

GENDER ROLE ATTITUDES AND THE LABOUR-MARKET OUTCOMES OF WOMEN ACROSS OECD COUNTRIES

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This paper uses data from the World Value Surveys (1990, 1995, 1999) to investigate the impact of gender role attitudes and work values on women's labour-market outcomes across 25 OECD countries. Anti-egalitarian views are found to display the strongest negative association with female employment rates and the gender pay gap. These views are, however, softening among recent cohorts. On the other hand, perceptions of women's role as homemakers, which are likely formed in youth and linked to religious ideology, are more persistent over time. They could be implicated in the recent slowdown of the gender convergence in pay. Finally, the unavoidable clash between family values and egalitarian views, that takes the form of an inner conflict for many women—the so-called 'mother's guilt'—is another obstacle in the path towards greater gender equality in the labour market.

I. INTRODUCTION

After two decades of spectacular gains, in many OECD countries, progress in women's employment

rates and in closing the gender pay gap (Clarke, 2001; O'Neill, 2003) has slowed considerably since the mid-1990s.² This troubling trend is occurring, perhaps concurrently, in an era of renewed interest

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I would like to thank Benjamin Sand for excellent research assistance. I am indebted to Pierre-André Chiappori, Christian Dustmann, Shelly Lundberg, two anonymous referees, and the participants at the CIAR Workshop on Social Groups, Economic Behaviour, and Human Welfare, the Empirical Workshop at the University of British Columbia, and the Workshop on Public Policy and the Family at the University of Victoria for helpful discussions and comments. Financial support was provided by SSHRC Grants INE No. 501-2002-0118.

² Clarke (2001) makes that claim about the gender pay gap for Austria, Denmark, Finland, Italy, Norway, Portugal, and Sweden; O'Neill (2003) makes the point for the USA. The gender earnings ratios presented in Appendix Table 1 also support the claim of a slowdown for Belgium, Canada, Iceland, Ireland, and the UK. The women's employment rates presented in Appendix Table 1 show more or less stable numbers for Canada, Finland, Norway, Sweden, the USA, and the UK. This is in addition to the declining female employment rates in the transition economies of the Czech Republic, Hungary, Poland, and Slovakia.

in family and religious values. As shown by Guiso *et al.* (2003) and Algan and Cahuc (2004), religiosity is associated with less favourable institutions and attitudes towards working women. Yet, these values and gender role attitudes have evolved over time and in different ways across countries. The main goal of this paper is to evaluate the impact of gender role attitudes and work values on women's labour-market outcomes across OECD countries, comparing individual outcomes with country-specific ones. This is a first step towards testing the hypothesis that the stabilization of gender role attitudes among post-Second World War cohorts may be a contributing factor to the slowdown of the economic progress of women.³

Blau and Kahn (2004), who study the slowing gender wage convergence in the United States, attribute the slowdown to factors that contributed to changes in the unexplained gender gap.⁴ These factors include changes in gender differences in unmeasured characteristics and labour-market discrimination, among others. Here, the analysis attempts to move some of these unmeasured characteristics into the measurable dimension.

As an individual woman makes decisions about education, family formation, fertility, and labour-market participation over her life-cycle, one can see these choices as influenced by her personal perception of the traditional family model, where the man is the breadwinner and the woman the homemaker. Many authors (Thornton *et al.*, 1983; Vella, 1994) have, indeed, found that female attitudes towards working women are developed in youth, influenced by parental education and religious affiliation. These views may also be shaped by societal attitudes and institutional barriers, and later on need to be balanced with individual aspirations. A woman's aspirations may include establishing caring and loving relationships with her children and spouse, as well as career goals (Moen *et al.*, 1997). The present study thus complements studies which emphasize the role of gender-equality or family-friendly policies and labour-market institutions as important determinants of women's labour-market outcomes (Jaumotte,

2003). Here, these institutions are thought to reflect the country's prevalent gender ideology or, as argued by Algan and Cahuc (2004), to the country's main religious ideology.

More specifically, this paper uses three waves (1990–3, 1995–7, and 1999–2001) of the World Value Surveys (WVS) to analyse the impact of attitudes towards gender roles, competition, and different aspects of work, on women's employment decisions and part-time status among working women. The analysis controls for individual characteristics and includes time period and country fixed-effects, as well as own-country's average male attitudes. The role of gender differences in attitudes and work values in accounting for the gender pay gap across countries is also assessed.

