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Investigating the Desperate Housewives: Using gender-role attitudes to explain women's employment decisions in twenty-three European countries

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Investigating the Desperate Housewives:

Using gender-role attitudes to explain women's employment decisions in twenty-three European countries.

Jérôme De Henau[*]

Abstract: This paper analyses the impact of a set of gender-role attitudes on the labour market situation of women with and without young children. These attitudes are used as a proxy for stated preferences. Our study covers 23 European countries, using an original up-to-date micro data-set, the European Social Survey (round 2004), completed with regional and national information on the institutional and socio-economic context. In particular, we investigate whether the effect of the presence of young children and the effect of attitudes towards female employment and maternal roles are substitutes, complementary or multiplicative, using interaction variables. We use a multinomial logit regression model to account for three different employment statuses as dependent variable, full-time, part-time and not in employment. Results show substantial cross-country differences in the influence of attitudes on work, which differs by level of education, but not according to the presence of young children. However, the negative effect of young children on the full-time employment of mothers is stronger than the positive effect of egalitarian attitudes in countries with lower subsidised childcare provision. These results refine the discussion on the effect of work/life balance policies in Europe.

Key words: gender-role attitudes, social policies, dual-earner couples, labour market participation, part-time work, parenthood.

JEL code: C43, J13, J21

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1. INTRODUCTION

The traditional gender division of work has been greatly challenged for the past fifty years, with the steady increase in female labour force participation and the fall in fertility rates (Del Boca and Wetzels 2008 forthcoming). This trend, common to most industrialised countries, followed however different paces. An important contribution to the knowledge of the relationships between female labour force participation, motherhood and public policy settings across countries is given by the analysis of gender-role attitudes, in that they are expected to shape women's labour market behaviour but also the policy context (Algan and Cahuc 2007, Sjöberg 2004, Fortin 2005, Pfau-Effinger 2005).

Many studies have analysed the determinants of these attitudes, either at the individual level – influenced by religious beliefs, intergenerational transmission, origin, and to a lesser extent, different life-course events – or at the societal / national level – through their interaction with institutions and family policies (Thornton et al. 1983, Willets-Bloom and Nock 1994, Sundström 1997, Jones and Brayfield 1997, Fan and Marini 1999, Treas and Widmer 2000, Sjöberg 2004). Other scholars have investigated the more structural interdependence between gender-role attitudes, preferences and behaviour: the common question addressed is in particular to what extent are traditional gender-role attitudes (women as housewives and men as breadwinners) integrated by women (and not men), and lead them to withdraw totally or partially from the labour market (or never enter), for example when children enter the picture (Bielby and Bielby 1984, Bielby 1992, Vella 1994, Himmelweit and Sigala 2004, Heineck 2004, Fortin 2005).

However almost no study has been carried out from a cross-country perspective, that explicitly includes some measure of individual preferences alongside information on the institutional and socio-economic context. The main issue here is to understand whether any dual-earner-friendly public policy can be effective in different European countries to increase female employment, and especially that of mothers. Indeed, a recurrent problem in the analysis of the link between public policies and female employment is due to the possible endogeneity of the former: two effects are to be considered, which can arise in different countries. On the one hand, traditional gender-role attitudes may prevail in a country and, on average, women would prefer to care for their family. If they work, it is because they need to,

for financial reasons. Hence, no need for public incentive to dual-earner families (Sjöberg 2004). On the other hand, because of a lack of public support towards dual-earner families, women with young children, in particular those with more egalitarian views towards the gendered division of work, may be restricted in their opportunities to fulfil their higher preference to work (full-time). The causality is, in this latter case, reversed.

This paper aims to investigate this latter hypothesis – which we call the "desperate housewives". To do so, we use a comparative framework providing enough cross-country heterogeneity in the level of public support toward dual-earner families, gender-role attitudes and employment rates. In particular, we analyse the cross-country differences in the impact of young children on women's employment outcomes, given their gender-role attitudes. We assume these attitudes to be exogenous and to provide a direct measure of preferences for female employment (or maternal employment). Therefore, we can investigate whether women (and especially mothers of young children) with more egalitarian views on the gender division of labour are more likely to work full-time than their more traditional counterparts, and whether this effect differs between countries, according to the level of public support towards the dual-earner model.

We focus on women with or without young children, aged twenty to forty-nine and living with a partner, because these women are more likely to respond to attitudes towards maternal employment. We have relevant individual information for twenty-three European countries (including three non Member States of the EU) taken from an original and up-to-date micro data set, the European Social Survey (round 2004).

Results show substantial cross-country differences in the influence of attitudes on work, which also varies by level of education, but not according to the presence of young children. However, the negative effect of young children on the full-time employment of mothers remains strong even among women with more egalitarian attitudes in countries with lower subsidised childcare provision. These findings partially verify the "desperate housewives" hypothesis and we use them to refine the discussion on the effect of work/life balance policies on female employment in Europe.

We first overview the existing literature to understand better what are the relationships between attitudes, norms, institutions and paid work, especially at the individual level. Next

we present our data set, the European Social Survey, and the particular questions dealing with measurement of gender-role attitudes, as well as their distribution across countries and men and women. Then we move on to the analysis of the impact of attitudes on labour market attachment issuing different empirical specifications before concluding on some policy implications and further tracks of research.

2. THEORETICAL AND EMPIRICAL BACKGROUND

There is a wide range of literature that deals with gender-role attitudes, trying to explain their determinants, gender differences and changes across the life course. Since post World War II, social normative view on the division of paid and unpaid work between the sexes has received increasing criticism as women took more and more part in paid employment (Gornick and Meyers 2003). However, a common feature to all industrialised countries is the way most women enter the labour market, which has been almost entirely through part-time, temporary, or short-term jobs (Jepsen 2006). Cross-country variation in female integration into paid employment is explained by different historical backgrounds, cultural and religious traits, shaping both the institutional and the policy context as well as gender-role attitudes among the citizens (Meulders and O'Dorchai 2008 forthcoming, Sjöberg 2004, Fortin 2005, Treas and Widmer 2000, Sundström 1999, Alwin et al. 1992, Pfau-Effinger 2005).

Some country-specific studies explain the differences in gender-role attitudes across individuals. They uncover some aspects of the intergenerational transmission of attitudes as well as the influence of some particular life-cycle transitions such as first entry in the labour market, household formation, the birth of a child, and retirement. (Ex and Janssens 1998, Fan and Marini 2000, Bielby and Bielby 1984, Thornton et al. 1983, Willets-Bloom and Nock 1994, Himmelweit and Sigala 2004). These studies mostly agree on the fact that, at an early stage of the individual's life, religiosity[1], parents' education and parents' employment status determine individuals' attitudes towards the role of women and men within and outside the household. Some also show that, attitudes are also subject to change throughout the adult life course (Fan and Marini 2000, Bielby and Bielby 1984). In general, individuals try to keep

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[1] Measured either by the frequency of attendance to religious offices or by the self-assessed degree of religious belief.

their own view on normative behaviour because change requires the alteration of a position already adopted. They then tend to seek out information and experiences likely to confirm the attitudes they hold (Himmelweit and Sigala 2004). Nevertheless, individuals could modify their attitudes when they are exposed to new (and strong) influences in their social environment (Fan and Marini 2000) or to behavioural changes (Himmelweit and Sigala 2004).

Yet, many scholars posit that since attitudes are mainly determined in youth, they could be used as mostly exogenous determinants of important adult life investments and choices, such as educational investment (Vella 1994), labour supply (Fortin 2005, Vella 1994), number of children (Goldstein et al. 2003), or choice of the partner (Hakim 2003, Gustafsson and Kenjoh 2008 forthcoming).

In particular, individual gender-role attitudes are expected to influence one's own greater commitment either to paid work or to family care, which will be reflected in one's own preferences for one or the other activity, and thus will affect the behavioural response to some extent (Bielby and Bielby 1984). However, this adjustment will follow a gendered pattern. Gender stereotypes and social norms concerning the sexual division of roles within the family does not prevent a working man from being completely committed to both spheres (of work and family) given his stereotyped role as family breadwinner that meets precisely both involvements. By contrast, the stereotyped family commitment of a woman will more often prevent her from engaging in both spheres given the time-consuming type of activity she would undertake as a carer. According to this view, a woman thinking "women should cut on paid work for the sake of family" in general might apply this opinion to herself, finding personal satisfaction in household activities and would therefore testify greater commitment to family than to work, which will eventually result in a reduction of her current labour market attachment, especially in the presence of young children (Fortin 2005, Sjöberg 2004, Nordenmark 2004). This reasoning applies all other things being equal (same financial resources, same opportunities, and so forth).

