

# DOCUMENTS DE TRAVAIL 201

---

## Institutional drivers of female labour Force participation in OECD countries

Olivier Thévenon

## INSTITUTIONAL DRIVERS OF FEMALE LABOUR FORCE PARTICIPATION IN OECD COUNTRIES

Olivier Thévenon<sup>‡</sup>

<sup>‡</sup>INED - INSTITUT NATIONAL D'ETUDES DEMOGRAPHIQUES

133, Boulevard Davout  
75980 Paris Cedex 20, France  
tel : +33 1 56 06 22 44  
[olivier.thevenon@ined.fr](mailto:olivier.thevenon@ined.fr)

This paper is a revised version of Thévenon, O. (2013), “Drivers of Female Labour Force Participation in the OECD”, OECD Social, Employment and Migration Working Papers, No. 145, OECD Publishing. <http://dx.doi.org/10.1787/5k46cvrgnms6-en>

Version of 20/12/2013

### RESUME

Cet article analyse la réaction de la participation à l'emploi des femmes aux évolutions des marchés du travail et aux politiques aidant à concilier travail et vie familiale, à partir de données de niveau national concernant 18 pays de l'OCDE depuis le début des années 1980s. Les interactions et complémentarités pouvant exister entre différentes mesures politiques sont analysées de façon originale, ainsi que la variation de leur influence selon le régime de politique familiale. Les résultats font apparaître que même si les taux d'emploi réagissent aux variations de taux d'imposition et aux politiques de congé, c'est la couverture des services d'accueil pour les enfants de moins de trois ans qui exercent la plus grande influence sur la participation des femmes à l'emploi. De plus, l'effet de cette couverture des services d'accueil est plus important dans des contexte où la protection de l'emploi est plus grande, où le congé parental est plus long, et où globalement l'ensemble des mesures est plus favorable à l'emploi des femmes. Au total, il est suggéré que les institutions qui sécurisent la participation à l'emploi des mères de jeunes enfants interagissent entre elles de façon à maximiser leur effet positif sur les taux d'emploi.

Mots clés : Emploi des femmes ; politiques familiales ; complémentarité institutionnelle.

### ABSTRACT

This paper analyses the response of female labour force participation to changes in labour markets and policies supporting the reconciliation of work and family life, with country-level data from the early 1980s for 18 OECD countries. It includes an original analysis of interactions and complementarity between different policy measures, as well as of potential variations in the influence of policies across different family policy regimes. The results highlight that while employment rates react to changes in tax rates and in leave policies, increased provision of formal childcare services to working parents with children below three years old is a key policy driver of female labour force participation. The coverage of childcare services is found to have a greater effect on women's labour market participation in countries with relatively high levels of employment protection, longer paid leave, and with other measures supporting

working mothers. In all, it suggests that policy measures securing the labour market participation of women with young children interact with each other to maximise their overall effect on employment rates.

Key words: female employment; family policies; institutional complementarity

### **ACKNOWLEDGEMENTS**

Willem Adema, Lucie Davoine, Nuria Diez-Guardia, Monika Queisser, Gwenn Parent and participants of seminar at OECD, OFCE and INED are acknowledged for providing valuable comments on an earlier draft of this paper. Andrea Bassanini is also thanked for sharing his programs.

A data appendix with additional results, and copies of the computer programs used to generate the results presented in the paper, are available from the author at [olivier.thevenon@ined.fr](mailto:olivier.thevenon@ined.fr)

## INSTITUTIONAL DRIVERS OF FEMALE LABOUR FORCE PARTICIPATION IN OECD COUNTRIES

Female labour force participation has increased sharply in most OECD countries over the past few decades, as participation rates climbed steadily from an average of 54% in 1980 to 71% in 2010. The timing and pace of that rise have, however, varied across countries and despite the overall increase, differences in levels of female labour force participation were still considerable in the early 2000s. Female employment rates are thus highest in Denmark and Iceland, at around 80%, and persistently low in Turkey, at around 30%.

Multiple factors contribute to the increase on both demand and supply sides (Pissarides *et al.*, 2003). Changes in labour demand – with, for example, the emergence of new production activities and different working conditions – have been important drivers of expanding female labour force participation (Pissarides, 2003). The switch from manufacturing and agriculture to services accounts for the growing demand for female workers. At the same time, the growth of part-time work has also attracted more women into the formal labour force by helping them to balance paid work with family life (Buddelmeyer *et al.*, 2004 and OECD, 2011a). Thus, while part-time work often offers the premium of control over working hours, stress and health, it may also be a penalty because of the generally lower hourly earnings, fewer training and promotion opportunities, and less job security. Nevertheless, it appears that in the short-term at least, advantages outweigh disadvantages for a majority of women working part-time. In the long-term, however, working part-time reduces long-term career prospects, affects pension benefits of retirees and increases the risk of poverty in old-age (OECD, 2010 and 2012a). When women make the choice to work part-time, they are often not aware of these long-term consequences.

The development of public sector employment has also attracted more female than male workers for a variety of reasons (Anghel *et al.*, 2011). Women may face less discrimination in the public than in the private sector and, in some countries, may earn higher wages if they belong to certain categories of employees. They may also prefer the greater employment protection and/or opportunities to combine work and family formation (Polachek, 1981 and Begall and Mills, 2012).

There have also been changes on the labour supply side. One key driver of women's aspiration to pursue a labour market career is the sharp increase in girls' educational attainment over recent decades. It has boosted female earnings potential, which in turn, however, has also increased the opportunity cost of having children (Hotz *et al.*, 1997; and, OECD, 2012a). That being said, greater access to contraception has enabled women to adjust their fertility behaviour to their new role in the labour market. At the same time, social attitudes and life styles have evolved towards childbearing later in life, which have contributed to falls in fertility rates (Goldstein *et al.*, 2009; Lesthaeghe, 2010; and, OECD, 2011). Yet society's attitudes to women's work remain equivocal, and the clash between family values and egalitarian perspectives are an obstacle to greater gender equality in the labour market (Fortin, 2005; and, Unnk *et al.*, 2005).

In this context, cross-national differences in household composition and fertility behaviour are key factors in explaining variations in female employment patterns (Anxo *et al.*, 2006; De Hénau *et al.*, 2007; Michaud and Tatsiramos, 2011; and, Thévenon, 2009). Another factor driving female employment in recent decades has been institutional support to help working parents cope with family responsibilities (Jaumotte, 2003; Misra *et al.*, 2011; Hegewish and Gornick, 2011; and, Blau and Kahn, 2013). The types of support that working women receive from the state or in the workplace vary greatly across countries, however (Gornick and Meyers, 2003; OECD, 2011; and, Thévenon, 2011). Variations in policy and

production regimes<sup>1</sup> also create contexts that determine how the labour market integrates women. They have differing effects on gender inequalities in market outcomes (Estevez-Abe *et al.*, 2001; Mandel and Semyonov, 2005; Soskice, 2005; and, Thévenon, 2006). Key in this respect is the fact that governments use different policy instruments to boost female employment and/or help women balance work with family responsibilities. Such instruments may complement each other to a certain degree and their efficiency is likely to depend on how they interact.

Against that background, this paper assesses the contribution of key labour market and policy components to the development of female labour market participation in the OECD since the early 1980s. In this perspective, a key but overlooked issue is that the influence of institutions and policy measures on labour market behaviour may vary across countries because the global context in which institutions are anchored might matter. One reason for this is that labour market outcomes are likely to respond more to a set of policy measures than to a single and isolated institution that may help parents to reconcile work and family partially, i.e. for a limited period of time or with regards to only one aspect of their needs in time, money and/or services. For instance, the provision of leave entitlements is likely to gain efficiency in promoting a durable attachment of women in the labour market if the supply of childcare services is large enough and/or affordable once women resume work; or we may expect the labour supply to be more responsive to financial incentives (such as those given by tax rates) in countries where the overall institutional setting does not offer strong support to balance work and family.

The “context dependence” of the influence of policies on female labour force participation is assessed in three ways. First, we look at the possible interaction between pairs of institutions that identify efficiency gain when two measures are combined. Then, we investigate the extent to which the influence of each policy measure depends or not on the overall context created by the addition of all institutional characteristics. This will allow to assess the presence of “systemic complementarity” between institutions (Bassanini and Duval, 2009), in which case the efficiency of one policy measure in raising female employment is increased by the effect of all the kinds of support together. Finally, the last approach takes stock from the qualitative differences in Welfare States regarding the types of support offered to parents, and especially mothers, to balance work and childrearing. Welfare State variations also reflect differences in attitudes regarding mother’s labour market participation which may affect the role of policies in supporting female employment. Therefore, one original addition of this paper to earlier work is the focus on the interactions and variations in the influence of policy instruments due to the overall characteristics of national contexts.

The paper comprises four sections. Section 1 presents the data and key trends regarding female employment and government policies helping women to balance work and family life. Section 2 considers a baseline model for a regression analysis of the female labour supply and discusses how different policy emphases affect determinants. Section 3 considers how government policy instruments and institutional competencies may interact and complement each other in order to increase female employment rates. Variations in the influence of policy measures across welfare regimes are also tested.

---

<sup>1</sup> In the “Varieties of Capitalism” approach, production regimes are characterised by various processes of skill production and wage determination, as well as by varying degrees of employment protection legislation. It also coincides with differences in organisations that provide social protection and welfare support to workers and their families (Esping-Andersen, 1999; Estevez-Abe *et al.*, 2001; and, Soskice, 2005).

## 1 FEMALE EMPLOYMENT AND POLICIES: DATA AND KEY OUTCOMES.

### Female employment

Female labour force participation has risen sharply in most OECD countries over the last few decades: among prime-age women (aged 25-54), participation rates climbed steadily from an average of 54% in 1980 to 71% in 2010 (see Table 1 summarising key employment outcomes). Cross-national differences are still wide, however, with for instance, female employment rates being persistently high (around 80%) since the early 1980s in Denmark and Iceland and persistently low in Turkey, at around 30%.

One reason for this rise is the shift of employment to the tertiary (service) sector that has considerably increased women's job opportunities. In 2008, an OECD average of four fifths of the female working population was employed in the service sector. In addition, the expansion of several tertiary activities (health and education, sales, hotels and catering, and domestic workers) has relied particularly on the use of part-time workers, which to some extent has contributed to women increasing their labour force participation (O'Reilly and Fagan, 1998). The incidence of part-time employment varies greatly across countries, however. The share of women among part-time workers has decreased in many countries since 1990, as men are now also more frequently working on a part-time basis, but often for longer hours than women (Morley *et al.*, 2009).

Similarly, the development of public employment has made it easier for women to join the labour market in many countries, since it provides them with a more secure labour market position when deciding to start a family (Gornick and Jacobs, 1998). Nevertheless, the International Labour Organisation (ILO) data (though not available for all OECD countries), show wide variations in the proportion of women working in public employment: in Japan it was less than 10%, for example, while the share is over one-third in Norway.

**Table 1. Key employment outcomes and labour market characteristics**  
Women aged 25 to 64)

	Sample properties 1980-2007							
	1980 <sup>5</sup>	2010		Mean	Std. Dev.	Min	Max	Observations
<b>Female employment rate</b> (women aged 25-54)	54.1	70.8	Overall	65.5	13.4	27.3	89.6	N= 472
Minimum	27.4	30.1	Between		11.4	42.12	83.6	n = 18
Maximum	81.4	82	Within		7.3	43.6	89.1	$\bar{T}$ =26.2
<b>Share of full-time employment rate</b> (women aged 25-54)	73.8	75.5	Overall	72.2	10.8	39.4	92.4	N = 472
Minimum	50.2	54.9	Between		10.5	45.1	88.4	n= 18
Maximum	88.2	94.9	Within		3.4	61.6	82.7	$\bar{T}$ =22.2
<b>Share of part-time<sup>1</sup> female employment rate</b> (women aged 25-54)	24.5	24.4	Overall	27.7	10.8	7.5	60.5	N = 472
Minimum	9.4	5.0	Between		10.5	11.5	54.8	n= 18
Maximum	51.1	45.0	Within		3.4	17.2	38.3	$\bar{T}$ =22.2
<b>Proportion of women among part-time workers<sup>2</sup></b>	75.8	73.2	Overall	76.4	7.2	59.8	91.9	N = 469
Minimum	40.4	47.3	Between		6.7	66.9	87.0	n= 18
Maximum	91.7	85.7	Within		3.0	66.9	86.8	$\bar{T}$ = 22.7
<b>Employment in services<sup>3</sup> (Index)</b>	62.5	108.3	Overall	82.9	14.5	43.3	118.2	N = 428
Minimum	43.3	101.1	Between		8.9	65.9	103.5	n= 18
Maximum	81.8	122.3	Within		12.4	57.9	126.2	$\bar{T}$ = 23.7
<b>Employment in the public sector<sup>4</sup></b>	77.9	79.4	Overall	78.3	7.2	63.4	92.2	N = 456
Minimum	63.6	66.9	Between		7.4	65.6	91.0	n= 18
Maximum	90.3	90.3	Within		1.6	71.8	83.6	$\bar{T}$ = 25.3

Note: For each variable, standard deviation into between and within components. The overall and within are calculated over N country-years of data. The between is calculated over 18 countries, and the average number of years the variable was observed for each country is given by  $\bar{T}$ . The 18 countries are: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, the United Kingdom and the United States.

- 1) The share of part-time employment measures the proportion of employees working usually no more than 30 hours a week in the total of female workers aged 25 to 54.
- 2) This proportion of women in the total of part-time workers is measured for all workers of active age (15 to 64 years).
- 3) This variable represents the share of employment in the sectors of services among all employees. Year 2005 is taken as the reference to calculate the index which equals 100 in each country this year.
- 4) The variable considers the proportion of workers employed in the public sector among all employees, based on an index which equals 100 in year 2005. According to ILO definition, employment in the public sector covers all employment of general government sector as defined in System of National Accounts 1993 plus employment of publicly owned enterprises and companies, resident and operating at central, state (or regional) and local levels of government. It covers all persons employed directly by those institutions, without regard for the particular type of employment contract.
- 5) 1985 for the shares of full- and part-time employment, the proportion of female part-time workers and the index-share of public employment.

Sources: OECD and ILO Employment Statistics; OECD Family database (see Appendix 2 for more details).

## Growing support to combine work and family

Government policies to help parents achieve a work-life balance are also key determinants of the rate at which female participation in the labour force has expanded since the early 1980s. There are three main policy instruments: parental entitlements to take leave from work after childbirth; the provision of childcare services for working parents with children of pre-school age; transfers through tax and benefits systems which affect the financial advantages for women and their families of being in paid employment.

Working parents' entitlements to take leave from work to care for a young or newborn child exist in all OECD countries and in many non-OECD countries. One purpose of this provision is to allow women to improve female labour force attachment. The available evidence suggests that, on average, the provision of paid leave produces a slight increase in the proportion of women engaged in paid work ( Del Boca *et al.*, 2007; Jaumotte, 2003; Ruhm, 1998; and, Thévenon and Solaz, 2013).

National family-related leave policies vary widely, one reason being that they are in fact designed to address health, labour market or demographic concerns (Kamerman and Moss, 2009). One consequence of international differences in policy approaches is the variety across countries in the total number of paid weeks a mother can claim after childbirth if she takes up her maternity and parental entitlements. Since 1980, most countries have increased the period during which parents are entitled to temporarily leave work and care for a young child. However, in some countries parents can now take leave for shorter periods at higher payment rates than before. Yet, in almost half of the OECD countries, subsequent to maternity leave, mothers can take parental leave for at least a year, often two years and sometimes three. They usually take parental leave just after maternity leave, although some countries allow them to do so when the child is much older (sometimes up to the eighth birthday).

As payment during leave is a key determinant of uptake, we consider the numbers of weeks of paid leave only. All OECD countries provide paid leave, except for the United States, which has no statutory compensation payment.<sup>2</sup> Women can take paid leave for three or more years in six countries – Austria, the Czech Republic, Finland, France (on the birth of a second child), Hungary, and the Slovak Republic. In the other countries, total periods of paid leave are much shorter – one year or less – because the fraction due to *parental* leave is much shorter.

Differences in leave duration, payment, and take-up rates explain the wide variations in governments' spending on paid leave and grants paid at childbirth. Figure 5 shows expenditure per childbirth as a ratio of GDP per capita.

The provision of childcare services for children under three years of age plays a prominent role in helping women to balance work commitments and family responsibilities (De Henau *et al.*, 2010; Del Boca *et al.*, 2007; and, Jaumotte, 2003). However, cross-national variations in public money invested in the provision of education and childcare services are wide, despite substantial increases in expenditure across countries since 1980.

---

<sup>2</sup> However, payment conditions vary across countries. Long leave periods are generally associated with relatively low flat-rate family-based payments, so that only one parent can claim income support while on leave. Shorter periods of parental leave are often associated with higher rates of earnings-related payments, often capped at a specified maximum (see OECD 2011b, indicator PF2.4).