In all regression analyses, women's participation in higher education comes out overwhelmingly as the main determinant of favourable labour-market outcomes for women. Promoting women's access to higher education remains the primary policy instrument to foster women's equality in the labour market.

With respect to gender role attitudes, agreement with the statement that '*When jobs are scarce, men should have more right to a job than women*' stands out as the most powerful explanatory factor of cross-country differences in female employment rates and in the gender pay gap. This statement captures perceptions of the man as main breadwinner, as well as anti-egalitarian views or discriminatory attitudes against working women (Azmat *et al.*, 2004). Perceptions of the woman as homemaker, measured as agreement with the statement '*Being a housewife is just as fulfilling as working for pay*' also have significant explanatory power. For individual choices, agreement with the statement that '*A working mother can establish just as warm and secure a relationship with her children as a mother who does not work*' is closely associated with women's employment status. This concurs with what the popular literature (Buttrose and Adams, 2005) has called 'mother's guilt'. For

³ I cannot conclusively verify this hypothesis since I do not have enough observations to perform a country-cohort analysis. However, I do provide suggestive evidence.

⁴ Changes in labour-market selectivity, less favourable supply and demand shifts, the occupational upgrading of women, and de-unionization are other factors that explain a portion of the slower 1990s convergence. However, the effect of 'unexplained' factors is sufficient to account fully for the slowdown.

many women, the unavoidable clash between family values and egalitarian views takes the form of an inner conflict. The growth of this concern is consistent with the fall in women's own wage elasticity associated with the 1990s stabilization in the growth of female labour supply in the United States identified by Blau and Kahn (2005). Work values, especially favourable views towards competition, are also shown to have significant explanatory power.

The paper is organized as follows. Section II reviews the literature on economic outcomes and attitudes, and links the empirical strategy to seminal models of gender discrimination (Becker, 1971) and of the household division of labour (Becker, 1985). Section III addresses the data issues. The interpretation of the empirical results is provided in the subsequent section. Section V concludes with a discussion of the policy implications of the main findings.

II. ECONOMIC OUTCOMES, WORK VALUES, AND GENDER ROLE ATTITUDES

(i) Existing Studies

Historically, gender differences in work values, which were perceived as a rationalization for occupational gender segregation, have been de-emphasized in the sociological literature (Bielby and Bielby, 1984; Rowe and Snizek, 1995). More recently, in an effort to account for the unexplained part of the gender pay gap and increasing returns to unobserved skills, there has been a renewed interest in economics for 'soft skills' and 'fuzzy variables'. Experimental studies in behavioural economics have noted important differences between men and women in individual attitudes towards altruism and greed (Andreoni and Vesterlund, 2001), and leadership and competitiveness (Gneezy *et al.*, 2003).

Empirical studies have found a substantial impact of these and related traits on wages. Day and Devlin (1998) using Canadian data, find positive returns to volunteering in sports (coaching) and economic interest organizations, but negative returns to volunteering in religious organizations. For men in the United States, especially those in managerial jobs, Kuhn and Weinberger (2002) find positive returns to leadership skills. In another study (Fortin, 2005), I

find significant gender differences in the importance of 'making a lot of money' and having a job useful to society. I also find a significant impact of altruism, greed, and leadership on the US gender wage gap. Borghans *et al.* (2005) find that the growth rate of the importance of interpersonal interactions in the labour market seems consistent with the pattern of changes in the US gender wage gap, including the slowing convergence since the mid-1990s.

The sociological literature has long paid attention to the sources and evolution of gender role attitudes and their consequences, not only for labour-market outcomes, but also for family formation and fertility. For example, Thornton *et al.* (1983), using data from an 18-year panel study, find that maternal employment, educational attainment, and labour-market experience contributes to egalitarian views. Others (Kiecolt and Acock, 1988; Burt and Scott, 2002) have found that, in adolescence, the presence of a working mother influences gender role attitudes.