However, the 'ceteris paribus' restriction may be questioned as individuals have limited freedom of choice. The analysis of the relationships between attitudes, commitment (or preferences) and behaviour cannot exclude the individual's environment, their family, their peers, and especially the policy context. Gender-role attitudes are not only shaped by religious affiliation or parental child-rearing styles (Ex and Janssens 1998), they also are influenced by

the country's historical background, its female employment level and institutional framework. In fact, at the macro-social level, relationships are much more complex than at the individual level given that positive attitudes towards female paid work may have been caused by the increase in female employment, through the labour market integration (and successful career) of some "pioneer" women. Following similar trends as in other important social changes (abortion, homosexuality, divorce, etc.), this can lead to modifications in the legislation and in turn eventually impact on people's opinions (Sjöberg 2004). Moreover, women's behaviour is likely to be influenced by peers' attitudes as well as national normative pressure so that in countries where female work is not really tolerated, female employment rate is likely to be lower (Fortin 2005, Algan and Cahuc 2007). The reason is that normative pressure may be exerted at the expense of female labour market attachment, especially that of mothers, either directly on women's preferences or through their set of constraints. The latter is mainly illustrated by a lack of a satisfactory policy setting to reconcile work and family life and to promote gender equality, availability of childcare facilities, as well as their quality and affordability (Gornick and Meyers 2003).

Therefore, though attitudes are shaped by individual history and present contingency, we cannot exclude from the behavioural analysis all the external constraints that will bind individuals in their decisions to work or not (Mc Rae 2003a, 2003b), in the sense that preferences for work will not always be translated in corresponding behaviour if women (mothers) do not find the opportunities to realise their aspirations (external support to reduce the cost of children for example). This is basically the group of women that we call the "desperate housewives".

3. THE EUROPEAN SOCIAL SURVEY

This paper uses the data from the second round of the European Social Survey (ESS), carried out during the year 2004. This round deals with opinions and attitudes of people aged over fifteen towards a wide range of issues such as trust, political preferences, family ties, medical approval, work-life relationships, caring activities, job conditions, additional to background data such as household composition, educational attainment, employment status and history, income, beliefs and church attendance, family origin and education.

One of the advantages of this survey is that it provides harmonised information for twenty-four European countries: all EU-15 (but Italy), Norway, Iceland and Switzerland, six of the ten new EU members (Estonia, Slovenia, Poland, Czech Republic, Slovakia and Hungary) and Ukraine. We choose this particular survey because country samples are somewhat bigger than in other attitudes surveys such as the International Social Survey Programme (ISSP rounds 1994, 1998 and 2002 with modules on gender-roles) or the World Value Surveys (WVS 1990, 1995 and 1999). In addition, data are quite more recent in the ESS. The drawback, though, is that the ESS data is not primarily focused on gender-role attitudes so that questions about maternal work acceptance, female work, sex division of work, etc. are less detailed than in the ISSP and the WVS.

We find however three questions likely to illustrate gender-role attitudes. Respondents are asked to state whether they strongly agree (1), agree (2), neither agree nor disagree (3), disagree (4) or strongly disagree (5) (also "don't know" is available) with the following statements[2]:

- "A woman should be prepared to cut down on her paid work for the sake of her family"
- "Men should take as much responsibility as women for the home and children"
- "When jobs are scarce, men should have more right to a job than women"[3]

The first statement is to be understood as attitudes linked to the consequences of maternal employment, rather than employment of married childless women, as shown by Treas and Widmer (2000)[4].

The second statement is less clear-cut. At first sight it can be considered as a measure of equal share of family tasks, both childcare and household chores. It might indeed be the modal understanding given the preceding question (we are dealing with gender-role models). But the

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[2] Appendix Table A.1 reports the percentage of agreement and disagreement by country and by sex for each of the three questions.

[3] The questionnaire specifies that "family" should be taken in the sense of "nuclear" rather than "extended" and that "more right to" means "should be given preference/priority".

[4] This question relates to other statements formulated somewhat differently in surveys like the ISSP and the WVS: "a preschool child is likely to suffer if his or her mother works", "All in all, family life suffers when the woman has a full-time job", and "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work" (Sundström 1999, Sjöberg 2004, Fortin 2005).

term "responsibility" is quite ambiguous since it may include one's ability to provide for a family within a completely different activity: paid work to earn a living for the entire household. As a result, we expect people to massively agree on this statement since the implications are less clear. Table A.1 in Appendix confirms our expectation in showing a high percentage of both sexes that agree on this statement.

The third statement rather captures the attitudes towards the male breadwinner paradigm and the more central work commitment of men than of women, at least in terms of opinion[5].

We only analyse the first and the third statements, given the ambiguous interpretation of the second question about family responsibilities. In Table 1, we display the average country-specific and sex-specific scores on the remaining two statements ("woman should cut down on paid work" and "men have priority to a job"). These scores are obtained by considering the five scaled items as numbers (strongly agree / strongly disagree) so that the higher the number the more positive the attitude toward female (maternal) employment. Results show a relative similarity between the two indices at the country level (correlation of about 0.79) but also at the individual level (correlation of about 0.42), in line with other studies (Fortin 2005, Vella 1994, Sundström 1999, Treas and Widmer 2000).

Our purpose is a cross-country comparison of the differences in the effect of young children on female employment given the revealed preferences (proxied by the attitudes) rather than a profound analysis of the different components of the constellation of gender-role attitudes as in Sjöberg (2004), Sundström (1999), Treas and Widmer (2000). Therefore, we aggregate both indices in one unique index of 'modernity' or 'egalitarianism'[6] (by summing their values for each individual), which takes values ranging from two to ten, and is considered as continuous, in line with Vella (1994)[7]. This index is used as explanatory variable in the estimation of labour market outcomes in the next section (Table 1).

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[5] It can be compared to other statements related to the division of labour: "A job is all right, but what a woman really wants is a home and children", "Being a housewife is just as fulfilling as working for pay" or "A man's job is to earn money, a woman's job is to look after the home and the family", also taken from the ISSP and WVS by the same authors.

[6] In the remainder, we simplify the view as we call individuals that are not in favour of female/maternal employment "traditional" and those who are "modern" or "egalitarian".

[7] Note that scaling the values (linearly) yields an index ranging from zero to ten although not changing anything to the effects. Ordered logit estimations do not take into account the value of the index while considering the

Table 1. Average score on two attitudes, separately and combined, by country and by sex.

	Women should cut on paid work			Men have more right to a job			Combined index			
	m	f		m	f		m	f		total
Denmark	3.55	3.57		4.01	4.25	***	7.55	7.83	***	7.70
Sweden	3.41	3.38		3.93	4.07	***	7.34	7.46		7.40
Norway	3.24	3.32		3.92	4.13	***	7.16	7.45	***	7.30
Finland	3.25	3.39	***	3.71	3.96	***	6.96	7.35	***	7.17
Iceland	3.24	3.21		3.72	3.92	**	6.96	7.13		7.05
The Netherlands	3.10	3.17		3.55	3.62		6.65	6.79		6.73
Belgium	3.05	3.09		3.26	3.37	*	6.31	6.46		6.38
Slovenia	2.85	2.87		3.38	3.54	***	6.23	6.41	*	6.33
Ireland	2.86	2.83		3.30	3.53	***	6.16	6.36	***	6.27
France	2.71	2.72		3.49	3.55		6.20	6.28		6.24
Germany	2.69	2.81	***	3.33	3.60	***	6.02	6.41	***	6.23
Austria	2.69	2.79	***	3.27	3.61	***	5.96	6.40	***	6.19
UK	2.82	2.73	**	3.31	3.40		6.13	6.13		6.13
Spain	2.72	2.60	**	3.35	3.44		6.06	6.03		6.05
Slovakia	2.78	2.95	***	3.10	3.25	***	5.88	6.20	***	6.04
Luxembourg	2.53	2.52		3.40	3.52		5.93	6.03		5.98
Switzerland	2.40	2.43		3.36	3.40		5.76	5.83		5.80
Estonia	2.50	2.52		2.90	3.23	***	5.40	5.75	***	5.61
Greece	2.63	2.95	***	2.58	2.96	***	5.22	5.91	***	5.60
Czech Rep.	2.44	2.62	***	2.88	3.20	***	5.32	5.82	***	5.58
Portugal	2.37	2.36		2.95	3.15	***	5.32	5.51	***	5.43
Poland	2.43	2.57	***	2.80	3.06	***	5.23	5.63	***	5.43
Hungary	2.39	2.51		2.46	2.55		4.85	5.06		4.97
Ukraine	2.01	2.20	***	2.60	2.86	***	4.60	5.05	***	4.88
Total	2.67	2.70	***	3.22	3.37	***	5.89	6.06	***	5.98

Source: European Social Survey, round 2 (2004) – own calculations.
Note: asterisks show the significance level of the country-specific difference between the sexes (* for 10% level, ** for 5%
and *** for 1%). Countries are ranked according to the last column (combined index for both sexes). Scores are computed
using answers from the whole sample of men and women. The higher the score the more people disagree with the statement.