**Table 2: Key characteristics of work-life balance policies**

	1980 <sup>5</sup>	2007	Sample properties 1980-2007					
				Mean	Std. Dev.	Min	Max	Observations
<b>Spending on family benefits<sup>1</sup></b> (US\$ PPP)	443	2262	Overall	1300	976.6	0	19405.9	N = 498
Minimum	36	21	Between		666.3	194.5	2315.4	n= 18
Maximum	1034	11070	Within		735.4	-645.6	5008.9	$\bar{T}$ =27.6
<b>Spending on childcare services</b> (per child under age 3, US\$ PPP)	541	6866	Overall	3314.9	3892.1	0	5392.4	N = 504
Minimum	0	0	Between		2963.7	614.8	10595.0	n= 18
Maximum	4900	19405	Within		2614.6	-3002.9	15799.0	$\bar{T}$ =28
<b>Spending on leave and birth grants</b> (per childbirth US\$ PPP)	1077	9483	Overall	4539.9	5631.6	0	25982	N = 472
Minimum	0	0	Between		4984	0	14706	n= 18
Maximum	5801	25982	Within		3020.5	-8792	15815	$\bar{T}$ =26.7
<b>Weeks of paid leave</b>	22.4	61.0	Overall	35.5	40.1	0	162	N = 504
Minimum	0	0	Between		35.6	0	138.8	n= 18
Maximum	162	214	Within		20.1	-66.6	160.6	$\bar{T}$ =28
<b>Service coverage for children under age 3</b>	10.0	34.9	Overall	22.0	15.1	0.9	66	N = 326
Minimum	0.9	12	Between		11.6	4.0	48.6	n= 18
Maximum	26	66	Within		8.5	-6.9	54.7	$\bar{T}$ =18.1
<b>Relative tax rate of second earner<sup>2</sup></b>	1.12	1.16	Overall	1.14	0.43	0.43	3.48	N = 398
Minimum	0.62	0.49	Between		0.38	0.60	1.81	n= 18
Maximum	1.91	2.83	Within		0.2	0.51	2.95	$\bar{T}$ =22.1
<b>Financial incentive to work part-time<sup>3</sup></b>	104.3	105.1	Overall	104.1	3.71	96.3	113.4	N = 384
Minimum	99.1	100	Between		3.23	99.8	111.1	n= 18
Maximum	113.4	112.1	Within		1.55	99.7	112.7	$\bar{T}$ =21.3
<b>Strictness of employment protection<sup>4</sup></b>	2.36	1.96	Overall	2.08	1.06	0.21	4.19	N = 409
Minimum	0.21	0.21	Between		1.03	0.21	3.80	n= 18
Maximum	4.19	3.72	Within		0.33	0.98	2.85	$\bar{T}$ =22.7
<b>Unemployment rate</b> (15-64 years old)	4.8	5.8	Overall	7.6	3.8	1.5	24.1	N = 454
Minimum	0.2	2.3	Between		3.0	3.6	16.4	n= 18
Maximum	11.4	11	Within		2.4	-0.5	15.7	$\bar{T}$ = 25.2
<b>Birth rates</b>	14.4	10.7	Overall	12.5	2.0	8.1	21.7	N = 478
Minimum	11	9.1	Between		1.8	9.8	15.8	n= 18
Maximum	21.7	14.3	Within		1.1	9.7	18.3	$\bar{T}$ = 26.5

1) This average is calculated on the basis of the population of all children under age 20.

2) The relative tax rate of a second earner is measured by the ratio of the marginal tax rate on the second earner with two-thirds of the average wage to the tax wedge for a single-earner couple with two children earning 100% of average earnings. The marginal tax rate on the second earner is in turn defined as the share of the second earner's earnings which goes into paying additional household taxes.

3) The tax incentive to work part-time is measured by the increase in household disposable income between a situation where one partner earns the entire household income (133% of average earnings) and a situation where two partners (a couple with two children) share earnings (100% and 33% of the average earnings respectively).

4) Strictness of employment protection is measured by the OECD indicator on employment protection which measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts (<http://www.oecd.org/employment/employmentpoliciesanddata/oecdindicatorsofemploymentprotection.htm>)

5) 1982 for service coverage, relative tax rate of second earner and financial incentive to work part-time; 1985 for strictness of employment protection.

Source Authors calculation from OECD sources; see the Appendix 2 for a comprehensive list and definition of variables

Average in-kind expenditure on children under the age of three is just below 0.9% of GDP in the OECD, which corresponds to roughly one-third of total expenditure on families. Denmark, Finland, France, Iceland, and Sweden are the biggest service providers, with in-kind expenditure exceeding 2% of GDP – more than twice the OECD average. Expenditure can be measured per child under the age of three and expressed as a percentage of GDP per capita. This makes it possible to compare the share of income per inhabitant that different countries actually devote to the provision of childcare services. In this respect, Denmark and Sweden are the two countries spending by far the most per child on childcare services since the early 1990s.

In parallel to increases in public expenditure on childcare and pre-school education, the number of children under preschool age in formal day care has risen markedly in many countries. Nevertheless, there are still large differences between countries like Denmark, where some two-thirds of all children below three have a place in day care facilities, and the Czech Republic, Hungary, Poland, and the Slovak Republic at the other end of the spectrum. The low coverage of childcare services in these countries is related to the long periods of paid employment-protected leave.

The design of tax and benefits systems is also a key dimension of the incentives women may have for entering or staying in employment. Women are often the "second earner" in households. i.e. they earn less than their partner. Their labour supply is highly responsive to variations in tax rates, especially when they can easily substitute their market activities with home production (Garibaldi and Wasmer, 2004). Cash transfers and tax-related support that families with children receive may increase household income in such a way that they weaken women's financial incentives to work, and thus their labour market participation.

Generally speaking, public expenditure on financial support to families comes in two forms: child-related cash transfers and tax breaks. The principal kinds of cash benefits are family allowance, child benefit, and working family income support. A number of OECD countries also provide one-off benefits such as back-to-school-supplements or social grants (*e.g.* for housing). Overall, cash transfers are the largest category of expenditure, accounting for 1.25% of GDP on average, and over 2% in Austria, Hungary, Iceland, Luxembourg, New Zealand, and the United Kingdom.

Public spending on family benefits is also expressed per child and as a percentage of GDP per capita to account for cross-national differences in wealth and numbers of children. Table 2 shows the cash transfers to each child under 20 as a percentage of average GDP per capita in OECD countries. (Birth grants and leave benefits are disregarded.) The United Kingdom disburses the highest cash expenditure per child, the United States and Korea the lowest.

Benefits are of importance when considering a household's allocation of time between care and paid work and the division of labour between partners. In particular, the participation of women in paid work could depend on the relative gain in disposable income of two-earner families as compared to one-earner households with the same initial earnings. Similarly, the proportion of women working part-time is likely to respond to the differences in effective tax rates that apply to households where one spouse earns the income and those where both do.

To measure the financial incentive for having two earners against one earner in the household, we use the information on the differences in the net transfer paid to governments by households with an income equal to 133% of average earnings and two children (before childcare costs) with single-earner and dual earner families (where spouses have equal earning or with one spouse earning three times as much as the partner). Positive values in Table 2 indicate that a household with a second earner has a financial advantage over one with a single breadwinner. In general, families with a single earner have higher net transfers to governments than those with two equal earners, with for example, the difference in net transfers being highest in Ireland and Mexico where, at this level of earnings, net transfers paid by dual-

earner families are relatively low. By contrast, Germany is the only OECD country, together with Bulgaria and Malta, where at this level of household earnings the tax/benefit system significantly favours single breadwinner couples over dual-earner families. There are no large differences in tax treatment between one and two earner families in the Czech Republic, Estonia, the United States or France. However, with differences across countries in the progressive nature of tax systems and the way in which benefits support is phased out as income increases, the results are somewhat different at different household income levels. Also table 2 does not include childcare costs, which could significantly alter the two-earner families' relative advantage (OECD, 2011).

### **Diversity of family policy patterns**

There are remarkable cross-country differences in the ways that countries combine policy instruments to provide families with support and target different groups of families in each country (OECD, 2011). The differences are rooted in countries' welfare histories, their attitudes towards families, the role of government, current family outcomes, and the relative weight given to different – but interdependent – underlying family policy objectives. The extent and form of support for working parents with children under three also varies. Thévenon (2011) examines family support policy packages across OECD countries in detail. The classification by country of family policies partially corroborates the standard Esping-Andersen (1999) categorisation of welfare states, albeit with considerable within-group heterogeneity and some outliers.

Nordic countries (Denmark, Finland, Iceland, Norway, and Sweden) provide comprehensive support to working parents with very young children (under three years of age). They are far ahead of other OECD countries in this respect. Support takes the form of generous leave conditions for working parents after childbirth, combined with a widely available provision of childcare and out-of-school-hours services. The average amount per child spent by government is thus higher than in other country groups, but the difference is especially large for spending on childcare services and earnings-related parental leave benefits. The counterpart to this comprehensive support is the comparatively high level of effective tax rates of dual-earner families (see Tables A1 in the Appendix).

By and large, English-speaking countries (Ireland and the United Kingdom in Europe together with Australia, Canada, New Zealand, and the United States) provide much less in-time and in-kind support to working parents with very young children. Their cash benefits are more generous, although they primarily target low-income families and preschool children. Levels of public support in English-speaking countries vary, with Canada and the United States lagging behind.<sup>3</sup> On average, per child spending on childcare services for the under-3s and on paid leave (and birth grants) is lower in English-speaking countries than in other country groupings (Table A1).

Continental countries form a more heterogeneous group that occupies an intermediate position between the English-speaking and Nordic countries. They generally provide high levels of financial benefits, although their in-kind support to dual-earner families with children under three is more limited. France stands out from the other Continental countries because of its relatively high public spending on families with children and a stronger support for working women to combine work and family. Countries in Southern Europe are characterised by limited support for working families and low public spending on family cash benefits and on childcare services, and thus low childcare participation (Table A1).

---

<sup>3</sup> To some extent this is related to measurement difficulties. In Canada, information on spending by local governments (that are responsible for childcare and pre-school education) is not reported to Federal government. Available information on public spending on early childhood education and care in the United States may also underestimate the true level of local government spending on relevant policies.

## 2. BASELINE MODEL OF FEMALE LABOUR FORCE PARTICIPATION

This section presents the main findings from an econometric analysis of the determinants of the female labour supply. The analysis considers the aggregate labour force participation rates of prime-age women (25-54 years old) in 18 countries from 1980 to 2007. Changes in the composition of the female population through age cohorts are to some extent captured by the length of time women spend in education and other socio-cultural markers, such as the number of children and the proportion of married women.

The influence of labour market and policy characteristics on female labour force participation is captured by regressing the following fixed-effect equation:

$$[1] \quad LFP_{it} = \alpha LM_{it} + \beta P_{it} + \phi X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where:

$LM_{it}$  is the time-varying characteristics of the labour market in each country  $i$ ,

$P_{it}$  is the time-varying characteristics policy measures,

$X_{it}$  captures other control factors,

$\alpha_i$  and  $\lambda_t$  are country and time dummies and  $\varepsilon_{it}$  represents the error term<sup>4</sup>.

Two broad groups of indicators relating to the labour market and family-friendly policies are considered as explanatory variables. The first group describes jobs and labour market characteristics, with information on the share of employment in the services and the public sector; the share of women among part-time workers and in employment in the public sector; the OECD indicator on the strictness of employment protection legislation<sup>5</sup>; and, total unemployment rates as an indicator of labour market equilibrium. Information on the number of years spent by women in education is also included to account for changes in the composition of the female workforce. The second group of indicators includes information on policies that help parents to reconcile work and family commitments, such as paid leave variables (public spending and duration); childcare services for children under the age of 3 (public spending and enrolment rates); public spending on other family benefits (which is calculated per child in order to reduce the bias caused by expenditure's endogeneity to the number of births); and financial incentives to work (including tax incentives for couple families to have two earners instead of one)<sup>6</sup>.

The econometric analysis considers different model specifications for female labour force participation as a whole, and for being employed full-time or part-time. Results of two specifications are reported for each

---

<sup>4</sup> In this model specification yearly time dummies control for common shocks (recessions, context of production changes) which are assumed to affect all countries in the same way, and it also implicitly assumes that there are no unobserved common 'factors' whose effect may differ across countries. The errors terms would capture such effects, resulting in a testable cross-sectional dependence of residuals (Pesaran, 2004). One approach to account for common factors with heterogeneous factor loadings is to use cross-section averages of the dependent and independent variables as additional regressors (Pesaran, 2006). Adding these variables as regressors in a pooled OLS model does not give credible results as our panel data set is too unbalanced and generates coefficient estimates with very large standard errors (see Appendix, Table A3).

<sup>5</sup> More information on this indicator is available at: <http://www.oecd.org/employment/employmentpoliciesanddata/oecdindicatorsofemploymentprotection.htm>.

<sup>6</sup> These incentives are defined as the ratio of the marginal tax rate that a second earner receiving 66% of the average earning will pay in comparison to the payment due by a single-earner couple with two children and the average earnings (see details in the appendix).

case: one with the influence of labour market characteristics only; the other including the full list of labour market characteristics, supply side determinants and policy variables as explanatory factors of the trends in female employment. The full model thus includes the incidence of part-time work as an explanatory variable, but its inclusion can introduce a bias into estimates. That is because part-time work is often the result of labour supply decisions, although it can be shaped by demand-side constraints. For this reason, the contribution of the development of part-time to increasing female employment is approached by considering the proportion of women among all part-time workers of active age, i.e. including age categories below and above those of our dependent variable. This proportion is also instrumented by its lagged values (and by the exogenous variables of the model) in order to limit the potential bias due to endogeneity of part-time work. Also tested is a regression analysis which uses the tax incentive to work part-time as an instrument.

These efforts to limit potential endogeneity bias might not be enough, however. For this reason, two other model specifications separately address full-time and part-time participation as dependent variables. Tax incentives to work part-time are then included in the equation for part-time participation.

Because the decision regarding the use of formal childcare is to some extent simultaneous with the choice between work and inactivity, the use of childcare enrolment rates as a regressor introduces a risk of bias in the estimated coefficients. To address this issue, childcare enrolment rates are instrumented by their lagged values (and by the model's exogenous variables).

Other potentially endogenous variables – also instrumented by their lagged values – are unemployment and birth rates. Unemployment rates are defined with respect to the 15-64 year-old age group, while birth rates are calculated as crude birth rates instead of fertility rates<sup>7</sup>.

The model is estimated by two-stage least squares with heteroskedasticity-consistent errors. All the estimated models include country-fixed effects to focus on the variations over time and within a given country of the relationship between female labour force participation and its determinants. It should also be noted that variables are defined in natural logarithms. The only exception is the indicator on tax incentives to work part time, which is expressed as percentage increases.

### **Influence of labour market characteristics**

The overall results from model specifications regarding female participation in the labour force, the incidence of full-time and part-time employment are reported in Table 3. The first two rows of the table show that the growth of employment in the services sector and the rising incidence of part-time work had a positive effect on female labour force participation. While the expansion of the service sector appears to be positively correlated with full-time employment (columns 3 and 4), its effect on part-time employment is less clear (columns 5 and 6).

---

<sup>7</sup> The crude birth rate is the annual number of births per 1,000 population, while fertility rates concern the number of children per woman. Hence the risk of the fertility variable being endogenous to the female employment rate is lower when the crude birth rate is used rather than the total fertility rate.

Table 3. Determinants of female labour force participation, full-time and part-time employment

Women aged 25-54, OECD 1980-2007

	Female labour force participation		Full-time employment		Part-time employment	
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Employment in services</b>	0.00856*** (0.000581)	0.00433*** (0.000759)	0.00873*** (0.000761)	0.00559*** (0.00123)	-0.00206 (0.00353)	0.0104* (0.00628)
<b>Employment in the public sector</b>	-0.0189 (0.0156)	-0.299 (0.206)	0.0653 (0.223)	-0.212 (0.237)	-1.901** (0.955)	-3.662*** (1.055)
<b>Incidence of part-time employment</b>	0.195*** (0.0605)	0.577*** (0.0971)	..	..		
<b>Strictness of employment protection</b>	-0.0341** (0.0137)	-0.000569 (0.0188)	-0.0564*** (0.0190)	0.0247 (0.0210)	-0.127* (0.0721)	-0.315*** (0.110)
<b>Average years in education</b>	0.515*** (0.0396)	0.334*** (0.0467)	0.115** (0.0536)	-0.371*** (0.0723)	2.303*** (0.177)	2.073*** (0.276)
<b>Unemployment rate</b>	-0.0637*** (0.0105)	-0.0218* (0.0122)	-0.0376** (0.0156)	-0.0190** (0.0115)	-0.299** (0.0647)	-0.311*** (0.0971)
<b>Birth rate</b>	0.0738* (0.0421)	0.0761* (0.0398)	0.131** (0.0592)	0.0678 (0.0651)		-0.231 (0.246)
<b>ΔGDP</b>	-0.261*** (0.0539)		..	..		
<b>Spending on leave and birth grants</b>		-0.00679 (0.0102)		0.0587*** (0.0143)		-0.174*** (0.0544)
<b>Spending on family benefits</b>		0.0782*** (0.0196)		0.0421 (0.0307)		0.0443 (0.119)
<b>Spending on childcare services</b>		-0.00491 (0.00491)		0.0125* (0.00695)		-0.0882*** (0.0299)
<b>Weeks of paid leave</b>		-0.0141*** (0.00434)		0.0125 (0.00798)		-0.0751*** (0.0267)
<b>Service coverage for children under age 3</b>		0.0438*** (0.00559)		0.0369*** (0.00996)		0.164*** (0.0422)
<b>Tax rate of second earner</b>		-0.0487*** (0.0123)		-0.0935*** (0.0199)		..
<b>Financial incentive to work part-time</b>						0.0168** (0.00672)
<b>No. of obs.</b>	249	150	256	153	275	146
<b>R<sup>2</sup></b>	0.991	0.997	0.983	0.994	0.951	0.983

The dependent and independent variables are expressed in log units. Estimates by two-stage least squares with robust heteroskedasticity-consistent standard errors in brackets. \*\*\*, \*\* and \* : significant at 1%, 5% and 10%, respectively.

All the estimated models include country-fixed effects so as to focus on the within-country, over-time variations between female labour force participation and its determinants. In addition, because the decision regarding care is to some extent simultaneous with the choice between work and inactivity, the use of childcare enrolment rates as regressors introduces a risk of bias in the estimated coefficients. Enrolment rates are therefore instrumented by their lagged values. Because of endogeneity concerns, unemployment rates are also instrumented by their lagged values, and cover 15-64 year-olds rather than 25-54.

Country coverage: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, the United Kingdom and the United States.

The contribution of the public sector to female labour market participation is unclear and its influence seems to be related to the development of employment protection (results not shown<sup>8</sup>). Yet, the increased share of women in public employment does not significantly change female labour market participation when the degree of employment protection and other institutional features are held to be constant (Columns 1 to 2). Public employment and part-time work are negatively associated (columns 5 and 6). This appears to suggest that female labour market participation has expanded through two separate channels: an increase in part-time work in some countries and growth of public employment in others.