In the economics literature, Vella (1994) predicts women's traditional attitudes mainly on the basis of religious affiliation and parental education and thus argues that women's attitudes toward work are formed early in life. He finds an important impact of these attitudes on human capital investment and labour supply. The intergenerational transmission of cultural and religious traits (Bisin and Verdier, 2000) is, indeed, a basic element of theoretical models of the evolution of preferences. More recent models incorporate feedback for the labour market (Escriche *et al.*, 2004) and marriage market (Fernandez *et al.*, 2004). In Fernandez *et al.*'s model, the returns to a woman's investment in labour-market skills depend on the proportion of men with working mothers, who may prefer working wives or provide greater assistance with housework. The authors test their empirical predictions about the growing proportion of married working women using different Second World War mobilization efforts across the US states, as in Acemoglu *et al.* (2002), which produce a distinct shock to women's labour force participation. Akerlof and Kranton (2000), who formalize a gendered identity-based model, argue that the recruitment of women into 'men's jobs' during the Second World War had to be accompanied by propaganda picturing women taking on factory work without loss of femininity. Goldin (2004) suggests a complementary channel and attributes the

transformation of women's work, which began with the cohorts born after the Second World War, to an episodic change associated with contraceptive technology.

Given that there has been continuing progress in contraceptive technology and a continued increase in the share of husbands with working mothers, some countervailing current must be at play to explain the sustained appeal of traditional gender roles. The impact of religious conservatism is a potential candidate that has attracted renewed attention. Earlier on, Thornton *et al.* (1983) had found that church attendance and a fundamentalist identification preserve traditional gender role attitudes. More recently, Guiso *et al.* (2003) study religiosity and economic attitudes toward the government, working women, legal rules, trust, thriftiness, and fairness in the market economy and find that religious beliefs are generally associated with attitudes conducive to higher economic growth. However, they find that religious people tend to be more racist and with less favourable attitudes towards working women. Algan and Cahuc (2004) develop a model in which gender bias in social status gives rise to job protection and family policies detrimental to women's employment. Algan and Cahuc thus argue that the previous literature has overestimated the effects of labour-market and family policies by ignoring the values that gave rise to them. Heineck (2004) also finds that women's regular participation in religious activities and the presence of a spouse with strong religious beliefs reduces female employment in Germany.⁵

(ii) Empirical Strategy

Here the aim is first to evaluate the extent to which gender role attitudes—namely traditional views, anti-egalitarian views, and inner conflict variables—

and work values—namely greed, competitiveness, usefulness to society, and meeting people—as preference parameters exert an important impact on individual economic behaviour.⁶ Let Y_{ict} denote the labour-market outcome of woman i in country c at time t , her employment and part-time work status. Traditional gender role attitudes and anti-egalitarian views G_{ict} are expected to have negative impacts on women's employment status but positive impacts on part-time work: the belief there is that a woman's place is in the home. Work values J_{ict} , such as greed and competitiveness as indicators of effort on the job, are expected to have positive impacts on employment status, but negative impacts on part-time work. Following the hedonic wage framework of Fortin (2005), usefulness to society and meeting people are job amenities that workers are willing to trade off for wages.⁷ Thus these work values are expected to have negative impacts on employment status, but positive impacts on part-time work.⁸ Altruistic and religious volunteering activities, V_{ict} , are another means of obtaining altruistic rewards. They are associated with lower effort on the job and have negative impacts, while leadership volunteering activities are associated with positive impacts. Considering the inner conflict variables, I_{ict} , the absence of mother's guilt is expected to have a positive impact on employment, while valuing good working hours is expected to have a positive impact on working part-time. Assuming linear preferences, the individual estimating equation takes the form

$$Y_{ict} = \alpha_0 + \alpha_G G_{ict} + \alpha_J J_{ict} + \alpha_I I_{ict} + \alpha_V V_{ict} + \alpha_X X_{ict} + \alpha_m \bar{G}_{mct} + \alpha_C C + \alpha_T T + \varepsilon_{ict},$$

where X_{ict} are individual characteristics, such as education, age, marital status, and the presence of children, and where \bar{G}_{mct} are the average men's gender role attitudes by country at time t , C are country dummies, and T time dummies.

⁵ Heineck (2004) finds that while Muslim women are the more likely not to be employed (72 per cent); they are followed closely by Baptists and Methodists (59 per cent).

⁶ The choice of particular work values is based on the presence of substantial gender differences in those values.