Women tend to have more egalitarian attitudes than their male counterparts in both dimensions, with significant cross-country gender differences, especially as regards "men priority to jobs". This confirms what we found in the literature about gender differences in such opinions. However, the correlation between male and female average national scores is close to one so that in the analysis of cross-country differences, we limit ourselves to the last column of this table. Northern European countries[8] prove to be the most modern among European countries, followed by the Netherlands. At the bottom of the ranking, we find two

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index as a continuous variable (in OLS regressions) does not dramatically change the results and is closer to results estimated by ordered logit. Therefore we stick to our "basic" index, also used in the following sections.

[8] In the remainder, we use a geographical grouping of countries as follows: Northern European countries are Iceland, Norway, Sweden, Finland and Denmark; North Western European countries (also sometimes called Atlantic in this paper) are the UK and Ireland, Belgium, France and the Netherlands; Southern European countries are Portugal, Spain and Greece; German-speaking countries are Germany, Austria, Switzerland and Luxembourg; Transition countries (also sometimes called Eastern Europe) are the six new Member states and Ukraine.

Southern European countries and five Transition countries. In these latter countries, it seems that the state-decreed norm of full-time employment for all during the Communist period did not succeed in changing traditional gender-role attitudes. It is precisely the socialist policy of mandatory full-time employment for all that might have caused dramatic cuts in the state support for an egalitarian division of labour during the transition, as a negative reaction to this previous interference of the state into the private lives of families (Braun et al. 1994, Treas and Widmer 2000, Artium 2005, Haller and Höllinger 1994, Panayotova and Brayfield 1997). Slovenia differs from other Transition countries by its high rating of centrality of work for both men and women, even more than in the United States (Morinaga et al. 1993), and contrarily to other Transition countries, did not reduce its public childcare provision (Kanjuo-Mrcela 2005).

In order to validate further our index, sex differences of attitudes across countries have been analysed in more detail through controlling for differences in characteristics and effects of other variables such as religion, origin, parental educational achievement and employment status as well as age as a proxy for generation (Vella 1994, Thornton et al. 1983, Heineck 2004). Estimation results confirm the expected impact of those variables in all countries and for both sexes[9].

4. MODELS AND VARIABLES

Our empirical analysis of the determinants of female employment outcomes uses a method similar to that of De Henau et al. (2006a): we run multinomial logit estimations because our dependent variable, the employment status, takes three possible discrete outcomes: full-time work, part-time, and inactive. Full-time workers report total hours of weekly paid work over 30[10] (reference outcome[11]).

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[9] Detailed results of the individual estimations of the determinants of attitudes are available upon request to the author.

[10] A relative consensus exists to consider part-timers as working less than 30 hours as is for example used in the European Community Household Panel.

[11] This allows us to compare different "cuts" on paid work that are part-time and inactivity.

We focus on women's behaviour rather than of men's since the literature does not support the existence of any link between male attitudes on gender roles and male employment outcomes. However, we run estimations on the male sample to verify whether our attitudes variables are not capturing some other economic factors. Indeed as Fortin (2005) underlines, agreement with the statement "scarce jobs should go to men first" for example, may be influenced by a persistent involuntary lower employment status rather than general support for gender division of labour.

We restrict our sample to women aged 20-49, with and without children, in order to focus on fertile women likely to be active (we further exclude full-time students from our sample, and unemployed looking actively for a job[12]). We pool our data over all countries because of the relatively small country-specific sample size[13]. We will then study case by case different variables of interest, such as attitudes, the presence of young children and the level of education to understand the differences across countries and across specifications. To do so we produce interaction terms between some of the interesting explanatory variables and our country dummies.

Our explanatory variables include:
- age and its squared,
- three dummies for highest educational attainment (less than secondary as reference),
- a dummy indicating whether the individual is married,
- a dummy reporting bad overall health status (subjective health),
- origin (a dummy indicating native of the country and a dummy indicating resident in the country for more than 20 years, the reference being resident in the country for less than 20 years),

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[12] We have excluded those unemployed looking actively for a job from our analysis because we link attitudes to labour market decisions, though not in a pure labour supply model (given the integration of labour demand proxies, and health proxies as possible explanatory factor for discrimination), but focusing on 'preferences' for one of the three outcomes. Unemployed looking actively for a job cannot be considered as having chosen such a situation. Conversely, one could argue that part-time is not chosen in most cases either (Meulders et al. 1994). Indeed part-time work is associated with particular jobs with more or less fixed weekly hours in most countries and as such, is a measure of segregation (Fortin 2005, Jepsen et al. 2004): in a sense, women do not reduce their hours of work in the same job but accept other jobs that offer reduced hours.

[13] ranging from 103 women in Iceland to 453 women in Germany

- the age of the youngest child (the reference category is "no child (at all)", then we include four dummies indicating aged less than six, aged six to twelve, aged thirteen to nineteen, and finally, aged twenty or more or no longer in the household),

- the total number of children (continuous variable)[14].

- the occupation of the partner (ISCO-88 (COM) at 1 digit level[15]) conditional to the partner working (category ISCO 2 – "professionals" – as reference), as a proxy for the non labour income of women[16],

- regional proxies for labour demand: regional part-time rate (at NUTS 2 level[17]) and unemployment rate (at NUTS 3 level), measured on all women over 15[18].

Regional data is not available for Ukraine so that we have excluded this country from our analysis. This leaves us with a sample of 7055 women across twenty-three countries. Descriptive statistics of the explanatory variables are reported in Appendix Table A.2.

We know that the presence of children plays a very distinct role across countries on women's employment (see De Henau et al. 2006a). Therefore, we systematically include an interaction term of our child dummies with our country dummies for the first two categories of age of the youngest child (0-5 and 6-12) and for the number of children.

Below are summarised our different specifications following Fortin's syntax (2005). Note that outcome Y_i^j stands for the probability of obtaining the outcome j (j=inactivity or part-time, compared to full-time) of the individual i.

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[14] Contrarily to data from the European Community Household Panel and the Labour Force Survey (see discussion in De Henau et al. 2006a), children outside the household are identifiable in the ESS.

[15] ISCO stands for International Standard Classification of Occupations. The ISCO 1-digit level is composed of nine categories of occupations.

[16] Not available in the ESS. Women with professional partners are expected to work less due to the relative high wage prospects and time-consuming jobs of their partner.

[17] NUTS stands for the "Nomenclature of Territorial Units for Statistics". The higher the number, the more disaggregated the level. The ESS provides NUTS 3 disaggregated information for seven countries (the Netherlands, Denmark, Slovenia, Estonia, Ireland, Czech Republic and Slovakia). NUTS 2 is available for ten countries (Greece, Spain, Hungary, Austria, Poland, Portugal, Finland, Sweden, Norway, Switzerland) while four countries have only NUTS 1 regional information (Belgium, Germany, France, the UK) and Luxembourg and Iceland have no regional data.

[18] Data on those two variables are taken from the Eurostat database available on line (data for 2003).

$$Y_i^j = \alpha^j + \beta^j X_i + \theta_1^j \cdot Ctry_{1i} + \theta_2^j \cdot Ctry_{2i} \cdot ch05_i + \theta_3^j \cdot Ctry_{2i} \cdot ch612_i$$
$$+ \theta_4^j \cdot Ctry_{2i} \cdot nch_i + \varepsilon_i \qquad (1)$$

$$Y_i^j = \alpha^j + \beta^j X_i + \theta_1^j \cdot Ctry_{1i} + \theta_2^j \cdot Ctry_{2i} \cdot ch05_i + \theta_3^j \cdot Ctry_{2i} \cdot ch612_i$$
$$+ \theta_4^j \cdot Ctry_{2i} \cdot nch_i + \theta_5^j \cdot imodern_i + \varepsilon_i \qquad (2)$$

$$Y_i^j = \alpha^j + \beta^j X_i + \theta_1^j \cdot Ctry_{1i} + \theta_2^j \cdot Ctry_{2i} \cdot ch05_i + \theta_3^j \cdot Ctry_{2i} \cdot ch612_i$$
$$+ \theta_4^j \cdot Ctry_{2i} \cdot nch_i + \theta_6^j \cdot imodern_i \cdot Ctry_{2i} + \varepsilon_i \qquad (3)$$

$Ctry_{1i}$ and $Ctry_{2i}$ are the vectors of country-specific effects (Sweden omitted in $Ctry_{1i}$, Sweden included in $Ctry_{2i}$, since the latter is used for interactions with other variables). $ch05_i$ signals the presence of a youngest child aged less than six, while $ch612_i$ stands for the presence of a youngest child aged six to twelve included. nch_i is the total number of children (living or not in the household). $imodern_i$ is our index of attitudes (higher values are associated with 'modernity' or 'egalitarian' opinions, in favour of female or maternal employment). X_i is the vector of the remaining explanatory variables (used as controls).