Educational attainment – as measured by the average number of years spent in education – also appears to be an important driver of female participation in the labour force. However, in the model that separates the effects of full-time and part-time work, each additional year in education appears to lower the chances of working full-time. The effect on part-time participation rates is positive, however, and the reason for this finding could be related to an "income effect": higher education gives access to jobs with higher hourly wage rates which makes part-time working of one parent more affordable for families. The results do not change significantly when also including control variables with respect to birth rates or variations in GDP *per capita*.

### **Influence of work-life balance policies**

The regressions that control for policy but not for labour-market variables show that female labour force participation and spending on leave and childcare services evolve together. However, the sensitivity of female labour force participation to public spending is clearly determined by certain labour market properties.

Leave policies are a prime component of the institutional setting that influences women's participation in the labour market. Table 2 indicates that, other things being equal, an increase in the duration of leave is likely to reduce total female labour force participation, while expenditure per childbirth on leave and birth grants appears to have no significant effect. Rates of participation in full and part-time work react differently, however.

The provision of paid leave makes it more likely that women will work full-time rather than part-time. Full-time employment rates do not appear to be sensitive to the duration of leave but they are positively associated with spending on income support during leave. By contrast, receipt of income support during parental leave and longer durations of paid parental leave both have a negative effect on the incidence of part-time work. Yet, the effects of variations in leave duration are overall smaller than percentage variation in the coverage of childcare services.

There is an unambiguous positive correlation between the provision of childcare services for the under-3s and full-time and part-time female participation in the labour market. Then, the estimated effect is quite large since, when taking sample means as references, the elasticity at 0.044 implies an increase of 0.2 percentage (1% in relative terms) point in the coverage of childcare services has produced a 2.8 per cent increase in female labour force participation rates. The effect is higher in relative term for part-time work which make sense since, in many countries, formal care is provided for a weekly amount of time that is compatible with part-time work only. Full-time employment is also sensitive to the amount spent per child on childcare services. This outcome might reflect the fact that a greater or higher-quality provision of care

---

<sup>8</sup> The public employment coefficient loses significance once controls for both unemployment and the degree of employment protection are incorporated into the model specification, which suggests that the three variables are closely but negatively correlated. The effect of employment protection, is dependent on other institutional variables, however, as suggested by its coefficient's loss of significance once other policy indicators are factored in.

increases average expenditure per child, so making it easier to work full-time. By contrast, spending on childcare is observed to exert a negative influence on part-time work, which suggests that women move from part-time to full-time work if, other things being equal, longer and/or better care is provided. Part-time work appears to be more likely when there are constraints in the provision of affordable, high-quality childcare services.

As expected, increasing effective tax rates on the second “full-time” earner reduces female labour force participation. Public spending on family cash benefits is sometimes found to have a significant effect on female employment participation, but this finding is not robust across model specifications. In any case, there is no evidence that general child allowances paid out beyond the period of leave upon childbirth significantly reduce female labour supply through an income effect.

### 3. POLICY INTERACTIONS

Thus far, the analysis has focused on the effect of individual policy instruments. However, some institutions may work together in influencing employment levels. Institutional interplay may thus create complementarities between policies, which suggests that the marginal efficiency of a particular kind of support from one institution is likely to depend on the presence or degree of development of others (Aoki, 1994; Bassanini and Duval, 2006; and, Hall and Soskice, 2001).

There are potentially two types of interactions – “paired” and “multiple”. Institutions or policies may first interact in pairs if, for example, parental leave policies are found to have a greater impact when childcare services are well developed. This kind of complementarity points to policy instruments exerting effects which are not linear but dependent on the properties of another institution. Such a scenario may be tested by including interacting pairs of policy instruments in the model specification. Policy efficiency may also depend on the interplay between institutions acting as a whole, shaping the overall policy context. Positive interactions could happen, for instance, if governments were willing to design policies in such a way that all instruments for boosting female employment complemented each other. In such an event, it is very likely that the effect of the overall set of institutions will be larger than the effect of each institution taken separately, because of a “systemic” complementarity created by the development and interplay of all these institutions at the same time. One way to test this assumes that the efficiency of each instrument would be dependent on the sum of effects that all institutions may have together on labour market decisions. Figure 1 helps to illustrate how the overall policy context – shaped by institutions working as one and to which labour supply and demand would adjust – could determine the efficiency of policy changes.



**Figure 1. Equilibrium adjustments of female labour force participation to policy changes**

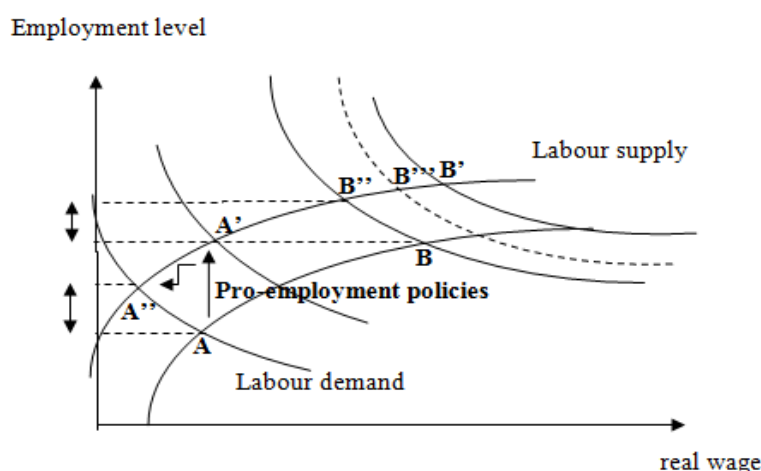


Figure 1 compares two cases of female employment. Case A is a situation where, women's employment is low but their labour supply is highly responsive to pro-employment policy changes. In Case B employment rates are higher (due to a more employment-friendly context for women) and could develop in two possible directions, depending on the responsiveness of female labour supply to policy reforms.

In Case A, it is obvious that pro-female employment policies are expected to drive female labour supply and demand up – theoretically from say A to A'. However, policies might be at least partially financed by employers' social contributions, in which case labour demand will be set at a lower real wage. A'' will be the new equilibrium if the cost of labour rises to a much higher level than in the initial situation in Case A. Such an increase in the labour cost of female workers might also lead to greater differences in employment conditions between sectors and/or employers seeking to foster female employment and sectors and/or employers who want to invest in company-specific skills and are ready to discriminate against women (Estevez-Abe *et al.*, 2001).

Case B has a higher base rate of female labour force participation. However, female labour supply is likely to be less responsive to policy changes since the remaining inactive women who could enter the workforce are more likely to face higher opportunity costs. In this case, the marginal effect of policy changes might be weaker than in Case A, as illustrated here by a concave curve of labour supply. However, it might also be that the cost for employers will be lower here than in Case A if economies of scale are generated for employers by continuing the development of policy support. In that event, the labour market equilibrium could move from B to B'' instead of to B'. The overall effect of policy change is thus likely to be smaller than in Case A, unless female labour supply becomes more elastic at higher employment levels, as illustrated by the "dotted-line curve". Social norms can make female labour supply more elastic if, for example, maternal employment becomes progressively more accepted when female employment rates are growing. Case B suggests that pro-female employment policies are likely to be more efficient at higher employment levels.

In sum, the effects on employment of changes in family-friendly policies (*e.g.* investment in a childcare service provision) will be greater: (i) the greater the sensitivity of female labour supply to incremental changes in policies (the steeper the female labour supply curve); and (ii) the more insensitive the reaction of employers to the potential increase in labour cost (the flatter the labour demand curve). Virtually all institutions can affect the slope and position of at least one curve, which makes the interaction between

institutions so important. A relevant key policy challenge is, then, to identify the most powerful interactions. This is not straightforward, however, in view of data constraints, as discussed below.

### Interaction between pairs of policy instruments

A standard approach towards measuring the interplay between policy variables involves augmenting the baseline model with all possible interactions between each individual pair of policy characteristics. Following the approach suggested by Bassanini and Duval (2006), we add multiplicative interactions between policy variables to the baseline model, defined by the products of the deviations of institutional variables from their sample mean.

Labour force participation is then modelled as in equation [1], but augmented by interactions between institutions  $P^k$  and  $P^h$ . Equation [2] applies to one single interaction:

[2]

$$LFP_{it} = \sum_j \beta_j P_{it}^j + \gamma_{kh} (P_{it}^k - \bar{P}^k) \cdot (P_{it}^h - \bar{P}^h) + \alpha LM_{it} + \phi X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where  $\bar{P}^k$  and  $\bar{P}^h$  are the sample means across countries and over time of  $P^k$  and  $P^h$ . Other variables are denoted as in equation [1]. Coefficients  $\beta$  can be readily interpreted as the marginal employment effects of institutions  $P$  at their sample mean when all other covariates are kept constant at their sample mean. For the two institutions  $P^k$  and  $P^h$  that increase employment rates, a positive sign for the interaction coefficient would provide evidence of policy complementarity.

There is no simple way to run a systematic analysis of policy interactions which is consistent with Figure 1 in the above framework, however. This is because any extension of equation [2] to more than one type of interaction should also include all “implicit” interactions in order to minimise the risk of coefficient bias (Braumoeller, 2004 and Brambor *et al.*, 2006). The result might be an over-specification of the model that causes a substantial loss of degree of freedom, however. In addition, given the likely correlation among the interaction terms, such an over-specified model specification would raise legitimate multicollinearity concerns. For this reason, it is usual to consider only a small number of well-chosen interactions, while all other interaction coefficients are set to 0. However, if this approach is to yield robust findings, it should at least be shown that the chosen interactions maintain sign and significance regardless of the specification and, in particular, of the inclusion of additional interaction terms (*ibid*). Interaction terms including omitted institutions could particularly bias coefficient estimates.

Against this background and in line with Bassanini and Duval (2009), the approach followed here is to first explore the impact of all interactions between policies taken in pairs, and then to consider the robustness of findings with changes in the estimation procedure (Table 3). Results from two alternative estimation procedures are reported, in addition to the basic ordinary least square (OLS):

1. an instrumental variable (IV) approach, where any interaction between institutions  $P^k$  and  $P^h$  is instrumented with the product of the deviations of  $P^k$  and  $P^h$  from their respective country-specific means;<sup>9</sup>

<sup>9</sup> The deviation of a variable from its country-specific means can be considered as a valid instrument when correlation with time-invariant factors is the main source of endogeneity (Hausman and Taylor, 1981). As noted by Bassanini and Duval (2009), this deviation is in fact uncorrelated with any time-invariant unobservable variable.

2. an augmented version of OLS estimations, where the institutions  $P^k$  and  $P^h$  are interacted with country dummies – thus assuming that the effects of institutions are country-specific.

The last column of Table 4 show results of the fixed-effect estimation where all possible interactions between policy components are taken into account.

**Table 4. Effects of interactions across institutions on female labour force participation**

	Each single pair of interactions taken separately				All interactions taken simultaneously
	OLS	IV	F-test on instruments (p-value)	OLS with country-specific variables	
Spending on leave * spending on family benefits	-0.005 (0.018)	..	2.1 (0.14)	-0.000 (0.000)	-0.002* (0.001)
Spending on leave * spending on childcare services	0.002 (0.009)	-0.010 (0.033)	5.4 (0.021)	0.000 (0.000)	-0.000 (0.000)
Spending on leave * leave duration	-0.000 (0.000)	0.031* (0.017)	215.7 (0.000)	-0.000 (0.000)	0.000** (0.000)
Spending on leave * CC enrolment	-0.0575*** (0.013)	..	0.07 (0.79)	-0.001*** (0.000)	0.002** (0.002)
Spending on leave * Strictness of employment protection	0.224** (0.098)	..	0.04 (0.83)	0.0196*** (0.006)	-0.007 (0.010)
Spending on leave * Rel. tax rate of 2 <sup>nd</sup> earner	-0.053 (0.049)	0.032 (0.028)	19.2 (0.00)	-0.004 (0.003)	0.009** (0.004)
Spending on family benefits * spending on childcare services	-0.006 (0.008)	..	1.1 (0.28)	-0.000 (0.000)	-0.000 (0.001)
Spending on family benefits * leave duration	-0.0018*** (0.000)	0.139*** (0.028)	24.3 (0.00)	-0.000 (0.000)	-0.000 (0.000)
Spending on family benefits * CC enrolment	-0.044*** (0.011)	..	1.4 (0.23)	-0.001*** (0.000)	0.000 (0.002)
Spending on family benefits * EPR	0.377** (0.145)	..	2.1 (0.14)	0.022*** (0.007)	-0.010 (0.008)
Spending on family benefits * Rel. tax rate of 2 <sup>nd</sup> earner	-0.0421 (0.040)	-0.037 (0.033)	37.3 (0.00)	-0.000 (0.003)	-0.003 (0.003)
Spending on childcare services * leave duration	-0.0008** (0.0003)	0.051*** (0.016)	45.5 (0.00)	-0.000** (0.000)	-0.000 (0.000)
Spending on childcare services * CC enrolment	-0.0197*** (0.0073)	-0.086 (0.057)	3.9 (0.04)	-0.0006** (0.0002)	0.000 (0.000)
Spending on childcare services * Strictness of employment protection	0.113*** (0.040)	..	0.3 (0.57)	0.005* (0.002)	0.000 (0.002)
Spending on childcare services * Rel. tax rate of 2 <sup>nd</sup> earner	-0.0051 (0.025)	0.005 (0.026)	20.9 (0.00)	-0.000 (0.001)	-0.006*** (0.006)
Weeks of paid leave * CC enrolment	0.001*** (0.000)	0.176** (0.075)	8.2 (0.00)	0.0002*** (0.0000)	0.000*** (0.000)
Weeks of paid leave * Strictness of employment protection	0.002 (0.001)	-0.197** (0.093)	9.3 (0.00)	0.000 (0.000)	-0.000*** (0.000)
Weeks of paid leave * Rel. tax rate of 2 <sup>nd</sup> earner	-0.002** (0.001)	0.185** (0.078)	16.2 (0.00)	-0.0002* (0.0001)	0.000 (0.000)
CC enrolment * Strictness of employment protection	0.233*** (0.079)	0.310* (0.186)	6.2 (0.01)	0.011* (0.006)	0.006** (0.002)
CC enrolment * Rel. tax rate of 2 <sup>nd</sup> earner	0.086 (0.101)	..	2.0 (0.15)	0.006 (0.005)	0.006 (0.003)
Strictness of employment protection * Rel. tax rate of 2 <sup>nd</sup> earner	-0.011 (0.286)	..	1.1 (0.28)	-0.009 (0.017)	0.012 (0.009)
<b>Number of observations</b>	167	167	167		167
<b>R2</b>	0.986	0.999	0.999	0.999	0.999

The dependent and independent variables are expressed in log units. Estimates by two-stage least squares with robust heteroskedasticity-consistent standard errors in brackets. \*\*\*, \*\* and \* : significant at the 1%, 5% and 10%, respectively.

IV estimates are reported when the instrument is not weak according to the Stock–Yogo test.

Table 4 provides little evidence that policies complement each other – at least in the form of interactions among pairs of institutions. What's more, there are few interactions among policy components that are robust across the different estimation procedures. Yet, there is some indication of positive interaction between the coverage of childcare services for under-3s and two other variables – (paid) leave duration and the strictness of employment protection. Not surprisingly, it suggests that the provision of formal childcare services is a particularly important incentive for mothers with young children to resume work in countries where longer periods of leave are available; in other words, mothers are more likely to return to work if they can access affordable childcare services immediately after their period of paid leave. It also suggests that policies providing parents with more time to care for a newborn child (as done by parental leave policies) and those encouraging the development of childcare services should be undertaken together to maximise their impact.

By contrast, the effect of services seems to diminish when spending on leave is higher, which may reflect a greater use of leave entitlements by women with very young children. The effect of childcare services is also found to be slightly larger when employment protection legislation is more stringent. More stringent employment protection legislation seems to increase the effect of family policy measures. This suggests that the efficiency of work-life balance policies is affected by the institutional setting in which they play out.

Finally, the lack of statistical significance regarding many of the "paired interaction terms" does not necessarily mean that institutions do not interact. Small sample sizes might prevent the emergence of significant terms. Most important, though, is that the above approach may be too narrowly focused on specific policy interactions while, as already ascertained, it is very likely that policy instruments interact with the set of institutions as a whole more than with any of them taken separately. In this case, the combined changes in policy will have a greater effect on female employment than the sum of the marginal effects of isolated changes in policy characteristics. In other words, the more (less) female employment-friendly the overall institutional framework, the greater (smaller) the effect of a given change is likely to be.

### Testing systemic complementarity between institutions

One way to test for systemic interaction is, as done by Bassanini and Duval (2009), to assume that the efficiency of each policy instrument is linked in a non-linear manner with the sum of the direct effects of all institutions. This can be expressed by the following equation:

[3]

$$LFP_{it} = \sum_j \beta_j P_{it}^j + \sum_k \left\{ \gamma_k (P_{it}^k - \bar{P}^k) \cdot \left( \sum_j \beta_j (P_{it}^j - \bar{P}^j) \right) \right\} + \alpha LM_{it} + \phi X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where parameters  $\beta_j$  and  $\gamma_k$  are estimated simultaneously by non-linear least squares.  $\beta_j$  denotes the direct effect of institution  $P^j$  at the sample average – *i.e.* for a country with an average mix of institutions – while  $\gamma_k$  indicates the strength of the interaction between  $P^k$  and the overall institutional framework. The latter is captured by the sum of the direct effects of policies' characteristics,  $\sum_j \beta_j (P_{it}^j - \bar{P}^j)$ , expressed in deviation form in the interaction. In fact, additional interactions involving country-fixed effects are also included in the specification in order to avoid potential bias from the correlation between certain institutions and the unobserved (and time-invariant) determinants of employment rates.<sup>10</sup> For any  $P^k$  that

<sup>10</sup> This implies that the specification actually estimated is a more complex than [X], with

increases the female employment rate, a positive and significant coefficient  $\gamma_k$  provides evidence of institutional complementarity in the sense that the more employment-friendly the overall institutional context is, the larger the impact of an incremental augmentation of  $P^j$  will be.