⁷ In the hedonic wage framework set in Fortin (2005), workers-consumers maximize utility, $U(W_i, R_i, A_i)$, by the choice of a wage level, a level of effort and responsibility, and a level of altruistic rewards. There is an upper limit on the total amount of effort and responsibility the worker-consumer allocates between market and non-market work: $R_i = R_i^M + R_i^H \leq R_i^T$. Altruistic rewards $A_i = A_i^M + A_i^H$ come from market activities, such as a feeling of the job's usefulness to society, and non-market activities, such as child rearing and volunteering.

⁸ When altruistic rewards are not available on the job, as in clerical, sales, and services jobs, for example, women may choose to obtain these rewards from full-time child rearing (negative effect on employment) or some combination of part-time child rearing and volunteering (positive effect on part-time work given that one is working). Because of child-rearing activities, women's reservation level of altruistic rewards on the job may be higher than men's.

A difficult question is the issue of causality. Despite efforts to address this issue, many of the results below should be more precisely referred to as partial correlations, rather than causal factors. At times, I use the word ‘impact’ or ‘effect’ of attitudes and values to simplify the exposition, but the reader should feel free to interpret this as mere correlation.

Were the women’s attitudes formed before their employment decisions—in their youth, for example—or are these attitudes subsequent rationalizations of their labour-market choices? Ideally, one would like to use lagged attitudes and values, as in Fortin (2005), to circumvent this problem of *ex-post* rationalization. In the absence of such data here, I have to rely on secondary evidence from panel survey data (Thornton *et al.*, 1983; Kiecolt and Acock, 1988; Burt and Scott, 2002) claiming that traditional gender role attitudes are linked to religious beliefs and developed in youth. Whether an attitude is formed later in life rather than in one’s youth can be revealed by considering a sample of immigrant women.⁹ The effects of attitudes formed early in life in a sample of immigrant women will likely be different from those estimated from a sample of natives. By contrast, the effects of attitudes conditioned by current experiences are more likely to be similar in the two samples. It remains difficult to know whether a working mother is likely to state that she cannot establish as ‘warm and secure a relationship with her children’ as if she was not working. In the end, though, whether an *ex-post* rationalization or an *ex-ante* explanation, the association between employment status and the presence of children may fall under what the new feminist literature has labelled as ‘mother’s guilt’.

Another issue related to causality is whether individual preferences dictate labour-market choices or whether these choices are conditioned by country-specific social norms.¹⁰ Here, male country-specific average attitudes are used to capture societal

influences and norms that may constrain a woman’s behaviour; they are arguably more exogenous than female average attitudes.¹¹ Country fixed effects are used to capture other country-specific variables arising from institutional differences. Robust standard errors clustered by country are used to adjust for differences in the variance of individual heterogeneity by country. The regressions are also estimated on a sample of men to assess, as in Fernandez and Fogli (2005), whether the attitudes and values are not capturing some other economic factors.¹²

Second, the paper seeks to explain whether country differences in women’s employment rates can be accounted for by social norms, measured by country-specific average gender role attitudes and work values:

$$\bar{Y}_{ct} + \beta_0 + \beta_G \bar{G}_{ct} + \beta_J \bar{J}_{ct} + \beta_V \bar{V}_{ct} + \beta_F F_c + t + \varepsilon_{ct},$$

where F_c denote some country-specific family policy, and t is a time trend.¹³ At the country level, the interpretation of some attitudinal variables and the challenges in the identification of causal effects are different. First, gender role attitudes now denote country-specific social norms that may constrain women’s choices. However, their effects are expected to have the same negative signs as in the individual level regressions. On the other hand, the inner conflict variable is no longer meaningful. Second, volunteering in leadership or religious organizations become indicators of the social importance of leadership skills networks and non-market altruistic activities, respectively. Third, attitudes towards competition can be interpreted in terms of Becker’s (1971) theory of employer discrimination, where increased competition is thought to decrease gender discrimination, which is costly for employers. Thus favourable attitudes towards competition are expected to have a positive impact on women’s employment rates. To the extent that men are more likely employers, the impact of male attitudes is expected to be stronger.

⁹ The focus on immigrant women is the basis of the identifying strategy of Fernandez and Fogli (2005), who argue that beliefs and preferences are transmitted across generations and thus come from culture.

¹⁰ Akerlof (1980) provides a model where deviations from the social norm result in individual disutility. Clark (2003) tests such a model in the case of unemployment.