5. RESULTS

5.1. Overview of the control variables

Table 2 shows the results for the three models of equations 1 to 3. The pseudo-R² increases and coefficients of the control variables (vector X) do not change much between our models, allowing us to conclude that our index is well defined, quite independent from our controls and adding substantial information to the specification, given the high significance of its coefficients for both part-time and inactivity.

One important question arising however (in Models 2 and 3) is the causality of the attitude index. The literature suggests a possible endogenous effect, through ex-post rationalization and feedback effects (Himmelweit 2002, Fortin 2005). We have then run a Durbin-Wu-Hausman test using religiosity, religion affiliation, parental education and employment as instruments[19]. Results of the test do not testify any significant effect of the residuals in our

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[19] See Davidson and MacKinnon (1993) for an explanation of the procedure.

labour market equation (Model 2-based but not displayed), allowing us to conclude that attitudes are in this case not endogenous to labour market decisions[20]. Similar results were found in Vella (1994). Model 2 was also applied to the sample of men to check whether the variables used as measurement of gender-role attitudes do not include other information given that men's employment outcome is not expected to be influenced by their view on appropriate gender-roles. Our results (not shown) confirm this hypothesis, in line with Fortin (2005), and further validate our index of attitudes[21].

As far as our other explanatory variables (controls) are considered, results of Model 3 reveal that age, education, marital status, subjective health and origin, and partner's occupation (to some extent) all have the expected sign when significant. And their impact is much stronger on inactivity than on part-time.

The effect of regional frequencies of female part-time work is also very significant for both inactivity and part-time outcomes, which is not the case for unemployment rates. Surprisingly, the higher the part-time rate, the higher the probability of being inactive versus working full-time. Although the lack of part-time arrangements can be assumed to prevent women from entering employment – as is argued for example for Southern European countries (Del Boca and Repeto-Alaia 2003), our results do not support this hypothesis, even if we would not have controlled for unemployment rates to avoid any partial correlation (not shown). The finding that high unemployment rate does not prevent women from deciding their employment status could be due to the fact that for this category of women in couple and aged 20-49, unemployment is low overall, so that their employment outcome will depend more on the type of work available in their region rather than on the existence of any job.

As far as the cross-country effects of attitudes are concerned (Model 3), we can isolate two groups of countries. A first group includes the Transition and Northern European countries (excluding Iceland[22]), with no significant effect. The second is composed of the Atlantic, German-speaking and Southern European countries, much more sensitive to attitudes. The

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[20] We also tried to test this hypothesis on different specifications, samples and types of attitudes, all confirming weakly exogeneity of attitudes (Results available upon request to the author).

[21] Different specifications of the index were used (index, single attitudes variables, and dummies for traditional versus non traditional), as well as a Durbin-Wu-Hausman test for endogeneity of the male index.

[22] In the ESS, Iceland has an abnormally lower sample size than the other countries so that the results should be taken with great precaution (only 103 women in the Icelandic sample).

effect is stronger in the UK, followed by Spain, the Netherlands, Portugal and Greece, although only the UK coefficient is significantly different from most other countries (tests not shown). Attitudes of French and Danes only play a significant negative role on part-time[23], while those of Swiss and Luxembourg women do not seem to play a significant role on employment.

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[23] This latter result is mainly due to the fact that our part-time category includes those reporting exactly 30 hours of weekly work. If we run the estimation by considering usual outcome categories (less than 30 hours as part-time workers), the coefficients of the two countries are no longer significant, while not dramatically changing results for other countries.

Table 2. Multinomial logit estimations of employment outcomes for women aged 20-49 living in couple – Impact of attitudes index

| | (1) | | | | (2) | | | | (3) | | | |
| | Inactivity | | Part time | | Inactivity | | Part time | | Inactivity | | Part time | |
	coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err	coeff	std err
age	**-0.325**	0.078	-0.035	0.096	**-0.300**	0.081	-0.011	0.098	**-0.301**	0.080	-0.019	0.098
age squared	**0.004**	0.001	0.001	0.001	**0.004**	0.001	0.000	0.001	**0.004**	0.001	0.001	0.001
medium educ.	**-0.738**	0.139	-0.192	0.161	**-0.644**	0.141	-0.091	0.160	**-0.677**	0.143	-0.111	0.162
high educ.	**-1.385**	0.182	**-0.577**	0.189	**-1.150**	0.184	*-0.347*	0.190	**-1.136**	0.184	*-0.349*	0.193
married	**0.673**	0.171	0.229	0.178	**0.576**	0.174	0.138	0.178	**0.596**	0.172	0.139	0.179
bad health	**1.891**	0.327	-0.013	0.440	**1.902**	0.340	-0.013	0.454	**1.920**	0.321	-0.081	0.453
in cntry >20 y	*-0.767*	0.359	-0.475	0.451	*-0.741*	0.366	-0.461	0.462	*-0.710*	0.372	-0.506	0.467
native	*-0.503*	0.218	0.083	0.269	-0.312	0.226	0.255	0.276	-0.258	0.234	0.263	0.281
partner ISCO1	**-0.443**	0.240	*-0.473*	0.237	*-0.463*	0.239	*-0.482*	0.241	*-0.435*	0.243	*-0.462*	0.245
partner ISCO3	*-0.413*	0.225	**-0.587**	0.219	*-0.455*	0.230	**-0.616**	0.224	*-0.409*	0.226	**-0.597**	0.225
partner ISCO4	-0.163	0.312	-0.052	0.325	-0.160	0.314	-0.009	0.316	-0.114	0.311	0.004	0.310
partner ISCO5	**-0.878**	0.262	*-0.485*	0.284	**-0.890**	0.265	*-0.488*	0.282	**-0.827**	0.265	-0.452	0.283
partner ISCO6	*-0.612*	0.331	**-1.177**	0.433	*-0.693*	0.333	**-1.398**	0.449	*-0.636*	0.337	**-1.330**	0.458
partner ISCO7	-0.229	0.196	-0.314	0.215	*-0.331*	0.200	*-0.399*	0.217	-0.281	0.202	-0.354	0.219
partner ISCO8	*-0.348*	0.224	-0.286	0.244	-0.333	0.229	-0.259	0.243	-0.299	0.229	-0.235	0.247
partner ISCO9	**-0.841**	0.325	*-0.570*	0.332	**-0.914**	0.330	*-0.615*	0.332	**-0.869**	0.335	*-0.589*	0.334
partner ISCO0	*-1.114*	0.516	0.140	0.529	*-1.121*	0.524	0.138	0.561	*-1.173*	0.523	0.119	0.571
partner ISCO ms.	**-1.510**	0.368	-0.623	0.387	**-1.418**	0.371	-0.529	0.379	**-1.331**	0.381	-0.471	0.372
partner not wk	-0.108	0.226	*-0.561*	0.265	-0.150	0.235	*-0.593*	0.268	-0.143	0.234	*-0.571*	0.273
reg. f. pt rate	**7.193**	1.288	**4.920**	1.501	**6.682**	1.323	**4.464**	1.537	**6.754**	1.339	**4.614**	1.574
reg. f. un. rate	*3.089*	1.613	1.928	2.099	*2.782*	1.651	1.634	2.143	2.766	1.692	1.692	2.175
imodern					**-0.257**	0.032	**-0.239**	0.035				
imodern*at									*-0.186*	0.090	*-0.173*	0.091
imodern*de									**-0.328**	0.081	*-0.202*	0.084
imodern*ch									-0.149	0.103	-0.073	0.111
imodern*lu									-0.141	0.094	-0.010	0.120
imodern*be									**-0.233**	0.076	*-0.151*	0.074
imodern*fr									-0.075	0.082	**-0.291**	0.083
imodern*nl									**-0.331**	0.110	*-0.170*	0.098
imodern*uk									**-0.585**	0.146	**-0.583**	0.122
imodern*ie									**-0.280**	0.090	*-0.247*	0.096
imodern*es									**-0.410**	0.092	**-0.361**	0.108
imodern*el									**-0.282**	0.076	-0.034	0.114
imodern*pt									**-0.323**	0.109	-0.167	0.142
imodern*pl									-0.102	0.077	0.006	0.137
imodern*hu									-0.171	0.128	0.028	0.150
imodern*cz									*-0.210*	0.082	0.105	0.138
imodern*sk									-0.124	0.099	0.157	0.211
imodern*ee									-0.078	0.103	0.045	0.231
imodern*si									0.069	0.125	-0.254	0.230
imodern*dk									-0.097	0.109	*-0.299*	0.126
imodern*no									-0.167	0.111	-0.084	0.100
imodern*fi									-0.162	0.107	-0.199	0.125
imodern*is									*-0.488*	0.234	**-0.808**	0.249
imodern*se									0.124	0.172	-0.083	0.126
constant	1.671	1.561	*-3.375*	1.927	*3.338*	1.600	-1.908	1.968	0.079	2.120	-3.104	2.195

# obs.		6803			6792			6792	
Chi²		1534			1526			1700	
Log ps-likelihood		-5678			-5545			-5487	
pseudo-R²		0.195			0.213			0.221	

1% significance level		*5% significance level*		10% significance level

Note: imodern stands for index of attitudes and imodern*at (for example) is the interaction term for Austrian attitudes (imodern multiplied by the dummy at). Other control variables not shown (country dummies, child age dummies and number of children). AT stands for Austria, DE for Germany, CH for Switzerland, LU for Luxembourg, BE for Belgium, FR for France, NL for the Netherlands, IE for Ireland, ES for Spain, EL for Greece, PT for Portugal, PL for Poland, HU for Hungary, CZ for the Czech Republic, SK for Slovakia, EE for Estonia, SI for Slovenia, DK for Denmark, NO for Norway, FI for Finland, IS for Iceland, SE for Sweden, following the EU notation.