Table 5 shows the estimation results obtained when allowing for systemic interactions: Column 1 presents the general model specification; Column 2 includes controls for labour market characteristics; and, Column 3 provides the final estimations obtained after eliminating insignificant interactions.

Compared with the baseline model reported in Tables 2 and 3, taking systemic interactions into account now affects the direct effects of policies estimated for the “average” country (as reported in the top half of table 5). First, some of the coefficients that were not significant in the baseline model are now found to have a significant influence on female labour force participation. This, for example, is the case of the following coefficients:

- Coefficients on spending in family benefits in equations for full and part-time employment,
- coefficients on public spending on childcare services in equations for labour force participation,
- coefficients on the duration of paid leave in equations for full-time employment.

Direct effects with significant coefficients are also often slightly stronger than in the baseline model, which is not surprising because it assumes the effect of the other variables to be equal to zero (Braumoeller, 2004). More striking, however, is the change in the sign of the coefficient for the effect of the duration of paid leave in the equation for female labour force participation: it now turns positive when all other variables are hypothetically set at zero. However, the significant interactions with the sum of direct effects indicate that the influence of leave duration is closely tied to the overall institutional setting. The negative sign of this interaction suggests – in particular and not surprisingly – that the more employment-friendly the overall setting is, the more the influence of leave duration wanes. The effect of government spending on childcare services is now also unambiguously positive in all employment equations, which includes part-time employment equations where the baseline model had estimated it as insignificant.

The bottom half of Table 5 shows that the effects of other key variables on female labour force participation are also highly dependent on the overall institutional context. The effect of childcare services coverage for the under-3s can, in particular, be seen to interact positively with the sum of the direct effects of other policy characteristics, which suggests that its influence increases in a context which is more favourable to women’s employment. Conversely, taxing second earners has a negative effect on female labour force participation and full-time employment. However, the negative interaction with the overall institutional context suggests that the influence of taxation weakens as the policy setting becomes more employment-friendly. By contrast, the positive effect of the interaction between employment protection

---


$$LFP_{it} = \sum_j \beta_j P_{it}^j + \sum_k \left\{ \gamma_k (P_{it}^k - \bar{P}^k) \cdot \left( \sum_j \beta_j (P_{it}^j - \bar{P}^j) \right) \right\} + \sum_h \left\{ \mu_h (C_{it}^h - \bar{C}^h) \cdot \left( \sum_j \beta_j (P_{it}^j - \bar{P}^j) \right) \right\} + \alpha LM_{it} + \phi X_{it} + \alpha_i + \lambda_t + \varepsilon_{it}$$

where  $C_i^h$  is a country dummy variable, and  $\mu_h$  is a parameter to be estimated.

legislation and other measures towards a better reconciliation of work and family life complement each other in their positive effect on female employment and labour force participation.<sup>11</sup>

**Table 5. Systemic interactions across institutions**

Effects on Labour force participation, full- and part-time employment.

	Labour force participation			Full-time employment			Part-time employment		
$\beta$ : Direct effects of policies	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Spending on leave and birth grants per childbirth	0.029 (0.018)	0.032 (0.028)	0.032 (0.027)	-0.028 (0.017)	-0.021 (0.037)	-0.022 (0.034)	0.052* (0.031)	0.059 (0.074)	0.040 (0.076)
Spending on family benefits	0.088*** (0.018)	0.137*** (0.012)	0.166*** (0.008)	0.139*** (0.028)	0.163*** (0.062)	0.175*** (0.015)	0.215 (0.215)	0.306*** (0.036)	0.306*** (0.041)
Spending on childcare services	0.027*** (0.007)	0.050*** (0.008)	0.046*** (0.007)	0.015*** (0.005)	0.043*** (0.014)	0.041*** (0.008)	0.108 (0.097)	0.146*** (0.039)	0.151*** (0.038)
Duration of paid leave	0.034** (0.015)	0.035** (0.016)	0.021** (0.011)	0.052*** (0.014)	0.050** (0.021)	0.050*** (0.012)	-0.051 (0.055)	-0.095** (0.038)	-0.063* (0.035)
Enrolment of children in formal childcare	0.055*** (0.014)	0.104** (0.019)	0.073*** (0.014)	0.069*** (0.023)	0.110*** (0.034)	0.112*** (0.023)	0.101 (0.099)	0.108** (0.053)	0.124** (0.050)
Strictness of employment protection	-0.108*** (0.033)	-0.104*** (0.036)	-0.095*** (0.037)	0.074*** (0.024)	0.067* (0.036)	0.073*** (0.028)	-0.479 (0.425)	- (0.212)	- (0.179)
Tax rate of a second earner	-0.072*** (0.019)	-0.129*** (0.017)	-0.143*** (0.016)	-0.092*** (0.025)	-0.138*** (0.051)	-0.145*** (0.024)	..	..	..
$\gamma$ : Interactions between institutions and the sum of direct effects									
Spending on leave and birth grants per childbirth	-0.067 (0.080)	-0.025 (0.053)	..	0.304** (0.128)	0.157* (0.090)	0.170** (0.077)	-0.224 (0.166)	-0.212** (0.089)	-0.183 (0.084)
Spending on family benefits	0.009 (0.065)	-0.044 (0.042)	..	-0.166* (0.095)	-0.175** (0.081)	-0.172*** (0.058)	0.139 (0.105)	0.122** (0.062)	0.120* (0.064)
Spending on childcare services	0.069** (0.034)	0.071*** (0.025)	0.054** (0.023)	-0.062 (0.044)	-0.028 (0.039)	..	0.080 (0.077)	0.064** (0.029)	0.073*** (0.027)
Weeks of paid leave	-0.124* (0.075)	-0.028 (0.032)	..	-0.086 (0.067)	0.003 (0.032)	..	0.011 (0.122)	0.236 (0.146)	..
Service coverage for children under 3	0.168*** (0.057)	0.111*** (0.030)	0.062** (0.028)	0.130** (0.066)	0.102* (0.056)	0.112*** (0.036)	0.027** (0.049)	0.044 (0.044)	..
Strictness of employment protection	-0.308** (0.122)	0.494*** (0.103)	0.428*** (0.097)	0.031 (0.165)	0.295* (0.168)	0.265** (0.119)	0.031 (0.171)	0.165 (0.173)	..
Tax rate of a second earner	0.349*** (0.106)	0.395*** (0.078)	0.401*** (0.072)	0.167 (0.220)	0.364** (0.183)	0.357** (0.1161)	..	..	..
Number of observations	217	181	181	213	177	177	223	185	185
R2	0.992	0.994	0.993	0.989	0.990	0.990	0.986	0.986	0.986

Non-linear least squares. Standard errors in brackets. \*, \*\*, \*\*\* statistically significant at the 10%, 5% and 1% levels, respectively

<sup>11</sup> In fact, the effect of this interaction on female labour force participation turns from negative in Column 1 to positive in Columns 2 and 3 which control for labour market characteristics, which suggests a close correlation between employment protection legislation and other labour market characteristics.

## Testing variations across welfare types

One limit of the approaches adopted so far is that the effects of variables (including policy instruments) are assumed to be the same across countries and depend on settings shaped by all institutions. This is, of course debatable, as specific measures are likely to have different effects in different countries/welfare states. For instance, the effect of policies will vary across Welfare States which assign different roles to men and women and to public policies in providing welfare to families (Esping-Andersen, 1999 and Thévenon, 2006). Variations in the design of institutions of course reflect these qualitative differences in expectations regarding the complementarity assumed between men, women, markets and the public sector. In that case, policy instruments will have an influence of which not only the intensity but also the sign may vary across policy regimes. For instance, we expect female labour force participation to be particularly affected by tax rates and by leave duration in environments such as the English-speaking countries where labour market flexibility is first and foremost assumed to provide enough opportunities for women to combine work and family, and where it is expensive for families to access childcare services despite financial assistance that primarily targets “poor families”. Conversely, labour market behaviour may be less responsive to financial incentives in countries (such as the Nordic ones) where broad access to affordable, high-quality childcare services is associated with high tax rates; and leave entitlements may be a powerful means to maintain women in employment in countries with a strong divide between insiders and outsiders.

One way to look at these possible variations in the influence of social welfare settings is to characterise each country according to its type of welfare state and examine its potential interactions with each policy measure. In this way, the terms of interaction will provide some insight into potential variations in the marginal returns of policy changes in different welfare-state contexts. In order to investigate such possible heterogeneity, we run regressions that include interactions with country-clusters in line with the categorisation of family policy regimes as in Thévenon (2011) using information from the OECD Family database.

Country-dummies are thus replaced by dummies for four different country-groupings identified from the combination of a range of key dimensions of family policies (English-speaking, Southern European, Nordic and Continental Welfare States as explained in the previous section and Appendix Table A1), and then interacted with each of the policy variables. The model is then re-written so as to take into account multiplicative interaction between family policy variables and their context of implementation.

Labour force participation is now modelled as follows:

$$[4] \quad LFP_{it} = WS_i + \alpha LM_{it} + \phi X_{it} + \varphi_i \cdot P_{it} WS_i + T_t + \varepsilon_{it}$$

where the marginal effect ( $\beta$ ) of policy variables  $P_{it}$  is now assumed to be conditional on countries' Welfare State context; the eighteen countries being grouped in four categories derived mainly from the differences that concern the extent and form of support provided to working parents with children under age three (Thévenon, 2011 and see above section 1).

All policy variables in equation [4] are centred beforehand by subtracting the mean score across all observations in the sample in order to facilitate the interpretation of the terms of interaction (Brambor *et al.*, 2006).  $\beta$  measures the effect of family policies on fertility in continental welfare states (reference category), whereas  $\varphi$  measures the deviation from the reference effect for English-speaking, Southern European and Nordic welfare states.

Tables 6 reports the results of estimations where labour force and employment equations include:

- The policy and control variables used in former model specifications.
- A variable indicating the welfare state categories (with the group of continental European countries taken as the reference category) and the terms of interaction between policy variables.

Regression results show remarkable differences in the effects generated by different policies in different groups of welfare states, on female labour force participation and on full-time employment in particular. For instance, public expenditure on leave and birth grants is found to have a strong positive effect on women's participation in full-time employment in the countries of “continental” Europe, but it has a negative effect in “English-speaking” and Nordic economies (despite large differences in spending levels between the two groups). Also, the association between the per child spending in family cash benefits and labour force participation and full-time employment is strongly positive in “continental” European countries and weaker or statistically non significant in other welfare state environments. It might be the case that in-cash benefits are especially large to cover the fixed cost of mothers’ full-time labour force participation in continental countries where formal childcare services are relatively scarce (except in France). Family cash benefits also have a positive influence on female labour force participation and on part-time work, especially in Nordic countries (even though the proportion of women working part-time (15%) is much lower than the 28% of women aged 25-54 on average in the other country-groupings.

Leave duration also has a strong negative impact on female labour force participation and full-time employment in English-speaking countries and to a much lesser extent in Nordic countries where a prolongation of paid leave somewhat increases the likelihood of women working part-time rather than full-time. The weak effect in the Nordic region might be due to the fact that despite much longer periods of paid leave (65 weeks on average against 10 in the English-speaking group), earnings-related payment and the large availability (and affordability) of childcare services upon the expiry of leave tend to keep women in the labour market more than in the English-speaking context<sup>12</sup>.

By contrast, the effect of an increased duration of paid leave on female employment is weak but positive in continental and especially southern countries where leave entitlements seem to offer valuable employment protection for mothers who often care for their children on a full-time basis during their early years. This makes sense in countries where dual labour markets produce high rewards in terms of career path and social protection for those who remain in employment over the life course (Häusermand and Schwander, 2011).

In all regions, greater childcare coverage for under-3s helps to raise full and/or part-time female labour force participation. Yet, the effect of enrolment rates in childcare services on female full-time employment is particularly strong in both “English-speaking” and “Nordic” groups. There is also a negative association between the enrolment of children under age 3 and part-time employment in the Nordic countries, which suggests that the provision of such childcare services facilitates the transition from part-time to full-time employment.

When considered separately from coverage rates, the effect of per-child expenditure on childcare on female labour market behaviour varies considerably across country-groupings. For instance, there is a very negative association in continental countries where the money invested does not actually seem to increase

---

<sup>12</sup> Payment associated with leave tend also to reduce the proportion of women working full-time in English-speaking countries. Other cash benefit payments also seem to be associated negatively with female employment, but coefficients are not statistically significant. One reason might be that, until recently, many English-speaking countries provided (and Ireland still does) categorical income support for lone parents until their dependent children were in their teens.



female employment, but merely generate a substitution from informal to formal childcare. By contrast, there seems to be a positive association between spending in childcare services and female labour force participation in southern countries where it adds to the direct positive effect of an increase in service coverage.

Then, as expected, women's full-time participation in the labour force also appears to be negatively affected by unfavourable tax treatment of second earners in couple families in English-speaking regions more than in the others. However and surprisingly, increased tax rates on second earners seem to have a positive effect on female employment rates in Nordic countries (while coefficients are not statistically significant in the other regions). This finding might be related to "income effects" dominating "substitution effects" in such a way that a tax increase reduces disposable income to the extent that second earners increase their employment participation to make up for the income loss. The high living costs in Nordic countries might be one reason why it remains advantageous to have two earners in families despite comparatively high tax rates (Kurkowiak, 2012). It also suggests that high tax rates are less likely to discourage female employment when they are accompanied by comprehensive provision of leave entitlements and childcare services.

Table 6. Variations in the influence of policy instruments across welfare state regimes

	Labour force participation	Full-time employment	Part-time employment
<b>Spending on leave and birth grants per childbirth</b>			
“Continental” countries	0.073*** (0.019)	0.121*** (0.033)	-0.198*** (0.080)
“English speaking” countries	-0.030 (0.043)	-0.120* (0.063)	-0.066 (0.142)
Southern European countries	0.0236 (0.030)	-0.000 (0.042)	-0.114 (0.119)
Nordic countries	-0.017* (0.033)	0.001 (0.070)	-0.119 (0.193)
<b>Spending on family benefits</b>			
“Continental” countries	0.418*** (0.045)	0.484*** (0.082)	0.262 (0.245)
“English speaking” countries	-0.111 (0.076)	-0.060 (0.127)	-0.206 (0.307)
Southern European countries	0.048*** (0.019)	0.019 (0.029)	0.272** (0.123)
Nordic countries	0.150*** (0.056)	0.076 (0.111)	0.580* (0.347)
<b>Spending on childcare services per child under 3</b>			
“Continental” countries	-0.099*** (0.017)	-0.170*** (0.026)	0.030 (0.089)
“English speaking” countries	0.067 (0.041)	0.071 (0.066)	0.187 (0.135)
Southern European countries	0.016** (0.007)	0.031*** (0.007)	-0.096*** (0.028)
Nordic countries	0.012 (0.035)	-0.060* (0.057)	0.295* (0.156)
<b>Weeks of paid leave</b>			
“Continental” countries	0.001*** (0.000)	0.000 (0.000)	0.004** (0.002)
“English speaking” countries	-0.015** (0.007)	-0.026** (0.010)	-0.024 (0.021)
Southern European countries	0.002*** (0.000)	0.004*** (0.001)	-0.010*** (0.002)
Nordic countries	-0.001*** (0.000)	-0.003*** (0.000)	0.004*** (0.000)
<b>Enrolment of children in formal childcare</b>			
“Continental” countries	0.051** (0.022)	-0.024 (0.031)	0.139 (0.099)
“English speaking” countries	0.203** (0.094)	0.289* (0.164)	0.326 (0.450)
Southern European countries	0.027*** (0.009)	0.035*** (0.015)	0.154*** (0.055)
Nordic countries	-0.022 (0.025)	0.287*** (0.045)	-0.595*** (0.141)
<b>Relative tax rate of a second earner</b>			
“Continental” countries	0.105* (0.062)	-0.166 (0.114)	..
“English speaking” countries	-0.080*** (0.027)	-0.175*** (0.048)	..
Southern European countries	-0.032 (0.052)	0.024 (0.094)	..
Nordic countries	0.187* (0.097)	0.618*** (0.149)	..
<b>Tax incentive to work part-time</b>			
“Continental” countries	..	..	0.008 (0.011)
“English speaking” countries	..	..	-0.011 (0.021)
Southern European countries	..	..	-0.006 (0.023)
Nordic countries	..	..	0.045*** (0.013)
<b>Number of observations</b>	164	164	156

All models include time and welfare state dummies but their single effects are not reported. t-statistics in parentheses from robust standard errors. Categorisation of countries as follows: “English speaking”: Australia, Canada, Ireland, New Zealand, United Kingdom, United States; “Southern European”: Italy, Spain, Portugal; “Nordic countries”: Denmark, Finland, Norway, Sweden; “Continental”: Austria, Belgium, France, Germany, the Netherlands.

#### 4. Conclusions

Overall, this analysis has shown that trends in female labour force participation within economies are influenced by the improvement in women's average level of educational attainment, and also by the structure of the labour market and the institutional setting that supports the work-life balance.

The growth of employment in the services and the rising incidence of part-time work have had a positive effect on female participation in the labour force. By contrast, there is no such clear relationship between female employment rates and expanding employment in the public sector. Indeed, the latter has been found to actually lower participation rates in part-time work, which seems to suggest that economies have used public employment and part-time work as two separate channels to boost female labour force participation. Greater strictness of employment protection legislation also seems to have slowed down the growth of part-time work.

Policies to encourage two-earner families and help working parents cope with their family commitments are identified as important factors in boosting female labour force participation. Both in-cash and in-kind support have been found to play a significant role; and it appears that a combination of policies providing parents with more time to care for a newborn child (as done by parental leave policies) and those encouraging the development of childcare services should be implemented together to maximise their impact.