¹¹ For example, women’s egalitarian views may increase with educational attainment.

¹² For example, it could be argued that ‘scarce jobs should go men first’ may capture conditions of persistent high unemployment rather than gender role attitudes.

¹³ As argued by Petrongolo (2004), the institutional aspects linked to the availability of part-time work are so important that a country-level analysis of the incidence of part-time work is left for another occasion.

Reverse causality is the problematic issue at the country level. Are women's employment rates lower in some countries because '*the man as main breadwinner*' is the norm and '*scarce jobs are given to men first*', or have women's low employment rates in some countries resulted in men being the sole provider for most families and thus getting priority for jobs? The synthetic panel nature of the country-level data will help address the reverse causality issue by the use of lagged attitudes. Because the number of country-level observations is very small, including country fixed effects saturates the model: they are thus excluded. Instead I include a measure of child-care support used by Jaumotte (2003).¹⁴ I also perform the regressions using country-specific average male attitudes, which are less likely to suffer from endogeneity problems.

Finally, I explore the impact of gender role attitudes and work values on the gender pay gap by country. Because the gender pay gap is a measure of the difference between the average wages of men and women, the explanatory variables, in the spirit of the Oaxaca–Blinder decomposition, are also measured as gender differences:¹⁵

$$\Delta \bar{Y}_{ct} = \delta_0 + \delta_G \Delta \bar{G}_{ct} + \delta_J \Delta \bar{J}_{ct} + \delta_X \Delta \bar{X}_{ct} + \delta_t t + \delta_{G-t} \Delta \bar{G}_{ct} \cdot t + \varepsilon_{ct},$$

where the operator Δ denotes differences between male and female country averages, t denotes a time trend, and where the interaction parameter δ_{G-t} captures the time effect of changes in gender role attitudes.¹⁶

Whereas the interpretation of gender differences in educational attainment is clear, the interpretation of

gender differences in the attitudinal variables is not as straightforward. First, with respect to men's traditional role and/or anti-egalitarian views measured as agreement with the statement that '*When jobs are scarce, men should have more right to a job than women*', I appeal again to Becker's (1971) theory of employer discrimination. To the extent that employers are likely to be men, when men show less nepotism towards male employees or have relatively less dislike for female employees, women's wages are more likely to rise. The country-specific social norms are thought to be captured by women's agreement with the statement.¹⁷ Thus the larger the male/female difference in this attitude, the more likely women will suffer from discrimination and the larger the wage gap.¹⁸

Second, with respect to women's traditional role measured as agreement with the statement that '*Being a housewife is just as fulfilling as working for pay*', I appeal to Becker's (1985) model of the division of labour within households. In that model, because of their responsibility as homemakers, women are more likely to choose less demanding market jobs that command lower wages. Here, the country-specific social norms about housewifery are thought to be captured by men's agreement with the statement. When fewer women than the social norm have a preference for housewifery, their average wages are likely to be higher.¹⁹ A related argument can be made regarding preferences for '*good hours*' in a job. In countries where women's preferences for '*good hours*' are close to the social norm set by men's preferences, women are less likely to be penalized by these preferences, which in turn may be linked to their responsibilities as homemakers. Thus, the fewer

¹⁴ Jaumotte (2003) finds a weakly significant (10 per cent level) impact of child-care support and paid leave on female labour-force participation across OECD countries. Because the different family policies are correlated, I prefer to focus on the most significant policy instrument.

¹⁵ For example, to the extent that a preference for '*good hours*' in a job may indicate an intended lower level of effort, it is the gender difference in this productive characteristic that is relevant for the gender pay gap.

¹⁶ This econometric specification is the regression-adjusted version of the difference-in-difference estimator given that t is actually discrete.

¹⁷ That is, female employers are not thought to have a prejudice against female employees. Among women, the statement may pertain more directly to gender role attitudes than anti-egalitarian views.

¹⁸ For example, we observe in Appendix Table 2 that in France 26 per cent of women and 25 per cent of men agree that scarce jobs should go to men first, while the numbers in the UK are 19 per cent for women and 24 per cent for men. We could thus conclude that there are more potential female employees in the UK facing the prejudice of potential male employers than in France.