5.2. Interactions between attitudes, education and children

At this first level of analysis, the effect of attitudes is measured equally on all women of our sample living in the same country (Model 3). Before detailing the results of the cross-country differences, we would like to further assess whether there are other significant differences in the impact of attitudes (i) between mothers of young children and childless women (or mothers of older children), and (ii) between low-educated and higher educated women. This combined analysis is carried out to verify the hypotheses identified in the literature. First, should attitudes be linked to public support to families (Sjöberg 2004, Fortin 2005), they would have a different impact for mothers than for non mothers in countries where substantial work support is available to women with young children. In other words, "egalitarian" mothers will remain attached to the labour market to a larger extent if they get the support they expect than their more traditional counterparts. Second, given that education is a positive determinant of labour market attachment and that more educated women are expected to have more "egalitarian" attitudes (Sjöberg 2004), the employment impact of attitudes is likely to be stronger for more educated women.

We run four types of estimations based on the previous models, with additional interaction terms between attitudes and education or age of the youngest child, as follows:

$$Y_i^j = \alpha^j + \beta^j X_i + \theta_1^j \cdot Ctry_{1i} + \theta_2^j \cdot Ctry_{2i} \cdot ch05_i + \theta_3^j \cdot Ctry_{2i} \cdot ch612_i + \theta_4^j \cdot Ctry_{2i} \cdot nch_i + \theta_7^j \cdot \text{imodern}_i \cdot Educ_i + \varepsilon_i \tag{4}$$

$$Y_i^j = \alpha^j + \beta^j X_i + \theta_1^j \cdot Ctry_{1i} + \theta_2^j \cdot Ctry_{2i} \cdot ch05_i + \theta_3^j \cdot Ctry_{2i} \cdot ch612_i + \theta_4^j \cdot Ctry_{2i} \cdot nch_i + \theta_8^j \cdot \text{imodern}_i \cdot Chi\_age_i + \varepsilon_i \tag{5}$$

$$Y_i^j = \alpha^j + \beta^j X_i + \theta_1^j \cdot Ctry_{1i} + \theta_2^j \cdot Ctry_{2i} \cdot ch05_i + \theta_3^j \cdot Ctry_{2i} \cdot ch612_i + \theta_4^j \cdot Ctry_{2i} \cdot nch_i + \theta_8^j \cdot \text{imodern}_i \cdot Educ_i \cdot Chi\_age_i + \varepsilon_i \tag{6}$$

$$Y_i^j = \alpha^j + \beta^j X_i + \theta_1^j \cdot Ctry_{1i} + \theta_2^j \cdot Ctry_{2i} \cdot ch05_i + \theta_3^j \cdot Ctry_{2i} \cdot ch612_i + \theta_4^j \cdot Ctry_{2i} \cdot nch_i + \theta_9^j \cdot \text{imodern}_i \cdot Educ_i \cdot Ctry_{2i} + \varepsilon_i \tag{7}$$

$Educ_i$ is a vector of two variables: medium educated and high educated.

Chi_age_i is a vector of four variables: youngest child aged 0-5 ($= ch05_i$), aged 6-12 ($= ch612_i$), aged 13-19, and aged more than 20 or has left home.

Appendix Table A.4 gives the results of the four specifications. In Model 4, with a control for educational attainment, we make the effect of attitudes interact with the level of education, for the whole sample (no country-specific interaction effects). As expected, the effect is stronger for more educated women, with significant differences only between low educated and the two other. If we look at the country-specific interaction terms (Model 7), which control for country differences in the "distribution" of educational attainment, we find this combined impact of attitudes and education to be significant only for the countries of our "sensitive" group (Atlantic, German-speaking and Southern European).

Model 5 gives the results for interactions between age of the youngest child and attitudes (also measured for the whole sample). Although differences are observed between the groups of women, they are not significant. This means that we cannot conclude to a differentiated impact of attitudes according to the age of the youngest child. More "egalitarian" mothers of young children find similar opportunities to work than their childless counterparts. The same conclusion holds should we use interaction terms that are country-specific (not shown): the effect of attitudes for mothers of preschoolers is the same as the one of non mothers or mothers of older children whatever the family-friendliness of the country[24]. Results from Model 3 remain appropriate to assess the combined impact of attitudes and children as no information is added to the model by using interaction terms between the two variables.

5.3. Country-specific effects of attitudes

So far we have only looked at the significance and the sign of the coefficients. Understanding the mechanisms underlying the combined effect of young children and attitudes on work from our non-linear multinomial specification is not straightforward[25], also because of their combined influence on inactivity and part-time. Therefore, to ease the comparison of the effects and the interpretation of the coefficients, we use an adaptation of the so-called "method of recycled predictions" to estimate a full-time equivalent employment probability of

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[24] However, the relatively small country-specific sample sizes could be responsible for the non significance of this latter effect.

[25] Note that in non-linear models, the marginal effect of a change in both interacted variables is not equal to the marginal effect of modifying just the interaction term: the odds-ratio (or relative risk ratio in the case of multinomial logit) interpretation of coefficients cannot be used for interaction term, precisely because non-linear models do not satisfy linear application properties (Norton et al. 2004).

a reference woman whose characteristics will change gradually (in our case: attitudes, age of children and number of children)[26].

The procedure is as follows:

First we define the reference woman for this exercise: 35 years old, medium educated, in good health, born in the country, and married with a partner working as professional (ISCO 2). She has no child at all and scores 4 on the index of attitudes (traditional attitude). Then we compute her full-time equivalent predicted employment rate[27] for each country, given that she lives in a region with (country-specific) average part-time and unemployment rates. Note that part-time work is considered as half-time in our computation of the full-time equivalent employment rate.

Second, we give her a more positive attitude (score 8) and we predict her full-time equivalent employment rate (again for each country). Now we have two types of women (scoring 4 and 8 on the index of attitudes respectively). Hence, for each type, we predict her outcome probabilities for four changes: (i) having a lone child aged less than six, (ii) once this child is older, aged six to twelve, (iii), having two children (with the youngest aged less then six), and (iv) once the second child is aged six to twelve. This procedure is just a translation of the different coefficients of attitudes, age of the youngest child and number of children, made comparable between countries and across employment outcomes. In doing so we isolate the impact of attitudes from that of children on female employment and we can compare the outcomes to verify our hypothesis.

Results are displayed in Table 3.

Table 3. Full-time equivalent employment rate predicted on a reference woman – effect of attitudes and children, by country (based on Model 3).

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[26] See Gornick et al. (1998) for more explanations and De Henau et al. (2006a) for details on the "method of recycled predictions".

[27] In the remainder, we use the terms full-time employment 'rate' or probability indifferently because we compute country-specific probabilities.