The analysis suggests that policies to foster greater enrolment in formal childcare have a significant effect on full-time and part-time labour force participation – and these effects are much more robust than the effects of paid leave or other family benefits. Not surprisingly, variations in enrolment of children under 3 in childcare services are found to have a larger positive influence on female labour force participation than those of the weeks of paid leave. However, higher public spending on childcare does not necessarily lead to more part-time employment, as it may facilitate moves into full-time work or improve the quality of childcare without affecting hours worked per week.

Going back to details, the baseline model (with data for all countries pooled) also indicated that increasing public spending for paid maternal and/or parental leave tends to raise the incidence of full-time employment relative to part-time work. Extending the duration of paid maternal and/or parental leave particularly lowers the incidence of part-time working relative to not working.

Higher tax rates on the second earner in a family reduce female labour force participation, and women are more likely to work part-time when two-earner households are taxed less than one-earner households with a similar income level. By contrast, levels of spending on family benefits per child have no direct bearing on rates of female employment, but results in the last section suggest that the non-significance of coefficients may reflect differences in the effects of cash benefits across family policy regimes.

Our main contribution stems from the analysis of interactions between policy components which shed light on the complementarities between them. In particular, the provision of childcare services is found to increase women's participation in the labour market to a greater extent in countries with comparatively long paid leave and/or a high degree of employment protection. Conversely, higher tax rates on second earners discourage women's participation in the labour market, and that effect is tempered in a work-life balance friendly institutional environment.

Finally, the analysis provides evidence of variations in the influence of policy characteristics on female labour force participation in different types of welfare state. The results are preliminary, since the data constraints do affect robustness tests. Nevertheless, the exploratory analysis suggests that female labour force participation may react differently to different policy measures, depending on the institutional

environment in which they play out. The provision of childcare services for the under-3s is key to increasing full-time employment among women in all countries, but its effect varies. Thus, the development since the early 1980s of childcare services for children under age 3 has been an important driver of full-time rather than part-time female employment. The effect of service coverage is weaker in continental and southern European countries where the expansion of childcare services seems to have merely changed informal into formal provision and have made it somewhat more likely for women to work part-time.

Female employment appears also to be particularly responsive to financial incentives to work in English-speaking countries where increases in the duration of paid leave, and/or the relative tax rates affecting second earners in couple families appear to reduce female employment rates. This finding makes sense in countries where labour markets are flexible in terms of moving in and out of the labour force and where working hours can be adjusted to better fit family needs and constraints, such as high childcare costs. In the absence of affordable formal childcare services, upon the expiry of parental leave, mothers will adjust their working hours in response to the cost of available informal or formal childcare and their earnings profile. In these circumstances, increases in leave duration merely postpone the decision to adjust working hours for a few weeks/months and may reduce female employment rates, as increased leave durations may make employers reluctant to hire many women of childbearing age.

By contrast, an increase in the duration of paid leave and in spending on cash benefits appears to have raised female labour force participation slightly over the past decades in continental and southern European countries. In these countries, formal childcare constraints are considerable and labour market opportunities are less flexible than in English-speaking countries. In this context, an increase in the duration of paid leave will encourage more women to stay in work until childbirth, and the reward of qualifying for paid leave is strongest for low-income workers, with relatively high replacement rates. Especially high-qualified women are also likely to take advantage of the continuity in employment that extended leave provides, as the dualised non-flexible labour markets make a return to work without employment-protected leave more difficult than elsewhere. In Nordic countries, the provision of childcare services for the under-3s is compatible with mothers' full-time employment. In such a context, additional weeks of paid leave appear to weaken labour force attachment and to raise the propensity to work part-time rather than full-time.

## REFERENCES

- Adema, W. (2012), "Setting the Scene: the Mix of Family Policy Objectives and Packages Across the OECD", *Children and Youth Services Review*, 34, Elsevier Ltd., pp. 487–98.
- Anghel, B., S. de la Rica and J. Dolado (2011), "The effect of public sector employment on women's labour market outcomes", *IZA Discussion Paper*, No. 5825, Institut zur Zukunft der Arbeit (Institute for the Study of Labor), Bonn.
- Aoki M. (1994), "The Contingent Governance of Teams: Analysis of Institutional Complementarities", *International Economic Review*, 35: 657-76.
- Bassanini, A. and R. Duval (2006), "Employment Patterns in OECD Countries: Reassessing the Role of Policies and Institutions", *OECD Social, Employment and Migration Working Papers*, No. 35, OECD Publishing, Paris.
- Bassanini, A. and R. Duval (2009), "Unemployment, institutions, and reform complementarities: re-assessing the aggregate evidence for OECD countries", *Oxford Review of Economic Policy*, Vol. 25, No. 1, Oxford University Press, Oxford, pp. 40-59.
- Begall K., and M. Mills (2013), "The Influence of Educational Field, Occupation, and Occupational Sex Segregation on Fertility in the Netherlands", *European Sociological Review*, doi: 10.1093/esr/jcs051.
- Blau F., and L Kahn (2013), "Female Labour Supply: Why is the US falling Behind?", *IZA Discussion Paper N°7140*, Institut zur Zukunft der Arbeit (Institute for the Study of Labour), Bonn.
- Boserup, E. (1970), *Women's Role in Economic Development*, Earthscan Publications Ltd., London.
- Brambor, T., W. Clark and M. Golder (2006), "Understanding interaction models: improving empirical analysis", *Policy Analysis*, Vol. 14, No. 1, pp. 63-82.
- Braumoeller, B. (2004), "Hypothesis Testing and Multiplicative Interaction Terms", *International Organization*, Vol. 58, No. 4, pp. 807-20.
- Buddelmeyer, H., G. Mourre and M. Ward (2004), "Recent Developments in Part-Time Work in EU-15 Countries: Trends and Policy", *IZA Discussion Paper*, No. 1415, Institut zur Zukunft der Arbeit (Institute for the Study of Labour), Bonn.
- Del Boca, D., S. Pasqua and C. Pronzato (2009), "Market work and motherhood decisions in contexts", *Oxford Economic Papers*, Vol. 61, No. 1, pp. 147-71.
- Esping-Andersen, G. (1999), *Social Foundations of Postindustrial Economies*, Oxford University Press, Oxford.

- Estevez-Abe, M., T. Iversen and D Soskice (2001), "Social protection and the formation of skills: a reinterpretation of the welfare state", in D. Soskice and P. Hall (eds.), *Varieties of capitalism: the institutional foundations of comparative advantage*, Oxford University Press, Oxford, pp. 145-83.
- Fortin, N. (2005), "Gender role attitudes and the labour market outcomes of women across OECD countries", *Oxford Review of Economic Policy*, Vol. 21, No. 3, pp. 416-38.
- Garibaldi, P. and E. Wasmer (2004), "Raising female employment: reflections and policy tools", *Journal of the European Economic Association*, Vol. 2, No. 2-3, MIT Press, pp. 1-12.
- Goldin, C. (1995), "The U-shaped female labour force function in economic development and economic history", in T.P. Schultz (ed.), *Investments in Women's Human Capital*, University of Chicago Press.
- Gornick, J. and M. Meyers (2003), *Families That Work: Policies for Reconciling Parenthood and Employment*, Russell Sage Foundation Press, New York.
- Gornick, J. and J. Jacobs (1998), "Gender, The Welfare State and Public Employment: A comparative study of seven industrialized Countries", *American Sociological Review*, 63 (5), pp. 688-710
- Hall, P. and D. Soskice (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford University Press.
- Häusermann S. and H. Schwander (2011), " Varieties of Dualization. Labor Market Segmentation and Insider-Outsider Divides across Regimes", in P. Emmenegger, S. Häusermann, B. Palier and M. Seeleib-Kaiser (eds.). *The Age of Dualization. Structures, Policies, Politics*. New York/Oxford: Oxford University Press.
- Hausman J., and W. Taylor (1981), "Panel data and unobservable individual effects", *Econometrica*, 49(6):1377-98.
- Hegewisch, Ariane, and Janet C. Gornick. "The Impact of Work-Family Policies on Women's Employment: A Review of Research from OECD Countries." *Community, Work & Family*, 14(2): 119-138. (To be reprinted in Steven Sweet, ed. 2012. *Anticipated and Unanticipated Consequences of Work-Family Policy*. New York: Routledge.)
- Henau, J. de, S. Meulders and S. O'Dorchai (2010), "Maybe Baby: Comparing Partnered Women's Employment and Child Policies in the EU-15", *Feminist Economics*, Vol 16, No. 1, pp. 43-77.
- Hotz, V., J. Klerman and R. Willis (1997), "The economics of fertility in developed countries", in M. Rosenzweig, O. Stark (eds.), *Handbook of population and family Economics*, Vol. 1A, Elsevier, Amsterdam, pp. 276-347.
- Jaumotte, F. (2003) "Female labour force participation: Past trends and main determinants in OECD countries", *Economics Department Working Paper*, No. 376, OECD, Paris.
- Kurkowiak, B. (2012). Major dispersion in consumer prices across Europe. Comparative price levels in 37 European countries for 2011, *Statistics in Focus*, 26/2012, Eurostat, Luxembourg.
- Lesthaeghe, R. (2010), "The Unfolding Story of the Second Demographic Transition", *Population and Development Review*, Vol. 36, Issue 2, pp. 211-51.

- Goldstein, J., T. Sobotka and A. Jasilioniene (2009), "The End of 'Lowest-Low' Fertility?," *Population and Development Review*, Vol. 35, No. 4, pp. 663-99.
- Mammen, K. and C. Paxson (2000), "Women's Work and Economic Development", *Journal of Economic Perspectives*, Vol. 14, No. 4, pp. 141-64.
- Mandel, H. and M. Semyonov (2005), "Family Policies, Wage Structures, and Gender Gaps: Sources of Earnings Inequality in 20 Countries", *American Sociological Review*, Vol. 70, pp. 949-67.
- Matysiak A. (2011), *Interdependencies Between Fertility and Women's Labour Supply* (European Studies of Population), Springer.
- Michaud, P. and K. Tatsiramos (2009), "Fertility and female employment dynamics in Europe: the effect of using alternative econometric modeling assumptions", *Journal of Applied Econometrics*, Vol. 26, No. 4, pp. 641-68.
- Misra J., M. Budig and I.Boeckmann (2011), "Work-Family Policies and the Effects of Children on Women's Employment Hours and Wages." *Community, Work, and Family*. 14(2), pp. 139-147.
- Morley J., F. Sanoussi, I. Biletta, and F. Wolf (2009), "Comparative analysis of working time in the European Union", Eurofound, <http://www.eurofound.europa.eu/ewco/studies/tn0803046s/tn0803046s.htm>
- OECD (2010), "How Good is Part-Time Work?," in *Employment Outlook*, OECD Publishing, Paris, pp. 201-266 ([www.oecd.org/els/employment/outlook](http://www.oecd.org/els/employment/outlook)).
- OECD (2011), *Doing Better for Families*, OECD Publishing, Paris.
- OECD (2012a), *Closing the Gender Gap: Acting Now!* OECD Publishing, Paris.
- OECD (2012b), *OECD Family database*, [www.oecd.org/social/family/database](http://www.oecd.org/social/family/database)
- O'Reilly, J. and C. Fagan, (eds.) *Part-time prospects: an international comparison of part-time work in Europe, North America and the Pacific Rim*, Routledge, London, 1998.
- Pesaran M. (2004), "General diagnostic tests for cross section dependence in panels", *IZA Discussion Paper No.1240* Institut für Zukunft der Arbeit (Institute for the Study of Labour), Bonn.
- Pesaran M. (2006), "Estimation and inference in large heterogeneous panels with a multifactor error structure", *Econometrica*, Vol. 74, No. 4), pp. 967-1012.
- Pesaran M. and R. Smith (1995). 'Estimating long-run relationships from dynamic heterogeneous panels.' *Journal of Econometrics*, Vol. 68(1): pp.79-113.
- Pissarides, C. *et al.* (2003). "Women in the Labour Force: How Well is Europe Doing?," paper presented at the Fifth European Conference of the Fondazione Debenedetti, [www.frdb.org](http://www.frdb.org).
- Polachek, W. (1981). Occupational self-selection: a human capital approach to sex differences in occupational structure. *The Review of Economics and Statistics*, 63, pp. 60-69.
- Ruhm, C. (1998), "The Economic Consequences of Parental Leave Mandates: Lessons from Europe", *Quarterly Journal of Economics*, Vol. 113, No. 1, pp. 285-317, MIT Press, February.

- Soskice D. (2005), “Varieties of Capitalism and Cross-National Gender Differences”, *Social Politics*, Vol. 12, No. 2, pp. 170-79.
- Stock, J. and M. Yogo (2005), “Testing for Weak Instruments in Linear IV regression”, in D. Andrews and J. Stock (eds.), *Identification and Inference for Econometric Models: A Festschrift in Honor of Thomas J. Rothenberg*, Cambridge University Press, Cambridge.
- Tam, H. (2011), “U-shaped Female Labor Participation with Economic Development: Some Panel Data Evidence”, *Economic Letters*, Vol. 110, No. 2, pp. 140-42.
- Thévenon O, and A. Solaz (2013), “Labour Market Effects of Parental Leave Policies in OECD Countries”, OECD Social, Employment and Migration Working Papers, N° 141, OECD Publishing, <http://dx.doi.org/10.1787/5k8xb6hw1wjf-en>
- Thévenon, O. (2006), “Régimes d’Etat Social et convention familiale: une analyse des regulations emploi-famille”, *Economies et Sociétés*, série Socio-économie du travail, Vol. 27, No. 6, pp. 137-71.
- Thévenon, O. (2009), “Increased Women's Labour Force Participation in Europe: Progress in the Work-Life Balance or Polarization of Behaviours?”, *Population*, English edition, Vol. 64, No. 2, pp. 235-72.
- Thévenon, O. (2011), “Family Policies in OECD countries: A Comparative Analysis”, *Population and Development Review*, Vol. 37, No. 2, pp. 57-87.
- Unnk W., M. Kalmijn, and R. Muffels (2005), “The impact of young children on women’s labour supply. A reassessment of institutional effects in Europe”, *Acta Sociologica*, 48(1), pp. 41-62.



## APPENDIX 1: ADDITIONAL TABLES

**Table A1. Descriptive statistics of policies by welfare regimes**

**Group of English speaking countries:** Australia, Canada, Ireland, New Zealand, the United Kingdom and the United States

		<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>	<b>Observations</b>
<b>Spending on family benefits</b> (US\$ PPP)	Overall	1377	1180	125	5392	N = 126
	Between		775	194	2187	n= 6
	Within		942	-185	5085	$\bar{T}=21$
<b>Spending on childcare services</b> (per child under age 3, US\$ PPP)	Overall	1293	1957	125	5392	N = 168
	Between		598	194	2187	n= 6
	Within		1878	-185	5085	$\bar{T}=28$
<b>Spending on leave and birth grants</b> (per childbirth, US\$ PPP)	Overall	1064	1746	0	10482	N = 165
	Between		1116	0	2885	n= 6
	Within		1416	-1256	9604	$\bar{T}=28$
<b>Weeks of paid leave</b>	Overall	10	12	0	50	N = 168
	Between		11	0	27.3	n= 6
	Within		6.3	-1.5	33.4	$\bar{T}=28$
<b>Service coverage for children under age 3</b>	Overall	16.1	9.4	2	35.1	N = 168
	Between		7.7	7.9	30.8	n= 18
	Within		6.7	3.2	35.2	$\bar{T}=13.5$

**Group of Southern European countries: Italy, Portugal, Spain**

Variable		Mean	Std. Dev.	Min	Max	Observations
Spending on family benefits (US\$ PPP)	Overall	410	271	53	1213	N = 80
	Between		150	270	570	n= 3
	Within		241	121	1096	$\bar{T}=26.6$
Spending on childcare services (per child under age 3, US\$ PPP)	Overall	1613	2326	0	10559	N = 84
	Between		778	899	2443	n= 3
	Within		2236	-544	9729	$\bar{T}=28$
Spending on leave and birth grants (per childbirth, US\$ PPP)	Overall	1882	14666	243	6924	N = 80
	Between		800	1083	2683	n= 3
	Within		1314	161	6983	$\bar{T}=26.6$
Weeks of paid leave	Overall	26.0	15	12.8	48	N = 84
	Between		19	14.7	48	n= 3
	Within		1.7	24.0	32.6	$\bar{T}=28$
Service coverage for children under age 3	Overall	14.2	13.8	2	50	N = 64
	Between		7.4	6.8	21.1	n= 3
	Within		12.4	-1.06	46.9	$\bar{T}=21.3$

**Group of Continental countries: Austria, Belgium, France, Germany, the Netherlands**

Variable		Mean	Std. Dev.	Min	Max	Observations
Spending on family benefits (US\$ PPP)	Overall	1465	813	0	3867	N = 110
	Between		432	855	1946	n= 5
	Within		714	-480	3386	$\bar{T}=22$
Spending on childcare services (per child under age 3, US\$ PPP)	Overall	3216	3067	0	16656	N = 140
	Between		987	2244	4389	n= 5
	Within		2936	-784	15700	$\bar{T}=28$
Spending on leave and birth grants (per childbirth, US\$ PPP)	Overall	4164	3556	0	1352	N = 132
	Between		3358	174	9272	n= 5
	Within		2123	-1424	8790	$\bar{T}=26.4$
Weeks of paid leave	Overall	46	43	12	162	N = 140
	Between		33	14.7	94	n= 5
	Within		30	9.4	171	$\bar{T}=28$
Service coverage for children under age 3	Overall	20.5	13.5	0.9	53.9	N = 102
	Between		13	4.0	37	n= 5
	Within		6.1	-8.5	37.4	$\bar{T}=20.4$