¹⁹ In Appendix Table 2, we observe that in the UK, 59 per cent of women and 54 per cent of men agree that housewifery is fulfilling, while the numbers in France are 56 per cent for women and 58 per cent for men. There are relatively fewer women in France than in the UK that prefer housewifery, which according to Becker's model would result in a smaller wage gap in France.

women relative to men who prefer ‘good hours’, the lower the gender pay gap.²⁰ The reader may find these relationships easier to grasp by referring to Figure 2 below.

III. DATA ISSUES

Like recent studies (Guiso *et al.*, 2003; Alesina and Angelos, 2005) on the interaction between attitudes and economic outcomes, I use data on values and individual characteristics including labour-market decisions, from the waves 1990–3 and 1995–7 (ICPSR 2970) of the WVS.²¹ I update these data with the more recent 1999–2001 wave (ICPSR 3975), which also includes answers to the European Value Survey (EVS). The WVS and EVS include a broad range of questions on attitudes towards working mothers, the dual breadwinner model, greed, altruism, and competitiveness among others, along with background information on labour-force status, education, marital status, etc.

While the coverage of societies/countries in the WVS has grown from 43 in the 1990 wave to 62 in the 1995 wave and 82 in the 2000 wave, because of the difficulty of finding comparable measures of the gender pay gap across countries, I limit my analysis to 24–26 OECD societies/countries.²² They include the following countries, classified according to the gender-sensitive typology of countries proposed by Siaroff (1994), which combines socio-democratic political ideologies with religiously derived ideologies. I add ‘transition countries’ to that typology; these countries combine the former communist ideology of gender equality with traditional orthodox family values.

- Protestant social democratic states: Sweden, Finland, Iceland, Norway, and Denmark.
- Protestant liberal states: Australia, Canada, the United Kingdom, and the United States, with minimal family welfare but a relatively egalitarian labour market.

- Advanced Christian democratic states: Austria, Belgium, France, Italy, Germany, and the Netherlands.
- Late female mobilization welfare states: Greece, Ireland, Japan, Portugal, Spain, Switzerland, and Turkey. Although the non-Western societies of Japan and Turkey are actually singletons.
- The transition ‘Visegrád’ countries: Czech Republic, Hungary, Poland, and Slovakia.

Data on the gender pay gap for these countries for periods corresponding roughly to those of the WVS are available from secondary sources, notably the OECD and Eurostat. In view of the important problems in finding comparable gender pay ratios across countries (Plasman *et al.*, 2002), I paid close attention to the methodologies used and when needed, supplemented data from reporting agencies with data from academic researchers as indicated at the bottom of Appendix Table 1. Here, my goal is to assess the explanatory power of ‘soft factors’, such as gender role attitudes and work values. Measurement error in the dependent variable—the gender wage gap—will simply reduce the precision of parameter estimates.²³

The main advantage of using the WVS is that the same questions on attitudes and values are asked in the different countries. On the other hand, when data on background variables such as education are gathered, they are necessarily dependent on each country’s education system. Being a large and very complex data set, the WVS suffers from some coding problems not reflected in the codebook.²⁴ Thus the coding of educational attainment was reduced to four classes to increase comparability across countries. On the other hand, it was not possible to classify the occupation classes into categories meaningful to study occupational gender segregation; in particular, a class of clerical workers was missing. Thus, this issue is captured only imperfectly, as in OECD (2002) and Jaumotte (2003), in terms of the incidence of part-time work among workers.

²⁰ For example, we observe in Appendix Table 2 that in France 35 per cent of women and 33 per cent of men state that good hours are important in a job, whereas the numbers in the UK are 53 per cent for women and 44 per cent for men. There are relatively more women in the UK than in France who want good hours in a job, which may lead to a larger wage gap in the UK.

²¹ The answers to questions on gender role attitudes were not recorded in the earlier 1981–4 wave of the WVS.

²² The change in the number of countries is due to re-unification of West and East Germany.

²³ That is, if we can assume that the measurement error in the dependent variable is uncorrelated with the error term and the other explanatory variables.

²⁴ It is at times necessary to tabulate responses by country to know what the allowable answers were.