	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)
(1)	Base: no ch., att. 4	Base	Base	1ch <6y	Base	1ch <6y	2ch yst<6	Public child care	Average male
(2)	-	+ att. 8	+ 1ch <6y	+ att. 8	+ 1ch 6-12y	+ 1ch.	+ yst 6-12y	cov. rate of infants	attitudes
	FTE rate (1)	(2) - (1)	(2) - (1)	(2) - (1)	(2) - (1)	(2) - (1)	(2) - (1)		
SE	87%	0.3%	-13.8%	-1.9%	-6.8%	-0.3%	7.0%	40%	7.3
FI	85%	6.7%	-53.4%	14.3%	-17.0%	2.0%	36.4%	25%	7.0
NO	78%	6.1%	-37.5%	11.6%	-21.0%	-4.4%	16.5%	30%	7.2
DK	68%	11.6%	-9.3%	10.0%	0.3%	0.3%	9.5%	58%	7.6
IS	50%	35.7%	-15.2%	3.4%	-5.8%	-4.7%	9.4%	38%	7.0
HU	96%	0.9%	-56.3%	15.6%	-18.0%	-11.4%	38.3%	6%	4.8
SI	90%	0.3%	-5.0%	-1.9%	-7.9%	-6.1%	-2.9%	28%	6.2
EE	88%	2.1%	-49.7%	7.2%	-8.9%	-1.9%	40.8%	22%	5.4
SK	84%	3.9%	-60.0%	10.4%	-9.1%	-1.7%	50.9%	6%	5.9
CZ	80%	8.2%	-66.1%	13.5%	-8.4%	-1.7%	57.7%	9%	5.3
PL	79%	2.5%	-34.1%	8.0%	-10.1%	-2.9%	24.0%	2%	5.2
FR	76%	9.6%	-4.9%	9.2%	0.0%	-8.1%	4.8%	39%	6.2
BE	71%	11.2%	-22.0%	14.3%	-7.0%	-10.6%	15.0%	30%	6.3
UK	64%	28.0%	-34.8%	26.1%	-25.0%	-6.5%	9.8%	2%	6.1
IE	62%	17.1%	-23.9%	19.4%	-20.5%	-9.2%	3.3%	2%	6.2
NL	49%	18.4%	-30.8%	13.1%	-24.4%	-3.8%	6.4%	2%	6.6
LU	75%	6.5%	-35.5%	8.9%	-24.8%	-3.6%	10.8%	7%	5.9
AT	73%	9.8%	-35.1%	9.7%	-23.2%	-7.5%	12.0%	10%	6.0
CH	62%	9.7%	-31.6%	9.3%	-26.4%	-6.3%	5.2%	5%	5.8
DE	54%	21.1%	-33.9%	15.3%	-20.0%	-3.6%	13.9%	9%	6.0
PT	79%	12.4%	-8.6%	15.9%	-15.8%	-18.6%	-7.2%	12%	5.3
ES	59%	26.3%	-17.9%	32.9%	-19.3%	-7.0%	-1.5%	5%	6.1
EL	35%	23.7%	-15.4%	20.2%	-7.5%	-0.9%	7.9%	3%	5.2
		Inact. and part time sig. (10% level)			*Only inactivity sig. (10%)*		*Only part time sig. (10%)*		

Note: The base is a reference woman computed for each country: 35 years old, medium educated, in good health, native, married with a partner working as professional (ISCO2), living in a region with country-specific average female part-time and unemployment rates. She has no child and an attitude score of 4. In column B, we replace her attitude score by 8 and the difference between her new computed FTE rate and the one of column A is displayed. In column C, we add one child aged less than 6 (with basic attitude of 4). In column E we add one child aged between 6 and 12 (compared to the base). In column F, we add a second child (compared to C) of any age. Finally, in column H, we have two children but we change the age of the youngest.
In each column, we compute the difference between FTE employment rate of the typical woman mentioned under "term two" and that under "term one". See Table 2 for country abbreviations.
Average male attitudes are measured for men in a couple aged 20-49 (not student, not unemployed).
Source: own calculations from the ESS 2004. Data on childcare coverage are taken from De Henau et al. (2006b) for the EU-15, from Plantenga and Remery (2005) for NO, IS, SK, HU, EE, SI and CZ (see sources from national reports), from Saxonberg and Sirovátka (2006) for PL, and from Le Goff and Dieng (2005) for CH.

A preliminary remark is the great heterogeneity of employment rates for this childless traditional woman of reference, ranging from 96 percent in Hungary to 35 percent in Greece (Column A of Table 8).

Column B shows the absolute change in the predicted employment rate of a more egalitarian type of childless women. As noted earlier, no significant change is to be mentioned for the group of Northern European countries and Transition countries. A possible interpretation of this result might be that in Northern European countries, the centrality of work is dominant, alongside more egalitarian gender-role attitudes, so that a certain social pressure makes most women work, even those more traditional. In Transition countries as well, women work

although they are on average much more traditional than in the former group of countries. Two incomes are necessary to survive in those countries and more traditional childless women do not work less than their more "egalitarian" counterparts (Artium 2005). In these two groups of countries, gender-role attitudes are less related to preferences for work or family care. By contrast, the other countries of our sample fit better our model of work/family commitment and behavioural consequences. Note that our model helps us understand the commonly mentioned "exception" of Portugal. The high level of female employment in this country is usually associated with an income effect, so that women have to work for financial reasons (see De Henau et al. 2006a for discussion), even though they express very traditional gender-roles attitudes (Table 1). This effect would then be similar to Transition countries. However our results show that, contrarily to Transition countries, Portuguese women with more egalitarian attitudes are significantly more likely to work (full-time) than their traditional counterparts.

Comparing columns C and B, or D and C respectively, it appears that the negative effect of the presence of a young child on full-time work outperforms the positive impact of attitudes in most countries, except in Slovenia, Denmark, France, and the three Southern European countries. The explanation for the first three countries might be found in their institutional support to working mothers so that child penalty is very weak, at least for a typical mother of *one* young child. For the Southern European countries of Spain and Greece, characterised by quite traditional attitudes, a low level of public support and of fertility (De Henau et al. 2006a), just like Transition countries and to some extent, German-speaking countries, one explanation might be found in light of the employment levels of non mothers, which are much lower than in the other two groups. In Spain and Greece, employment decisions of women would be taken with an all-encompassing analysis of costs and benefits, including the presence of children: women work if they think it is profitable, and if their attitudes are in line with their possible behaviour. By contrast, in German-speaking and Transition countries (but also in Ireland), childless women enter the labour market on higher proportion and temporarily or definitively quit the market once the child is born. This explanation isolates the effect of adjustment through reducing the supply of children given that both groups of countries face low fertility. Incorporating the future cost of children on their labour market attachment, Spanish and Greek women will work if they have positive attitudes towards their

own role or that of their female peers. In this sense, the positive impact of attitudes counterbalances the negative effect of children[28].

Table 2 also allows us to isolate the impact of attitudes from that of children on female labour market attachment across countries, as displayed in columns C, E, F and H, which show the various effects of children for our traditional woman of reference. The impact of a first child aged less than six is rather negative in most countries. It is not significant in Denmark, Slovenia, France, Belgium, and Spain and relatively weak in Portugal and Sweden (compared to the level of employment for non mothers). Having the youngest unique child aged over 6 is no longer significant in Transition countries as is the case for having a second child. In the 'Atlantic' group, only Dutch and British mothers are still negatively affected by their child being older as is the case in German-speaking countries. No significant effect is found in Southern European countries. However, the number of children plays a negative role on top of that of having a young child in all countries (but Greece) of the latter three groups (column F).

5.4. Macro-level correlations

Now that we have isolated the influence of individual preferences, we are able to refine the link between these so-called 'child penalties' and the level of public support to dual-earner families. Subsidised childcare provision has been found to partially explain cross-country differences in these 'child penalties' (see De Henau et al. 2006a). The correlation coefficient between the net relative impact of a young child (column C divided by column A) and the childcare coverage (column H) is 0.59. If we drop countries one by one to assess their relative contribution to this correlation, Denmark, Sweden and France appear to be strong explanatory countries in the sense that without them the correlation is substantially reduced compared to dropping other countries. If we drop these three countries together, we obtain a correlation of only 0.34. By contrast, Finland, Portugal and Spain can be considered as outlying values since their withdrawal improves the correlation. Dropping them together, the correlation rises to 0.74.

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[28] Unfortunately, our data set does not include Italy, preventing us from building clearer relationships for this group.

However, these correlations are computed on the relative employment penalty of the presence of one child (column C). A better correlation (higher and more stable) is found by considering the relative impact of two children (columns F+C divided by column A). The correlation coefficient with childcare coverage is 0.70 for all countries (0.77 if we exclude Finland[29] and Portugal and no change without Spain). Hence the confirmed validity of the relationship between public childcare provision and child-related employment penalties in Europe. Figure 1 illustrates this correlation.