**Group of Nordic countries: Denmark, Finland, Norway, and Sweden**

Variable		Mean	Std. Dev.	Min	Max	Observations
Spending on family benefits (US\$ PPP)	Overall	1665	742	357	3240	N = 106
	Between		431	1330	2315	n= 4
	Within		651	-197	2594	$\bar{T}=26.5$
Spending on childcare services (per child under age 3, US\$ PPP)	Overall	7746	4341	0	19405	N = 112
	Between		3194	4459	10595	n= 4
	Within		3335	1428	17548	$\bar{T}=28$
Spending on leave and birth grants (per childbirth, US\$ PPP)	Overall	12499	5963	1374	25982	N = 105
	Between		2178	9624	14706	n= 4
	Within		5660	-832	23775	$\bar{T}=26.5$
Weeks of paid leave	Overall	65.7	49	18	161	N = 112
	Between		49	30.4	138	n= 4
	Within		24	-36	87	$\bar{T}=28$
Service coverage for children under age 3	Overall	36.5	13.2	18	66	N = 79
	Between		11.1	21.7	48.6	n= 4
	Within		9	7.8	53.8	$\bar{T}=19.75$

Table A2. Effects of interactions across institutions on female labour force participation

	OLS	IV	F-test on instruments (p-value)	OLS with country-specific variables
Spending on leave * spending on family benefits	-0.005 (0.018)	-0.016 (0.055)	2.1 (0.14)	-0.000 (0.000)
Spending on leave * spending on childcare services	0.002 (0.009)	-0.010 (0.033)	5.4 (0.021)	0.000 (0.000)
Spending on leave * weeks of paid leave	-0.000 (0.000)	0.031* (0.017)	215.7 (0.000)	-0.000 (0.000)
Spending on leave * CC enrolment	-0.0575*** (0.013)	-1.503 (5.285)	0.07 (0.79)	-0.001*** (0.000)
Spending on leave * Strictness of employment protection	0.224** (0.098)	2.94 (13.45)	0.04 (0.83)	0.0196*** (0.006)
Spending on leave * Rel. tax rate of 2 <sup>nd</sup> earner	-0.053 (0.049)	0.032 (0.028)	19.2 (0.00)	-0.004 (0.003)
Spending on family benefits * spending on childcare services	-0.006 (0.008)	0.040 (0.062)	1.1 (0.28)	-0.000 (0.000)
Spending on family benefits * weeks of paid leave	-0.0018*** (0.000)	0.139*** (0.028)	24.3 (0.00)	-0.000 (0.000)
Spending on family benefits * CC enrolment	-0.044*** (0.011)	-0.220 (0.192)	1.4 (0.23)	-0.001*** (0.000)
Spending on family benefits * Strictness of employment protection	0.377** (0.145)	0.526 (0.332)	2.1 (0.14)	0.022*** (0.007)
Spending on family benefits * Rel. tax rate of 2 <sup>nd</sup> earner	-0.0421 (0.040)	-0.037 (0.033)	37.3 (0.00)	-0.000 (0.003)
Spending on childcare services * weeks of paid leave	-0.0008** (0.0003)	0.051*** (0.016)	45.5 (0.00)	-0.000** (0.000)
Spending on childcare services * CC enrolment	-0.0197*** (0.0073)	-0.086 (0.057)	3.9 (0.04)	-0.0006** (0.0002)
Spending on childcare services * Strictness of employment protection	0.113*** (0.040)	0.470 (0.748)	0.3 (0.57)	0.005* (0.002)
Spending on childcare services * Rel. tax rate of 2 <sup>nd</sup> earner	-0.0051 (0.025)	0.005 (0.026)	20.9 (0.00)	-0.000 (0.001)
Leave duration * CC enrolment	0.001*** (0.000)	0.176** (0.075)	8.2 (0.00)	0.0002*** (0.0000)
Leave duration * Strictness of employment protection	0.002 (0.001)	-0.197** (0.093)	9.3 (0.00)	0.000 (0.000)
Leave duration * Rel. tax rate of 2 <sup>nd</sup> earner	-0.002** (0.001)	0.185** (0.078)	16.2 (0.00)	-0.0002* (0.0001)
CC enrolment * Strictness of employment protection	0.233*** (0.079)	0.310* (0.186)	6.2 (0.01)	0.011* (0.006)
CC enrolment * Rel. tax rate of 2 <sup>nd</sup> earner	0.086 (0.101)	0.089 (0.073)	2.0 (0.15)	0.006 (0.005)
Epr * Rel. tax rate of 2 <sup>nd</sup> earner	-0.011 (0.286)	0.007 (0.153)	1.1 (0.28)	-0.009 (0.017)
Number of observations	167	167	167	167
R2	0.986	0.999	0.999	0.944

The dependent and independent variables are expressed in log units. Estimates by two-stage least squares with robust heteroskedasticity-consistent standard errors in brackets. \*\*\*, \*\* and \* : significant at the 1%, 5% and 10%, respectively.

See Table 1 and Appendix 2 for the definition of variables.

**Table A3. Determinants of female labour force participation –additional results**

Women aged 25-54, OECD 1980-2007

	Pooles OLS	First diff <sup>1</sup>	CCEP <sup>2</sup>	2SLS <sup>2</sup>	Mean group <sup>3</sup>
<b>Employment in services</b>	0.006*** (0.001)	0.005*** (0.000)	0.007* (0.003)	0.003*** (0.000)	0.005*** (0.001)
<b>Employment in the public sector</b>	-0.079 (0.121)	-0.093 (0.187)	-0.316 (0.511)	0.093 (0.136)	2.60 (2.05)
<b>Incidence of part-time employment</b>	0.191 (0.127)	0.120** (0.058)	0.039 (0.372)	0.263*** (0.048)	0.684 (0.733)
<b>Strictness of employment protection</b>	-0.091*** (0.029)	-0.037* (0.020)	-0.039 (0.044)	0.008 (0.014)	0.067 (0.047)
<b>Average years in education</b>	-0.274*** (0.055)	0.516* (0.266)	1.238* (0.563)	0.704*** (0.120)	4.395 (3.463)
<b>Unemployment rate</b>	-0.110*** (0.021)	-0.033*** (0.012)	-0.005 (0.043)	-0.023*** (0.006)	0.028 (0.051)
<b>Spending on leave and birth grants</b>	0.038** (0.015)	-0.000 (0.015)	-0.029 (0.040)	0.021** (0.009)	0.028 (0.034)
<b>Spending on family benefits</b>	0.115*** (0.016)	0.041* (0.024)	0.028 (0.027)	0.018* (0.011)	0.166 (0.135)
<b>Spending on childcare services</b>	-0.051*** (0.008)	-0.000 (0.003)	0.004 (0.024)	0.007** (0.002)	0.009 (0.007)
<b>Weeks of paid leave</b>	0.046*** (0.011)	0.002 (0.003)	-0.020 (0.028)	0.032*** (0.006)	-0.039 (0.031)
<b>Service coverage for children under age 3</b>	0.132*** (0.010)	0.007 (0.006)	0.012 (0.017)	0.014* (0.008)	0.035 (0.084)
<b>Tax rate of second earner</b>	-0.135*** (0.017)	-0.060** (0.025)	-0.014 (0.098)	0.049** (0.021)	-0.252 (0.158)
<b>No. of obs.</b>	167	167	167	144	59
<b>R<sup>2</sup></b>	0.944	0.997	0.990	..	..

The dependent and independent variables are expressed in log units. Estimates by two-stage least squares with robust heteroskedasticity-consistent standard errors in brackets. \*\*\*, \*\* and \* : significant at 1%, 5% and 10%, respectively.

1) Estimation based on the first-differences in dependent and independent variables.

2) The Common Correlated Effects (Pooled or 2SLS) estimators account for unobserved common factors with heterogeneous factor loadings by using cross-section averages of the dependent and independent variables as additional regressors.

3) The mean group estimates are obtained by estimating the effect of the independent variables separately for each country and then taking the mean (Pesaran and Smith, 1995).

Country coverage: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, the United Kingdom and the United States.

## APPENDIX 2: DEFINITION OF VARIABLES AND DATA SOURCES

### **Public employment rate:**

Public employment is defined as a share of the working-age population (15-64 age group), in %.

Source: OECD, Database on Labour Force Statistics; OECD, Annual Labour Force Statistics.

### **Aggregate unemployment (employment) rate:**

Definition: unemployed (employed) workers as share of the labour force (working-age population), in %. Aggregate rates refer to the 15-64 age group.

Source: OECD, Database on Labour Force Statistics; OECD, Annual Labour Force Statistics.

### **Employment Protection Legislation (EPL):**

The OECD indicators of employment protection measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. It is important to note that employment protection refers to only one dimension of the complex set of factors that influence labour market flexibility. For more information, see: <http://www.oecd.org/employment/emp/oecdindicatorsofemploymentprotection.htm>

### **Number of leave weeks:**

Definition: maximum number of leave weeks that can be taken by a mother for the birth of a first child as maternity leave, parental leave, and childcare leave.

Data source: OECD Family database (Indicator PF2.5 Trends in leave entitlements around childbirth).

### **Public spending for families:**

The main data source is the OECD “Social Expenditures Database” (SOCX data).

[www.oecd.org/els/social/expenditure](http://www.oecd.org/els/social/expenditure)

Public spending on family benefits includes financial support that is exclusively for families and children. Spending recorded in other social policy areas such as health and housing also assists families, but not exclusively, and it is not included here. One can estimate separately:

*Child-related cash transfers to families with children*: this includes child allowances, with payment levels that in some countries vary with the age of the child, and sometimes are income-tested, and income support for lone-parent families (in some countries)<sup>13</sup>. Public income support payments during periods of parental leave and birth grant are identified separately.

These data do not include tax expenditures (i.e., tax allowances and tax credits for childcare expenses) or family-related in-work benefits which are counted as part of active labour market programmes. In English-speaking countries, this type of expenditure is likely to be greater (e.g. Canada and the United States).

Details for each country available at the address:

[http://stats.oecd.org/Index.aspx?datasetcode=SOCX\\_AGG](http://stats.oecd.org/Index.aspx?datasetcode=SOCX_AGG)

*Public spending on services for families with children* includes direct financing and subsidising of providers of childcare and early education facilities, public childcare support through earmarked payments to parents, public spending on assistance for young people and residential facilities, public spending on family services, including centre-based facilities and home help services for families in need.

### **Enrolment in childcare services:**

The enrolment rates presented here for 0-2 year olds concern formal childcare arrangements such as group care in childcare centres, registered childminders based in their own homes looking after one or more children and care provided by a carer at the child's home.

Data on the participation of very young children (under 3 years) in formal day-care services have been taken from different sources.

Source: OECD Family database [www.oecd.org/social/family/database](http://www.oecd.org/social/family/database)

### **Relative marginal tax rates on second earners (as in Jaumotte 2004):**

Definition: ratio of the marginal tax rate on the second earner to the tax wedge for a single-earner couple with two children earning 100% of AW earnings. The marginal tax rate on the second earner is in turn defined as the share of his/her earnings which goes into paying additional household taxes:

The tax rate on the second earner is so defined as the share of his/her earnings which goes into paying additional household taxes and is calculated as follows:

---

<sup>13</sup> Data on cash transfers for Australia, Ireland, New Zealand and the United Kingdom include spending on categorical income support benefits for lone-parent families. Other countries also support lone-parent families in need, but through general social assistance type payments.

$$\text{Tax second earner} = 1 - \frac{(\text{Household net Income})_B - (\text{Household Net Income})_A}{(\text{Household Gross Income})_B - (\text{Household Gross Income})_A}$$

where A denotes the situation in which the woman does not earn any income and B denotes the situation in which the woman's gross earnings are a certain percentage of the average wage (AW). Two different tax rates are calculated, depending on whether the woman is assumed to work full-time ( $X = 67\%$ ) or part-time ( $X = 33\%$ ). In all cases it is assumed that the man earns 100% of AW and that the couple has two children. The difference between gross and net income includes income taxes, employee's social security contribution, and universal cash benefits. Means-tested benefits based on household income are not included (apart from some child benefits that vary with income) due to lack of time-series information. However, such benefits are usually less relevant at levels of household income above 100% of AW.

Source: OECD calculations based on OECD "tax models", *Taxing wages*, OECD Publishing.

### **Tax incentives to part-time**

The incentives to share market work between spouses are measured by the increase in household disposable income between a situation where the man earns the entire household income (133% of APW), and a situation where both partners share earnings (100% and 33% of APW respectively). The couple is assumed to have two children. Denoting the first scenario by A, and the second by B, the calculation is simply:

$$\frac{(\text{Household net Income})_B - (\text{Household Net Income})_A}{(\text{Household Net Income})_A}$$

Source: OECD calculations based on OECD "tax models". *Taxing wages*, OECD Publishing.



## Publications des Documents de Travail

- N° 201. – Olivier THÉVENON, *Institutional drivers of female labour Force participation in OECD countries*, janvier, 40 p.
- N° 200. – Olivier THÉVENON, *Politiques familiales, fécondité et emploi des femmes : apports et limites des comparaisons au niveau national/Family policy, fertility and women's employment: value and limitations of national comparisons*, janvier, 44 p
- N° 199. – Olivier THÉVENON et Anne SOLAZ, *Parental Leave and Labour Market Outcomes: Lessons from 40 Years of Policies in OECD countries*, janvier, 38 p
- N° 198. – Marie DIGOIX, *Coming out et ordre normatif en Islande*, octobre 2013, 134 p.
- N° 197. – *Actes de la Journée Doctorale de l'Ined du 30 juin 2011*, septembre 2013, 220 p.
- N° 196. – Patrick SIMON, Vincent TIBERJ, *Sécularisation ou regain religieux : la religion des immigrés et de leurs descendants*, juillet 2013, 38 p.
- N° 195. – Gilles PISON, Laetitia DOUILLOT, Géraldine DUTHÉ, Malick KANTE, Cheikh SOKHNA, Jean-François TRAPE, *Successes and Failures in the Fight against Child Mortality in Sub-Saharan Africa: Lessons from Senegal*, juin 2013, 34 p.
- N° 194. – François HÉRAN, *L'usage des langues dans la recherche publique en France, d'après l'enquête Elvire*, juin 2013, 90 p.
- N° 193. – André WIELKI, *Pratique de Sas Windows ...9.3*, Volume 2, mars 2013, 255 p.
- N° 192. – André WIELKI, *Pratique de Sas Windows v 9.2...*, Volume 1, mars 2013, 211 p.
- N° 191. – Carole BONNET, Alice KEOGH, Benoît RAPOPORT, *Quels facteurs pour expliquer les écarts de patrimoine entre hommes et femmes en France ?*, mars 2013, 44 p.  
– Carole BONNET, Alice KEOGH, Benoît RAPOPORT, *How can we explain the gender wealth gap in France?*, mars 2013, 46 p.
- N° 190. – Christelle HAMEL et Muriel MOISY, *Immigrés et descendants d'immigrés face à la santé*, Série Trajectoires et Origines (TeO) : enquête sur la diversité des populations en France, janvier 2013, 50 p.
- N° 189. – Christelle HAMEL, Bertrand LHOMMEAU, Ariane PAILHÉ, Emmanuelle SANTELLI, *Rencontrer son conjoint dans un espace multiculturel et international*, Série Trajectoires et Origines (TeO) : enquête sur la diversité des populations en France, janvier 2013, 32 p.
- N° 188. – Cora Leonie MEZGER KVEDER, *Temporary Migration: A Review of the literature*, janvier 2013, 44 p.
- N° 187. – Arnaud RÉGNIER-LOILLIER, Présentation, questionnaire et documentation de la troisième vague de l'*Étude des relations familiales et intergénérationnelles* (Erfi-GGS 2011), décembre 2012, 328 p.
- N° 186. – Zahia OUADAH-BEDIDI et Jacques VALLIN, *Fécondité et politique de limitation des naissances en Algérie : une histoire paradoxale*, octobre 2012, 20 p.
- N° 185. – Zahia OUADAH-BEDIDI, *Fécondité et nuptialité différentielles en Algérie : l'apport du recensement de 1998*, octobre 2012, 42 p.
- N° 184. – Maud LESNÉ et Patrick SIMON, *La mesure des discriminations dans l'enquête « Trajectoires et Origines »*, septembre 2012, 32 p.
- N° 183. – Yael BRINBAUM, Mirna SAFI, Patrick SIMON, *Les discriminations en France: entre perception et expérience*, septembre 2012, 34 p.
- N° 182. – Dominique MEURS, Bertrand LHOMMEAU et Mahrez OKBA, *Emplois, salaires et mobilité intergénérationnelle*, 2012, 48 p.
- N° 181. – Christelle HAMEL et Ariane PAILHÉ, *Former une famille en contexte migratoire*, septembre 2012, 35 p.
- N° 180. – Marie-Thérèse LETABLIER et Anne SALLES, *Labour market uncertainties for the young workforce in France and Germany: implications for family formation and fertility*, juillet 2012, 79 p.
- N° 179. – Aline F. DÉSESQUELLES, *Self-Rated Health of French Prison Inmates: Does Time Spent Behind Bars Matter?*, mai 2012, 14 p.
- N° 178. – Aline F. DÉSESQUELLES, *Self-Rated Health of French Prison Inmates: Measurement and Comparison with Other Health Indicators*, mai 2012, 20 p.
- N° 177. – Béatrice VALDES, Khalid ELJIM, Christophe BERGOUIGNAN, Patrick FESTY, Jean-Paul SARDON (coord.), *Évaluer et valoriser la base européenne de micro-données de recensement. Les résultats du projet ANR CENSUS*, janvier 2012, 355 p.
- N° 176. – Patrick SIMON et Vincent TIBERJ, *Les registres de l'identité. Les immigrés et leurs descendants face à l'identité nationale*, janvier 2012, 30 p.