Figure 1. Macro-level correlation between subsidized childcare coverage rates and employment-related child penalties for mothers of two children (youngest under 6).
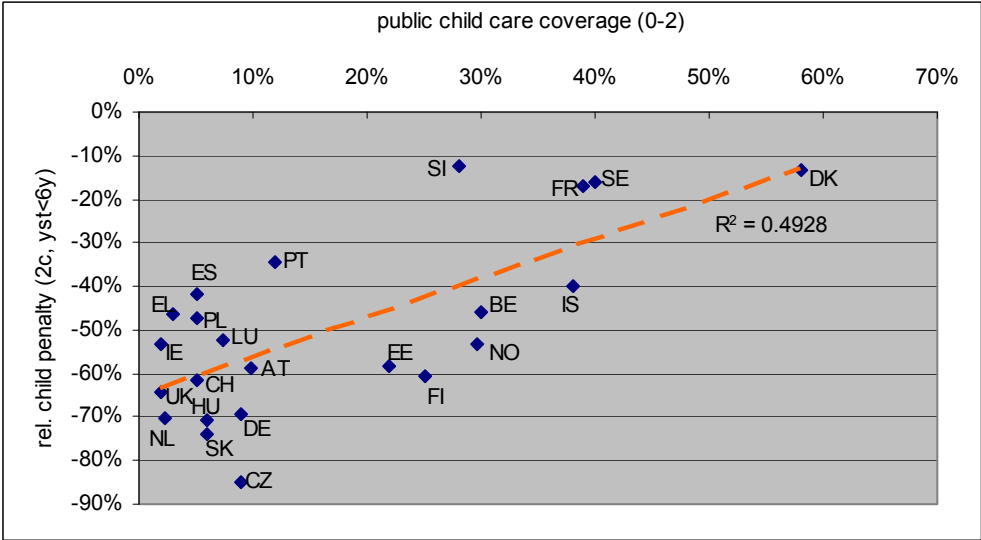
This exercise gives also interesting results with the male average attitudes (column I of Table 2), which are correlated with childcare provision (0.70), as expected from the literature (Sjöberg 2004). However, the correlation with child penalties is much lower (0.33). Outlying countries are again Portugal and Finland, in addition with the Netherlands (high penalty with no traditional attitudes). Without these three countries, correlation would be raised at 0.57. Correlation with the penalty associated with having two children is also improved (0.44) but remains very sensitive to the exclusion of the same three underlying countries (the correlation rises up to 0.61 without NL, PT and FI).

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[29] Finnish long and relatively well paid parental leave might be part of the explanation for the drop in participation for mothers of one preschool child, given that employment recovers considerably when the child is older (and to a lesser extent with more children).

6. CONCLUSION

This research aimed at investigating the cross-country differences in the effect of young children on female employment outcomes, through the use of a set of gender-role attitudes. Various specifications were carried out in order to improve the understanding of the combined role of three major explanatory factors, the age of the youngest child, the number of children and the educational attainment, all three expected to be linked with labour market attachment through the impact of attitudes. We have used gender-role attitudes as an indicator of women's preferences for work or for family care.

Multinomial logit estimations show that at the individual level, traditional attitudes are significantly associated with inactivity and part-time, except in Northern European and Transition countries. In the first group, most women work and have on average much less traditional attitudes than in other countries. In the second, women work despite average important traditional views on gender-role, mainly because two earnings are necessary, although in presence of young children they need to temporarily quit their job because of the lack of external support.

Results do not show significant differences of attitudes according to the age of the youngest child, neither on general, nor by country. On the contrary, more educated women are much more influenced by their attitudes than low educated ones, and this holds true for all countries where a general impact was found significant.

As expected, cross-country differences in the employment penalty associated with the presence of a young child is positively correlated with the level of public childcare provision, and this is clearer with two children. Investigating the desperate housewives hypothesis – stating that women are more constrained than willing to stay at home in the presence of young children – our results show that this is generally true: in most countries, mothers in couple reduce their working hours or drop from the labour market because they have no other choice, whatever their view on the appropriate role of mothers. However in Greece and Spain, women with young children may challenge the traditional gender division of work as more 'egalitarian' mothers are more likely to work full-time in these two countries than their traditional counterparts, despite the lack of state-level work/life balance support.

Some policy implications are inferred from our results.

First, in countries where attitudes have a significant effect on full-time work, the impact of work-life balance policies should be assessed on two grounds. On the short run, we assume that policies do not affect preferences. They may impact on individuals' behaviour only through affecting their budget constraint. On the long run, on the contrary, policies may indirectly affect people's opinions: most people will do what their peers do if they think that might improve their situation (Bielby 1992, Himmelweit 2002). Therefore short-term effects are likely to be reduced for individuals with more traditional attitudes. This is especially true in countries where the impact of attitudes is very strong, such as Portugal, Greece, Spain, the Netherlands and the UK. Long-term effects are expected to be strengthened through the relationship between attitudes and policies (Sjöberg 2004, Himmelweit and Sigala 2004): if childcare provision is developed, more women will be able to remain on the labour market while having children, at least those with 'modern' attitudes in a first stage. This will have an indirect impact on average attitudes through positive feedback effects, in the sense that more traditional women will be confronted to other women working *and* succeeding in their family life, and might therefore change their opinion, then preferences, and finally, behaviour, entering the labour market later on.

However, adjustments are expected to be much slower for low-educated women as the effect of their attitudes on their employment situation is very small. This implies that raising female educational attainment is less a means to reduce female traditional attitudes, which will allow such women to integrate and remain on the labour market because their preferences will have changed than a way to improve their labour market opportunities and expected wages on top of any consideration of appropriate female behaviour.

In Transition countries (except for Slovenia), both the level and the effect of the index of attitudes are low. Women need to work for a living and keep traditional attitudes no matter what their labour market attachment. A change in women's individual attitudes induced by changes in social norms (legislation, information, creating role models by successful working mothers, and so forth) will not have a big short run impact in those countries, in terms of employment.

Our study shows that adding attitudes to the analysis of policy impact on mothers' employment is useful to understand cross-country differences in outcomes but also expected effects of developing effective public policies toward dual-earner couples.

Further research could be carried out to include other dimensions of this topic, such as fertility, time allocation, and other aspects of labour market conditions (career prospects, etc.). Moreover, dynamic and evolutionary models including interrelationships of attitudes, policies and employment outcomes are likely to substantially improve our knowledge of these issues. Unfortunately, no cross-country panel data sets are yet available with gender-role attitudes.

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8. APPENDIX

Table A.1. Percentage of agreeing and disagreeing with three gender-role attitudes, by sex and country.

	"Women should cut on paid work for the sake of family"				"Men and women should share family responsibility"				"Men have more right to scarce jobs than women"			
	men		women		men		women		men		women	
	yes	no	yes	no	yes	no	yes	no	yes	no	yes	no
AT	48%	22%	45%	27%	71%	12%	82%	5%	25%	43%	18%	55%
BE	37%	43%	38%	45%	84%	7%	87%	5%	29%	51%	32%	55%
CH	63%	14%	63%	16%	79%	8%	76%	8%	24%	50%	25%	53%
CZ	56%	15%	53%	23%	68%	9%	83%	4%	39%	29%	31%	42%
DE	49%	22%	48%	29%	75%	9%	85%	4%	23%	47%	21%	59%
DK	19%	60%	20%	61%	88%	4%	92%	3%	9%	79%	8%	87%
EE	56%	15%	57%	18%	88%	3%	92%	2%	40%	32%	32%	47%
ES	52%	27%	57%	23%	76%	12%	86%	7%	29%	54%	31%	56%
FI	26%	44%	23%	52%	89%	2%	92%	2%	13%	65%	11%	74%
FR	50%	28%	50%	30%	92%	3%	95%	2%	27%	56%	29%	58%
GB	42%	26%	48%	26%	90%	3%	89%	4%	23%	49%	27%	55%
GR	50%	26%	39%	35%	68%	8%	80%	5%	56%	24%	42%	37%
HU	63%	19%	59%	25%	93%	3%	96%	3%	59%	26%	56%	31%
IE	44%	32%	49%	32%	91%	2%	94%	2%	25%	50%	22%	61%
IS	24%	40%	30%	43%	94%	3%	95%	2%	13%	66%	12%	73%
LU	58%	19%	60%	21%	88%	4%	91%	4%	24%	53%	25%	58%
NL	39%	44%	35%	46%	85%	7%	79%	8%	22%	63%	22%	65%
NO	26%	43%	27%	48%	91%	4%	92%	2%	9%	78%	8%	83%
PL	60%	17%	55%	23%	86%	5%	94%	2%	43%	31%	37%	44%
PT	66%	14%	68%	13%	77%	6%	81%	5%	39%	34%	38%	43%
SE	20%	51%	23%	51%	93%	2%	94%	2%	8%	75%	10%	79%
SI	43%	29%	42%	33%	89%	4%	91%	2%	23%	52%	24%	61%
SK	43%	26%	38%	33%	72%	6%	87%	4%	32%	42%	30%	50%
UA	73%	7%	67%	11%	86%	5%	90%	3%	50%	24%	41%	35%
Tot.	50%	25%	51%	27%	83%	6%	88%	4%	30%	46%	29%	53%

Source: European Social Survey, round 2 (2004) – own calculations.
Note: "yes" includes the answers "strongly agree" and "agree"; "no" the answers "disagree" and "strongly disagree".
Answers are taken from the whole sample of men and women. See Table 2 for country abbreviations.