- N° 175. – Vincent TIBERJ et Patrick SIMON, *La fabrique du citoyen: origines et rapport au politique en France*, janvier 2012, 32 p.
- N° 174. – Angela LUCI et Olivier THÉVENON, *The impact of family policy packages on fertility trends in developed countries*, janvier 2012, 40 p.
- N° 173. – Arnaud RÉGNIER-LOILIER, Leila SABONI, Béatrice VALDES, *Presentation and Modifications to the Generations and Gender Survey Questionnaire in France (Wave 2). L'Étude des relations familiales et intergénérationnelles (Érfi.)*, novembre 2011, 146 p.
- N° 172. – Cris BEAUCHEMIN, Hugues LAGRANGE, Mirna SAFI, *Transnationalism and immigrant assimilation in France: between here and there?*, Imiscoe Annual Conference, Workshop 6: Integration and transnationalism: how are the two connected? Warsaw, Poland – 7-9 September 2011, 2011, 26 p.
- N° 171. – Jean-Louis PAN KÉ SHON, Claire SCODELLARO, *Discrimination au logement et ségrégation ethno-raciale en France*, 2011, 30 p.
- N° 170. – Audrey SIEURIN, Emmanuelle Cambois, Jean-Marie Robine, *Les espérances de vie sans incapacité en France: Une tendance récente moins favorable que dans le passé*, 2011, 30 p.
- N° 169. – Ariane PAIHLÉ et Anne SOLAZ, *Does job insecurity cause missing births in a high fertility European country. Evidence for France*, 2011, 32 p.
- N° 168. – Équipe TeO, coordonné par Patrick SIMON, Cris BEAUCHEMIN et Christelle HAMEL, *Trajectoire et Origines. Enquête sur la diversité des populations en France. Premiers résultats*, 2010, 152 p.
- N° 167. – Angela LUCI, Olivier THEVENON, *Does economic development drive the fertility rebound in OECD countries?*, 2010, 45 p.
- N° 166. – Cris BEAUCHEMIN, Lama KABBANJI, Bruno SCHOU MAKER, *Sept communications présentées lors de la table ronde sur les migrations entre l'Afrique et l'Europe*, Dakar, Sénégal, 21 novembre 2009, 244 p.
- N° 165. – Arnaud RÉGNIER-LOILIER, Présentation, questionnaire et documentation de la seconde vague de l'étude des relations familiales et intergénérationnelles (Erfi-GGS2), 211 p.
- N° 164. – Carole BONNET, Anne SOLAZ, Elisabeth ALGAVA, *La séparation conjugale affecte-t-elle l'activité professionnelle? Une estimation basée sur les méthodes d'appariement*, 2009, 36 p.
- N° 163. – Olivia EKERT- JAFFÉ, *Le coût du temps consacré aux enfants: contraintes de temps et activité féminine/ The Real Time Cost of Children in France is Equally Shared by Mothers and Fathers*, 2009, 48 p.
- N° 162. – Laurent GOBILLON et François-Charles WOLFF, *Housing and location choices of retiring households: Evidence from France*, 2009, 28 p.
- N° 161. – Matthieu SOLIGNAC, *Les politiques de conciliation vie professionnelle/vie familiale menées par les employeurs: élaboration d'une typologie des établissements de l'Enquête Familles-Employeurs*, 2009, 143 p.
- N° 160. – Géraldine DUTHÉ, Raphaël LAURENT, Gilles PISON, *Vivre et mourir après 60 ans en milieu rural africain. Isolement, recours aux soins et mortalité des personnes âgées à Mlomp*, 2009, 26 p.
- N° 159. – Nathalie DONZEAU et Jean-Louis PAN KÉ SON, *La mobilité résidentielle depuis la fin des Trente Glorieuses*, 2009, 34 p.
- N° 158. – Olivier THÉVENON, *The costs of raising children and the effectiveness of policies to support parenthood in European countries: a Literature Review* 2009, 612 p.
- N° 157. – Jean-Louis PAN KÉ SON, *L'émergence du sentiment d'insécurité en quartiers défavorisés. Dépassement du seuil de tolérance... aux étrangers ou à la misère?* 2009, 20 p.
- N° 156. – Maryse Marpsat, *The Ined Research on Homelessness, 1993-2008*, 2008, 218 p.
- N° 155. – Éva BEAUJOUAN, Anne SOLAZ, *Childbearing after separation: Do second unions make up for earlier missing births? Evidence from France*, 2008, 24 p.
- N° 154. – Carole BONNET, Laurent GOBILLON, Anne LAFERRÈRE, *The effect of widowhood on housing and location choices*, 2008, 40 p.
- N° 153. – Louise MARIE DIOP-MAES, *La population ancienne de l'Afrique subsaharienne. Les éléments d'évaluation*, 2008, 20 p.
- N° 152. – Traduction en Russe du N° 121.
- N° 151. – P. FESTY, J. ACCARDO, D. DEMAILLY, L. PROKOFIEVA, I. KORTCHAGINA, A. SZUKIELOJC-BIENKUNSKA, L. NIVOROZHKINA, L. OVTCHAROVA, M. SEBTI, A. PATERNO, S. STROZZA, I. ELISEEVA, A. SHEVYAKOV, *Mesures, formes et facteurs de la pauvreté. Approches comparative*, 2008, 196 p.
- N° 150. – Géraldine DUTHÉ, Serge H. D. FAYE, Emmanuelle GUYAVARCH, Pascal ARDUIN, Malick A. KANTE, Aldiouma DIALLO, Raphaël LAURENT, Adama MARRA, Gilles PISON, *La détermination des causes de décès par autopsie verbale: étude de la mortalité palustre en zone rurale sénégalaise*, 2008, 42 p.
- N° 149. – Maryse MARPSAT, *Services for the Homeless in France. Description, official statistics, client recording of information. A report for the European Commission*, 2007, 84 p.
- N° 148. – Olivier THÉVENON, *L'activité féminine après l'arrivée d'enfants: disparités et évolutions en Europe à partir des enquêtes sur les Forces de travail, 1992-2005*, 2007, 56 p.

- N° 147. – Magali BARBIERI, *Population en transition. Dix communications présentées au XXV<sup>e</sup> Congrès général de la population, Tours, France, 18-23 juillet 2005*, 2007, 201 p.
- N° 146. – François CHAPIREAU, *La mortalité des malades mentaux hospitalisés en France pendant la deuxième guerre mondiale*, 2007, 36 p.
- N° 145. – Maryse MARPSAT, *Explorer les frontières. Recherches sur des catégories « en marge »*, Mémoire présenté en vue de l'habilitation à diriger des recherches en sociologie, 2007, 274 p.
- N° 144. – Arnaud RÉGNIER-LOILIER et Pascal SEBILLE, Modifications to the Generations and Gender Surveys questionnaire in France (wave 1), 192 p.
- N° 143. – Ariane PAILHÉ et Anne SOLAZ, *L'enquête Familles et employeurs. Protocole d'une double enquête et bilan de collecte*, 180 p.
- N° 142. – Annie BACHELOT et Jacques de MOUZON, *Données de l'enquête « Caractéristiques des couples demandant une fécondation in vitro en France »*, 2007, 44 p.
- N° 141. – Olivia EKERT-JAFFÉ, Shoshana GROSSBARD et Rémi MOUGIN, *Economic Analysis of the Childbearing Decision*, 2007, 108 p.
- N° 140. – Véronique HERTRICH and Marie LESCLINGAND, *Transition to adulthood and gender: changes in rural Mali*
- N° 139. – Patrick SIMON et Martin CLÉMENT, *Rapport de l'enquête « Mesure de la diversité ». Une enquête expérimentale pour caractériser l'origine*, 2006, 86 p.
- N° 138. – Magali BARBIERI, Alfred NIZARD et Laurent TOULEMON, *Écart de température et mortalité en France*, 2006, 80 p.
- N° 137. – Jean-Louis PAN KÉ SHON, *Mobilités internes différentielles en quartiers sensibles et ségrégation*, 2006, 42 p.
- N° 136. – Francisco MUNOZ-PÉREZ, Sophie PENNEC, avec la collaboration de Geneviève Houriet Segard, *Évolution future de la population des magistrats et perspectives de carrière, 2001-2040*, 2006, XXX + 114 p.
- N° 135. – Alexandre DJIRIKIAN et Valérie LAFLAMME, sous la direction de Maryse MARPSAT, *Les formes marginales de logement. Étude bibliographique et méthodologique de la prise en compte du logement non ordinaire*, 2006, 240 p.
- N° 134. – Catherine BONVALET et Éva LELIÈVRE, *Publications choisies autour de l'enquête « Biographies et entourage »*, 2006, 134 p.
- N° 133. – Arnaud RÉGNIER-LOILIER, *Présentation, questionnaire et documentation de l'« Étude des relations familiales et intergénérationnelles » (Erfi). Version française de l'enquête « Generations and Gender Survey » (GGS)*, 2006, 238 p.
- N° 132. – Lucie BONNET et Louis BERTRAND (sous la direction de), *Mobilités, habitat et identités*, Actes de la journée d'étude « Jeunes chercheurs ». Le logement et l'habitat comme objet de recherche. Atelier 3, 2005, 92 p.
- N° 131. – Isabelle FRECHON et Catherine Villeneuve-Gokalp, *Étude sur l'adoption*, 2005, 64 p.
- N° 130. – Dominique MEURS, Ariane PAIHLÉ et Patrick SIMON, *Mobilité intergénérationnelle et persistance des inégalités. L'accès à l'emploi des immigrés et de leurs descendants en France*, 2005, 36 p.
- N° 129. – Magali MAZUY, Nicolas RAZAFINDRATSIMA, Élise de LA ROCHEBROCHARD, *Déperdition dans l'enquête « Intentions de fécondité »*, 2005, 36 p.
- N° 128. – Laure MOGUEROU et Magali BARBIERI, *Population et pauvreté en Afrique. Neuf communications présentées à la IV<sup>e</sup> Conférence africaine sur la population*, Tunis, Tunisie, 8-12 décembre 2003, 2005, 184 p.
- N° 127. – Jean-Louis PAN KÉ SHON, *Les sources de la mobilité résidentielle. Modifications intervenues sur les grandes sources de données dans l'étude des migrations*, 2005, 30 p.
- N° 126. – Thierry DEBRAND et Anne-Gisèle PRIVAT, *L'impact des réformes de 1993 et de 2003 sur les retraites. Une analyse à l'aide du modèle de microsimulation Artémis*, 2005, 28 p.
- N° 125. – Kees WAALDIJK (ed), *More or less together: levels of legal consequences of marriage, cohabitation and registered partnership for different-sex and same-sex partners: a comparative study of nine European countries*, 2005, 192 p. (s'adresser à Marie DIGOIX)
- N° 124. – Marie DIGOIX et Patrick FESTY (eds), *Same-sex couples, same-sex partnerships, and homosexual marriages: A Focus on cross-national differentials*, 2004, 304 p.
- N° 123. – Marie DIGOIX et Patrick FESTY (sous la dir.), *Séminaire « Comparaisons européennes », années 2001-2002*, 2004, 220 p.
- N° 122. – Emmanuelle GUYAVARCH et Gilles PISON, *Les balbutiements de la contraception en Afrique au Sud du Sahara*, septembre 2004, 48 p.
- N° 121. – Maryse JASPARD et Stéphanie CONDON, *Genre, violences sexuelles et justice*. Actes de la journée-séminaire du 20 juin 2003, 2004, 135p.
- N° 120. – Laurent TOULEMON et Magali MAZUY, *Comment prendre en compte l'âge à l'arrivée et la durée de séjour en France dans la mesure de la fécondité des immigrants ?* 2004, 34 p.
- N° 119. – Céline CLÉMENT et Bénédicte GASTINEAU (coord.), *Démographie et sociétés*. Colloque international « Jeunes Chercheurs », Cerpos-Université Paris X-Nanterre, 1<sup>er</sup> et 2 octobre 2002, 2003, 350 p.

- N° 118. – Monique BERTRAND, Véronique DUPONT et France GUÉRIN-PACE (sous la dir.), *Espaces de vie. Une revue des concepts et des applications*, 2003, 188 p.
- N° 117. – Stéphanie CONDON et Armelle ANDRO, *Questions de genre en démographie. Actes de la journée du 22 juin 2001*, 2003, 128 p.
- N° 116. – Maryse JASPARD et l'équipe Enveff, *Le questionnaire de l'enquête Enveff. Enquête nationale sur les violences envers les femmes en France*, 2003, 10 + 88 p.
- N° 115. – Zahia OUADAH-BEDIDI et Jacques VALLIN, *Disparités régionales de l'écart d'âge entre conjoints en Algérie. Évolution depuis 1966*, 2003, 32 p.
- N° 114. – Magali MAZUY, *Situations familiales et fécondité selon le milieu social. Résultats à partir de l'enquête EHF de 1999*, 2002, 60 p.
- N° 113. – Jean-Paul SARDON, *Fécondité et transition en Europe centrale et orientale*, 2002, 38 p.
- N° 112. – Thérèse LOCOH, *Deux études sur la fécondité en Afrique: 1) Structures familiales et évolutions de la fécondité dans les pays à fécondité intermédiaire d'Afrique de l'Ouest; 2) Baisse de la fécondité et mutations familiales en Afrique sub-saharienne*, 2002, 24 p. et 30 p.
- N° 111. – Thierry DEBRAND et Anne-Gisèle PRIVAT, *Individual real wages over business cycle: The impact of macroeconomic variations on individual careers and implications concerning retirement pensions*, 2002, 38 p.
- N° 110. – Recueil préparé par Amandine LEBUGLE et Jacques VALLIN, *Sur le chemin de la transition. Onze communications présentées au XXIV<sup>e</sup> Congrès général de la population à Salvador de Bahia, Brésil, août 2001*, 2002, 234 p.
- N° 109. – Éric BRIAN, Jean-Marc ROHRBASSER, Christine THÉRÉ, Jacques VÉRON (intervenants et organisateurs), *La durée de vie: histoire et calcul*. Séminaire de la valorisation de la recherche, 7 février 2000, 2002, 70 p.
- N° 108. – France MESLÉ et Jacques VALLIN, *Montée de l'espérance de vie et concentration des âges au décès*, 2002, 20 p.
- N° 107. – Alexandre AVDEEV, *La mortalité infantile en Russie et en URSS: éléments pour un état des recherches*, 2002, 48 p.
- N° 106. – Isabelle ATTANÉ (organisatrice), *La Chine en transition: questions de population, questions de société*. Séminaire de la valorisation de la recherche, 31 janvier et 1<sup>er</sup> février 2001 (s'adresser à Céline PERREL), 2002, 46 p.
- N° 105. – A. AVDEEV, J. BELLENGER, A. BLUM, P. FESTY, A. PAILHÉ, C. GOUSSEFF, C. LEFÈVRE, A. MONNIER, J.-C. SEBAG, J. VALLIN (intervenants et organisateurs), *La société russe depuis la perestroïka: rupture, crise ou continuité?* Séminaire de la valorisation de la recherche, 1<sup>er</sup> mars 2001 (s'adresser à Céline PERREL), 2001, 124 p.
- N° 104. – Jacques VÉRON, Sophie PENNEC, Jacques LÉGARÉ, Marie DIGOIX (éds), *Le contrat social à l'épreuve des changements démographiques - The Social Contract in the Face of Demographic Change*, Actes des 2<sup>e</sup> Rencontres Sauvy, 2001, 386 p.
- N° 103. – Gilles PISON, Alexis GABADINHO, Catherine ENEL, *Mlomp (Sénégal). Niveaux et tendances démographiques; 1985-2000*, 2001, 182 p.
- N° 102. – *La famille en AOF et la condition de la femme*. Rapport présenté au Gouverneur général de l'AOF. par Denise SAVINEAU (1938). Introduction de Pascale Barthélémy, 2001, XXII-222 p.
- N° 101. – Jean-Paul SARDON, *La fécondité dans les Balkans*, 2001, 88 p.
- N° 100. – Jean-Paul SARDON, *L'évolution récente de la fécondité en Europe du Sud*, 26 p.
- N° 99. – S. JUSTEAU, J.H. KALTENBACH, D. LAPEYRONNIE, S. ROCHÉ, J.-C. SEBAG, X. THIERRY et M. TRIBALAT (intervenants et organisateurs), *L'immigration et ses amalgames*. Séminaire de la valorisation de la recherche, 24 mai 2000, 2001, 94 p.
- N° 98. – Juliette HALIFAX, *L'insertion sociale des enfants adoptés. Résultats de l'enquête « Adoption internationale et insertion sociale », 2000 (Ined - Les Amis des enfants du monde)*, 2001, 58 p.
- N° 97. – Michèle TRIBALAT, *Modéliser, pour quoi faire?* 2001, 10 p.
- N° 96. – O. EKERT-JAFFÉ, H. LERIDON, S. PENNEC, I. THÉRY, L. TOULEMON et J.-C. SEBAG (intervenants et organisateurs), *Évolution de la structure familiale*. Séminaire de la valorisation de la recherche, 28 juin 2000, 2001, 110 p.
- N° 95. – A. ANDRO, A. LEBUGLE, M. LESCLINGAND, T. LOCOH, M. MOUVAGHA-SOW, Z. OUADAH-BEDIDI, J. VALLIN, C. VANDERMEERSCH, J. VÉRON, *Genre et développement. Huit communications présentées à la Chaire Quetelet 2000*, 2001, 158 p.
- N° 94. – C. BONVALET, C. CLÉMENT, D. MAISON, L. ORTALDA et T. VICHNEVSKAIA, *Réseaux de sociabilité et d'entraide au sein de la parenté: Six contributions*, 2001, 110 p.
- N° 93. – Magali MAZUY et Laurent TOULEMON, *Étude de l'histoire familiale. Premiers résultats de l'enquête en ménages*, 2001, 100 p.
- N° 92. – *Politiques sociales en France et en Russie*, INED/IPSEP, 2001, 246 p.
- N° 91. – Françoise MOREAU, *Commerce des données sur la population et libertés individuelles*, 2001, 20 p. + Annexes.
- N° 90. – Youssef COURBAGE, Sergio DELLAPERGOLA, Alain DIECKHOFF, Philippe FARGUES, Emile MALET, Elias SANBAR et Jean-Claude SEBAG (intervenants et organisateurs), *L'arrière-plan démographique de l'explosion de violence en Israël-Palestine*. Séminaire de la valorisation de la recherche, 30 novembre 2000, 2000, 106 p.