Table A.2. Descriptive statistics of explanatory variables for both estimation exercises

	Men	Women
Average age	38.5	37.5
Low educated	31%	28%
Medium educated	41%	47%
Highly educated	28%	25%
Married	82%	84%
Bad health	3%	4%
In country <20 years	9%	9%
In country >20 years	4%	3%
Native	91%	91%
Partner ISCO2	10%	14%
Partner ISCO1	3%	10%
Partner ISCO3	15%	12%
Partner ISCO4	10%	4%
Partner ISCO5	13%	7%
Partner ISCO6	1%	3%
Partner ISCO7	2%	21%
Partner ISCO8	2%	10%
Partner ISCO9	4%	5%
Partner ISCO0	0%	1%
Partner ISCO missing	2%	3%
Partner not working	38%	11%
Regio. fem. part time rate	31%	32%
Regio. fem. unempl. rate	10%	10%
No child	18%	16%
Yst child <6y	32%	31%
Yst child 6-12y	25%	24%
Yst child 13-19y	17%	18%
Yst child 20y+ or not in hh.	8%	11%
No. of children	1.72	1.81

Source: Own calculations based on ESS round 2 (2004) and Eurostat database (data 2003 for regional female part-time and unemployment rates). Sample of men and women aged 20-49 (not student, not unemployed).

Table A.4. Multinomial logit estimations of employment outcomes for women aged 20-49 living in couple – interaction effects of education and children with attitudes index

Inactivity	(4) coeff	std err	(5) coeff	std err	(6) coeff	std err	(7) low edu coeff	std err	med edu coeff	std err	high edu coeff	std err
im*low educ	-0.119	0.047										
im*med educ	-0.328	0.047										
im*high educ	-0.357	0.070										
im*yst c.<6y			-0.305	0.055								
im*yst c. 6-12			-0.299	0.065								
im*yst c. 13-19			-0.179	0.067								
im*yst c. 20+			-0.215	0.088								
im* no child			-0.179	0.072								
im*led*yc<6					-0.123	0.070						
im*led*yc 6-12					-0.161	0.076						
im*led*yc 13-19					-0.097	0.086						
im*led*yc 20+					-0.126	0.095						
im*led*no ch.					-0.011	0.091						
im*med*yc<6					-0.371	0.068						
im*med*yc 6-12					-0.416	0.071						
im*med*yc 13-19					-0.246	0.075						
im*med*yc 20+					-0.284	0.097						
im*med*no ch.					-0.232	0.090						
im*hed*yc<6					-0.368	0.077						
im*hed*yc 6-12					-0.413	0.105						
im*hed*yc 13-19					-0.277	0.104						
im*hed*yc 20+					-0.365	0.118						
im*hed*no ch.					-0.236	0.086						
imodern*at							-0.155	0.094	-0.260	0.106	-0.365	0.135
imodern*de							-0.200	0.125	-0.339	0.083	-0.364	0.113
imodern*ch							-0.015	0.138	-0.199	0.108	-0.151	0.124
imodern*lu							-0.142	0.120	-0.211	0.114	-0.227	0.112
imodern*be							0.045	0.120	-0.278	0.092	-0.307	0.106
imodern*fr							-0.016	0.090	-0.206	0.110	-0.147	0.104
imodern*nl							-0.067	0.149	-0.277	0.127	-0.379	0.125
imodern*uk							-0.342	0.162	-0.659	0.160	-0.629	0.166
imodern*ie							-0.125	0.114	-0.316	0.096	-0.360	0.128
imodern*es							-0.280	0.102	-0.541	0.118	-0.689	0.137
imodern*el							-0.204	0.094	-0.349	0.082	-0.377	0.110
imodern*pt							-0.281	0.106	-0.467	0.142	-0.408	0.159
imodern*pl							0.001	0.091	-0.230	0.095	-0.184	0.120
imodern*hu							0.051	0.174	-0.458	0.189	-0.276	0.166
imodern*cz							0.106	0.144	-0.289	0.086	-0.139	0.124
imodern*sk							0.221	0.187	-0.128	0.104	-0.205	0.155
imodern*ee							-0.171	0.171	-0.094	0.111	-0.111	0.124
imodern*si							0.066	0.150	-0.032	0.139	-0.126	0.167
imodern*dk							0.092	0.146	-0.139	0.116	-0.222	0.132
imodern*no							-0.040	0.153	-0.136	0.121	-0.196	0.117
imodern*fi							-0.017	0.119	-0.169	0.117	-0.202	0.121
imodern*is							-0.288	0.334	-0.536	0.267	-0.499	0.246
imodern*se							0.219	0.181	0.074	0.186	0.066	0.176
constant	2.310	1.621	2.696	1.619	1.446	1.661	-1.061	2.121				

(continued on next page)

Table A.4. (continued)

Part time	(4) coeff	std err	(5) coeff	std err	(6) coeff	std err	(7) low edu coeff	std err	med edu coeff	std err	high edu coeff	std err
im*low educ	**-0.170**	0.057										
im*med educ	**-0.245**	0.052										
im*high educ	**-0.333**	0.065										
im*yst c.<6y			**-0.231**	0.069								
im*yst c. 6-12			**-0.277**	0.064								
im*yst c. 13-19			**-0.211**	0.074								
im*yst c. 20+			**-0.275**	0.093								
im* no child			*-0.163*	0.072								
im*led*yc<6					*-0.195*	0.100						
im*led*yc 6-12					*-0.186*	0.079						
im*led*yc 13-19					-0.177	0.093						
im*led*yc 20+					-0.199	0.114						
im*led*no ch.					-0.071	0.102						
im*med*yc<6					**-0.215**	0.082						
im*med*yc 6-12					**-0.372**	0.086						
im*med*yc 13-19					*-0.211*	0.085						
im*med*yc 20+					**-0.294**	0.099						
im*med*no ch.					*-0.155*	0.081						
im*hed*yc<6					**-0.312**	0.084						
im*hed*yc 6-12					**-0.348**	0.086						
im*hed*yc 13-19					**-0.315**	0.096						
im*hed*yc 20+					**-0.415**	0.120						
im*hed*no ch.					*-0.221*	0.094						
imodern*at							-0.094	0.103	*-0.229*	0.115	*-0.302*	0.127
imodern*de							*-0.453*	0.179	*-0.212*	0.091	*-0.265*	0.108
imodern*ch							0.065	0.148	-0.098	0.119	-0.103	0.129
imodern*lu							-0.062	0.139	-0.009	0.130	-0.094	0.139
imodern*be							0.070	0.126	-0.129	0.086	*-0.207*	0.099
imodern*fr							**-0.254**	0.093	*-0.251*	0.105	**-0.432**	0.119
imodern*nl							0.070	0.155	-0.063	0.117	*-0.223*	0.116
imodern*uk							**-0.433**	0.154	**-0.596**	0.132	**-0.644**	0.147
imodern*ie							-0.214	0.136	**-0.265**	0.101	*-0.244*	0.119
imodern*es							*-0.292*	0.132	**-0.491**	0.150	**-0.416**	0.121
imodern*el							0.062	0.146	-0.224	0.140	-0.013	0.123
imodern*pt							-0.101	0.145	*-0.451*	0.273	*-0.327*	0.176
imodern*pl							-0.169	0.273	-0.178	0.192	0.018	0.170
imodern*hu							-0.116	0.234	-0.174	0.157	-0.002	0.176
imodern*cz							0.233	0.287	0.096	0.141	0.060	0.178
imodern*sk							0.311	0.284	0.127	0.209	0.255	0.236
imodern*ee							**-12.840**	0.945	0.000	0.262	0.022	0.230
imodern*si							-0.346	0.320	*-0.659*	0.327	-0.248	0.223
imodern*dk							*-0.257*	0.153	*-0.337*	0.132	*-0.337*	0.143
imodern*no							0.125	0.153	0.029	0.114	-0.134	0.114
imodern*fi							**-8.634**	0.576	-0.149	0.130	*-0.247*	0.148
imodern*is							*-0.894*	0.392	**-0.837**	0.286	**-0.897**	0.259
imodern*se							0.051	0.142	-0.010	0.150	-0.181	0.144
constant	-2.451	2.000	-2.371	2.061	-3.268	2.126	*-4.042*	2.270				
# obs.		6792		6792		6792		6792				
Chi²		1496		1538		1524		3728				
Log ps-lkhood		-5527		-5542		-5507		-5398				
pseudo-R²		0.215		0.213		0.218		0.234				

1% significance level		*5% significance level*		*10% significance level*	

*Note: imodern stands for index of attitudes and imodern*at (for example) is the interaction term for Austrian attitudes (imodern multiplied by the dummy at). Led stands for low educated, med for medium educated and hed for high educated (in Model 6). Other control variables not shown (available from the author).*