- N° 89. – Bénédicte GASTINEAU et Elisabete de CARVALHO (coordonné par), *Démographie: nouveaux champs, nouvelles recherches*, 2000, 380 p.
- N° 88. – Gil BELLIS, Jean-Noël BIRABEN, Marie-Hélène CAZES et Marc de BRAEKELEER (modérateur et intervenants), *Génétiq ue et populations*. Séminaire de la valorisation de la recherche, 26 janvier 2000, 2000, 96 p.
- N° 87. – Jean-Marie FIRDION, Maryse MARPSAT et Gérard MAUGER (intervenants), *Étude des sans-domicile: le cas de Paris et de l'Île-de-France*. Séminaire de la valorisation de la recherche, 19 avril 2000, 2000, 90 p.
- N° 86. – François HÉRAN et Jean-Claude SEBAG (responsables modérateurs), *L'utilisation des sources administratives en démographie, sociologie et statistique sociale*. Séminaire de la valorisation de la recherche, 20 septembre 2000, 2000, 170 p.
- N° 85. – Michel BOZON et Thérèse LOCOH (sous la dir.), *Rapports de genre et questions de population. II. Genre, population et développement*, 2000, 200 p.
- N° 84. – Michel BOZON et Thérèse LOCOH (sous la dir.), *Rapports de genre et questions de population. I. Genre et population, France 2000*, 2000, 260 p.
- N° 83. – Stéphanie CONDON, Michel BOZON et Thérèse LOCOH, *Démographie, sexe et genre: bilan et perspectives*, 2000, 100 p.
- N° 82. – Olivia EKERT-JAFFE et Anne SOLAZ, *Unemployment and family formation in France*, 2000, 26 p.
- N° 81. – Jean-Marie FIRDION, *L'étude des jeunes sans domicile dans les pays occidentaux: état des lieux*, 1999, 28 p.
- N° 80. – *Age, génération et activité: vers un nouveau contrat social? Age, cohort and activity: A new "social contract"?*, Actes des 1<sup>res</sup> rencontres Sauvy (s'adresser à Marie DIGOIX), 1999, 314 p.
- N° 79. – Maryse MARPSAT, *Les apports réciproques des méthodes quantitatives et qualitatives: le cas particulier des enquêtes sur les personnes sans domicile*, 1999, 24 p.
- N° 78. – *Les populations du monde, le monde des populations. La place de l'expert en sciences sociales dans le débat public*, Actes de la Table ronde pour l'inauguration de l'Ined, 1999, 54 p.
- N° 77. – Isabelle SÉGUY, Fabienne LE SAGER, *Enquête Louis Henry. Notice descriptive des données informatiques*, 1999, 156 p.
- N° 76. – I. SÉGUY, H. COLENÇON et C. MÉRIC, *Enquête Louis Henry. Notice descriptive de la partie nominative*, 1999, 120 p.
- N° 75. – Anne-Claude LE VOYER (s'adresser à H. LERIDON), *Les processus menant au désir d'enfant en France*, 1999, 200 p.
- N° 74. – Jacques VALLIN et France MESLÉ, *Le rôle des vaccinations dans la baisse de la mortalité*, 1999, 20 p.
- N° 73. – Bernard ZARCA, *Comment passer d'un échantillon de ménages à un échantillon de fratries? Les enquêtes « Réseaux familiaux » de 1976, « Proches et parents » de 1990 et le calcul d'un coefficient de pondération*, 1999, 20 p.
- N° 72. – Catherine BONVALET, *Famille-logement. Identité statistique ou enjeu politique?* 1998, 262 p.
- N° 71. – Denise ARBONVILLE, *Normalisation de l'habitat et accès au logement. Une étude statistique de l'évolution du parc « social de fait » de 1984 à 1992*, 1998, 36 p.
- N° 70. – *Famille, activité, vieillissement: générations et solidarités*. Bibliographie préparée par le Centre de Documentation de l'Ined, 1998, 44 p.
- N° 69. – XXIII<sup>e</sup> Congrès général de la population, Beijing, Chine, 11-17 octobre 1997 :  
*Contribution des chercheurs de l'Ined au Congrès*, 1997, 178 p.  
*Participation of Ined Researchers in the Conference*, 1997, 180 p.
- N° 68. – France MESLÉ et Jacques VALLIN, *Évolution de la mortalité aux âges élevés en France depuis 1950*, 1998, 42 p.
- N° 67. – Isabelle SEGUY, *Enquête Jean-Noël Biraben « La population de la France de 1500 à 1700 ». Répertoire des sources numériques*, 1998, 36 p.
- N° 66. – Alain BLUM, *I. Statistique, démographie et politique. II. Deux études sur l'histoire de la statistique et de la statistique démographique en URSS (1920-1939)*, 1998, 92 p.
- N° 65. – Annie LABOURIE-RACAPÉ et Thérèse LOCOH, *Genre et démographie: nouvelles problématiques ou effet de mode?* 1998, 27 p.
- N° 64. – C. BONVALET, A. GOTMAN et Y. GRAFMEYER (éds), et I. Bertaux-Viame, D. Maison et L. Ortalda, *Proches et parents: l'aménagement des territoires*, 1997.
- N° 63. – Corinne BENVENISTE et Benoît RIANDEY, *Les exclus du logement: connaître et agir*, 1997, 20 p.
- N° 62. – Sylvia T. WARGON, *La démographie au Canada, 1945-1995*, 1997, 40 p.
- N° 61. – Claude RENARD, *Enquête Louis Henry. Bibliographie de l'enquête*, 1997, 82 p.
- N° 60. – H. AGHA, J.-C. CHASTELAND, Y. COURBAGE, M. LADIER-FOULADI, A.H. MEHRYAR, *Famille et fécondité à Shiraz (1996)*, 1997, 60 p.
- N° 59. – Catherine BONVALET, Dominique MAISON et Laurent ORTALDA, *Analyse textuelle des entretiens « Proches et Parents »*, 1997, 32 p.

- N° 58. – B. BACCAÏNI, M. BARBIERI, S. CONDON et M. DIGOIX (éds),  
 Questions de population. Actes du Colloque Jeunes Chercheurs :  
 I. *Mesures démographiques dans des petites populations*, 1997, 50 p.  
 II. *Nuptialité – fécondité – reproduction*, 1997, 120 p.  
 III. *Histoire des populations*, 1997, 90 p.  
 IV. *Économie et emploi*, 1997, 50 p.  
 V. *Vieillesse – retraite*, 1997, 66 p.  
 VI. *Famille*, 1997, 128 p.  
 VII. *Santé – mortalité*, 1997, 136 p.  
 VIII. *Population et espace*, 1997, 120 p.  
 IX. *Migration – intégration*, 1997, 96 p.
- N° 57. – Isabelle SÉGUY et Corinne MÉRIC, *Enquête Louis Henry. Notice descriptive non nominative*, 1997, 106 p.
- N° 56. – Máire Ní BHROLCHÁIN and Laurent TOULEMON, *Exploratory analysis of demographic data using graphical methods*, 1996, 50 p.
- N° 55. – Laurent TOULEMON et Catherine de GUIBERT-LANTOINE, *Enquêtes sur la fécondité et la famille dans les pays de l'Europe (régions ECE des Nations unies). Résultats de l'enquête française*, 1996, 84 p.
- N° 54. – G. BALLAND, G. BELLIS, M. DE BRAEKELEER, F. DEPOID, M. LEFEBVRE, I. SEGUY, *Généalogies et reconstitutions de familles. Analyse des besoins*, 1996, 44 p.
- N° 53. – Jacques VALLIN et France MESLÉ, *Comment suivre l'évolution de la mortalité par cause malgré les discontinuités de la statistique ? Le cas de la France de 1925 à 1993*, 1996, 46p.
- N° 52. – Catherine BONVALET et Eva LELIÈVRE, *La notion d'entourage, un outil pour l'analyse de l'évolution des réseaux individuels*, 1996, 18 p.
- N° 51. – Alexandre AVDEEV, Alain BLUM et Serge ZAKHAROV, *La mortalité a-t-elle vraiment augmenté brutalement entre 1991 et 1995 ?* 1996, 80 p.
- N° 50. – France MESLÉ, Vladimir SHKOLNIKOV, Véronique HERTRICH et Jacques VALLIN, *Tendances récentes de la mortalité par cause en Russie, 1965-1993*, 1995, 70 p. Avec, en supplément, 1 volume d'Annexes de 384 p.
- N° 49. – Jacques VALLIN, *Espérance de vie : quelle quantité pour quelle qualité de vie ?* 1995, 24 p.
- N° 48. – François HÉRAN, *Figures et légendes de la parenté :*  
 I. *Variations sur les figures élémentaires*, 1995, 114 p.  
 II. *La modélisation de l'écart d'âge et la relation groupe/individu*, 1995, 84 p.  
 III. *Trois études de cas sur l'écart d'âge : Touaregs, Alyawara, Warlpiri*, 1995, 102 p.  
 IV. *Le roulement des alliances*, 1995, 60 p.  
 V. *Petite géométrie fractale de la parenté*, 1995, 42 p.  
 VI. *Arbor juris. Logique des figures de parenté au Moyen Age*, 1996, 62 p.  
 VII. *De Granet à Lévi-Strauss*, 1996, 162 p.  
 VIII. *Les vies parallèles. Une analyse de la co-alliance chez les Etoro de Nouvelle-Guinée*, 1996, 80 p.  
 IX. *Ambrym ou l'énigme de la symétrie oblique : histoire d'une controverse*, 1996, 136 p.
- N° 47. – Olivia EKERT-JAFFÉ, Denise ARBONVILLE et Jérôme WITWER, *Ce que coûtent les jeunes de 18 à 25 ans*, 1995, 122 p.
- N° 46. – Laurent TOULEMON, *Régression logistique et régression sur les risques. Deux supports de cours*, 1995, 56 p.
- N° 45. – Graziella CASELLI, France MESLÉ et Jacques VALLIN, *Le triomphe de la médecine. Évolution de la mortalité en Europe depuis le début de siècle*, 1995, 60 p.
- N° 44. – Magali BARBIERI, Alain BLUM, Elena DOLGIKH, Amon ERGASHEV, *La transition de fécondité en Ouzbékistan*, 1994, 76 p.
- N° 43. – Marc De BRAEKELEER et Gil BELLIS, *Généalogies et reconstitutions de familles en génétique humaine*, 1994, 66 p.
- N° 42. – Serge ADAMETS, Alain BLUM et Serge ZAKHAROV, *Disparités et variabilités des catastrophes démographiques en URSS*, 1994, 100 p.
- N° 41. – Alexandre AVDEEV, Alain BLUM et Irina TROITSKAJA, *L'avortement et la contraception en Russie et dans l'ex-URSS : histoire et présent*, 1993, 74 p.
- N° 40. – Gilles PISON et Anabel DESGREES DU LOU, *Bandafassi (Sénégal) : niveaux et tendances démographiques 1971-1991*, 1993, 40 p.
- N° 39. – Michel Louis LÉVY, *La dynamique des populations humaines*, 1993, 20 p.
- N° 38. – Alain BLUM, *Systèmes démographiques soviétiques*, 1992, 14 + X p.

- N° 37. – Emmanuel LAGARDE, Gilles PISON, Bernard LE GUENNO, Catherine ENEL et Cheikh SECK, *Les facteurs de risque de l'infection à VIH2 dans une région rurale du Sénégal*, 1992, 72 p.
- N° 36. – Annabel DESGREES DU LOU et Gilles PISON, *Les obstacles à la vaccination universelle des enfants des pays en développement. Une étude de cas en zone rurale au Sénégal*, 1992, 26 p.
- N° 35. – France MESLÉ, Vladimir SHKOLNIKOV et Jacques VALLIN, *La mortalité par causes en URSS de 1970 à 1987: reconstruction de séries statistiques cohérentes*, 1992, 36 p.
- N° 34. – France MESLÉ et Jacques VALLIN, *Évolution de la mortalité par cancer et par maladies cardio-vasculaires en Europe depuis 1950*, 1992, 48 p.
- N° 33. – Didier BLANCHET, *Vieillesse et perspectives des retraites: analyses démo-économiques*, 1991, 120 p.
- N° 32. – Noël BONNEUIL, *Démographie de la nuptialité au XIX<sup>e</sup> siècle*, 1990, 32 p.
- N° 31. – Jean-Paul SARDON, *L'évolution de la fécondité en France depuis un demi-siècle*, 1990, 102 p.
- N° 30. – Benoît RIANDEY, *Répertoire des enquêtes démographiques: bilan pour la France métropolitaine*, 1989, 24 p.
- N° 29. – Thérèse LOCOH, *Changement social et situations matrimoniales: les nouvelles formes d'union à Lomé*, 1989, 44 p.
- N° 28. – Catherine ENEL, Gilles PISON, et Monique LEFEBVRE, *Migrations et évolution de la nuptialité. L'exemple d'un village joola du sud du Sénégal, Mlomp*, 1989, 26 p.  
(Sénégal) depuis 50 ans, 1<sup>re</sup> édition: 1989, 36 p.; 2<sup>e</sup> édition revue et augmentée: 1990, 48 p.
- N° 27. – Nicolas BROUARD, *L'extinction des noms de famille en France: une approche*, 1989, 22 p.
- N° 26. – Gilles PISON, Monique LEFEBVRE, Catherine ENEL et Jean-François TRAPE, *L'influence des changements sanitaires sur l'évolution de la mortalité: le cas de Mlomp*, 1989, 36 p.
- N° 25. – Alain BLUM et Philippe FARGUES, *Estimation de la mortalité maternelle dans les pays à données incomplètes. Une application à Bamako (1974-1985) et à d'autres pays en développement*, 1989, 36 p.
- N° 24. – Jacques VALLIN et Graziella CASELLI, *Mortalité et vieillissement de la population*, 1989, 30 p.
- N° 23. – Georges TAPINOS, Didier BLANCHET et Olivia EKERT-JAFFÉ, *Population et demande de changements démographiques, demande et structure de consommation*, 1989, 46 p.
- N° 22. – Benoît RIANDEY, *Un échantillon probabiliste de A à Z: l'exemple de l'enquête Peuplement et dépeuplement de Paris. INED (1986)*, 1989, 12 p.
- N° 21. – Noël BONNEUIL et Philippe FARGUES, *Prévoir les « caprices » de la mortalité. Chronique des causes de décès à Bamako de 1964 à 1985*, 1989, 44 p.
- N° 20. – France MESLÉ, *Morbidité et causes de décès chez les personnes âgées*, 1988, 18 p.
- N° 19. – Henri LERIDON, *Analyse des biographies matrimoniales dans l'enquête sur les situations familiales*, 1988, 64 p.
- N° 18. – Jacques VALLIN, *La mortalité en Europe de 1720 à 1914: tendances à long terme et changements de structure par âge et par sexe*, 1988, 40 p.
- N° 17. – Jacques VALLIN, *Évolution sociale et baisse de la mortalité: conquête ou reconquête d'un avantage féminin?* 1988, 36 p.
- N° 16. – Gérard CALOT et Graziella CASELLI, *La mortalité en Chine d'après le recensement de 1982: I. – Analyse selon le sexe et l'âge au niveau national et provincial*, 1988, 72 p. II. – *Tables de mortalité par province*, 1988, 112 p.
- N° 15. – Peter AABY (s'adresser à J. VALLIN), *Le surpeuplement, un facteur déterminant de la mortalité par rougeole en Afrique*, 1987, 52 p.
- N° 14. – Jacques VALLIN, *Théorie(s) de la baisse de la mortalité et situation africaine*, 1987, 44 p.
- N° 13. – Kuakuvi GBENYON et Thérèse LOCOH, *Différences de mortalité selon le sexe, dans l'enfance en Afrique au Sud du Sahara*, 1987, 30 p.
- N° 12. – Philippe FARGUES, *Les saisons et la mortalité urbaine en Afrique. Les décès à Bamako de 1974 à 1985*, 1987, 38 p.
- N° 11. – Gilles PISON, *Les jumeaux en Afrique au Sud du Sahara: fréquence, statut social et mortalité*, 1987, 48 p.
- N° 10. – Philippe FARGUES, *La migration obéit-elle à la conjoncture pétrolière dans le Golfe? L'exemple du Koweït*, 1987, 30 p.
- N° 9. – Didier BLANCHET, *Deux études sur les relations entre démographie et systèmes de retraite*, 1986, 26 p.
- N° 8. – Didier BLANCHET, *Équilibre malthusien et liaison entre croissances économique et démographique dans les pays en développement: un modèle*, 1986, 20 p.
- N° 7. – Jacques VALLIN, France MESLÉ et Alfred NIZARD, *Reclassement des rubriques de la 8<sup>e</sup> révision de la Classification internationale des maladies selon l'étiologie et l'anatomie*, 1986, 56 p.
- N° 6. – Philippe FARGUES, *Un apport potentiel des formations sanitaires pour mesurer la mortalité dans l'enfance en Afrique*, 1986, 34 p.

N° 5. – Jacques VALLIN et France MESLÉ, *Les causes de décès en France de 1925 à 1978*, 1986, 36 p.

N° 4. – Graziella CASELLI, Jacques VALLIN, J. VAUPEL et A. YASHIN, *L'évolution de la structure par âge de la mortalité en Italie et en France depuis 1900*, 1986, 28 p.

N° 3. – Paul PAILLAT, *Le vécu du vieillissement en 1979*, 1981, 114 p.

N° 2. – Claude LÉVY, *Aspects socio-politiques et démographiques de la planification familiale en France, en Hongrie et en Roumanie*, 1977, 248 p.

N° 1. – Georges TAPINOS, *Les méthodes d'analyse en démographie économique*, 1976, 288 p.

**Janvier 2014**