The main dependent variables computed from the WVS are the employment status of women and the part-time status of female workers. I select individuals aged 18–64, excluding students and retirees. I first analyse their employment status, a variable set to 1 for individuals in paid or self-employment, and to zero for others, housewives, and the unemployed. Individual employment status is aggregated by country to obtain employment rates at the country level. These are displayed in Appendix Table 1, along with the employment rates among 25–54-year-olds from OECD (2002).²⁵ Azmat *et al.* (2004) have analysed the gender gap in unemployment across OECD countries, which is sizeable in the Mediterranean countries. They find that this gap arises from labour-market institutions that protect certain groups of workers at the expense of others, but they also find a strong correlation with discriminatory attitudes. Second, to address the issue of occupational gender segregation, I focus on part-time work status, a variable set to 1 for part-time employees and to zero for full-time employees. Education level, age, marital status, and the presence of children are obtained from the WVS and used as control variables.

The more unusual variables coming from the WVS relate to gender role attitudes, work values, and volunteering. Note that there are other country-specific surveys (Vella, 1994; Day and Devlin, 1998; Fortin, 2005) that ask similar questions, and that Guiso *et al.* (2003) used these same questions to capture attitudes toward working women. The questions on gender role attitudes are included in a section that asks respondents whether they agree strongly, agree, disagree, or disagree strongly with a number of statements. The two more important ones for my purpose are an inner-conflict statement, '*A working mother can establish just as warm and secure a relationship with her children as a mother who does not work*', and a statement about women's traditional role, '*Being a housewife is just as fulfilling as working for pay*'. Strongly agree and agree were coded as 1, while disagree and disagree strongly were coded as zero. Another

interesting statement in that group, '*Both the husband and wife should contribute to household income*', was asked mainly in the 1999–2001 wave; unfortunately, there were not enough respondents to include this question fully in the analysis. Another question which captures both the concept of '*the man as main breadwinner*' and anti-egalitarian views, was placed in a group of questions designed to capture discriminatory attitudes against women, older workers, and immigrants. Respondents were asked to state whether they agreed, disagreed, or neither with the following statement: '*When jobs are scarce, men should have more right to a job than women*'. The interpretation of answers to this question is tricky. One could answer 'neither' or 'disagree' to show non-discriminatory attitudes towards working women. One could answer 'agree' to reflect the belief that men are the main breadwinners and earn higher wages, without thinking about the discriminatory implications. Accordingly, 'agree' was coded as 1 and 'neither' and 'disagree' were coded as zeros.

I exploit another group of questions related to work values. The respondents were asked to mention aspects of a job that they personally thought were important; multiple answers were allowed.²⁶ When an aspect is mentioned, it is coded as a 1 and zero otherwise. I used two aspects of a job where there are sizeable gender differences: '*good pay*' and '*good hours*'. The EVS additionally includes aspects of a job which capture the higher 'altruism' and 'sociability' of women: '*a useful job for society*' and '*meeting people*'. Unfortunately, the smaller number of respondents and countries (North America, Australia, Japan, and Turkey are excluded) limits the analysis of these questions. To capture potential gender differences in competitiveness, as well as the Beckerian effect of competition on gender discrimination, I use a question where respondents were asked to indicate their complete agreement with a statement on the left with a 1 or their complete agreement with an opposite statement on the right with a 10, and to choose any integer

²⁵ The discrepancies between the WVS and the OECD numbers are generally small, but there are some more significant ones for late female mobilization countries, where the cohort effects are probably more important. It is difficult to know which numbers are more reliable. OECD numbers come from different sources across countries. The WVS numbers are from the same questionnaire administered in the different countries, but the samples are small (around 1,000 per country.)

²⁶ The questions about important aspects of a job were asked of all respondents, both employed and non-employed. It is difficult to know whether a housewife's response relates to a job she might have held in the past or expects to have in the future or to her husband's job, for example.

in between if their views fell somewhere in between. The statement on the left was ‘*Competition is good. It stimulates people to work hard and develop new ideas*’ and the statement on the right was ‘*Competition is harmful. It brings out the worst in people*’. I recode responses to fall between zero and 1, with one denoting complete agreement that competition was good.

Finally, I capture the issue of leadership and religiosity using questions that asked for which type of organization respondents were currently doing unpaid voluntary work. As shown by Day and Devlin (1998) and Fortin (2005), volunteering has a sizeable effect on wages, but it varies by type of organizations. I classify sport and recreation (usually coaching), labour unions, political parties or groups, and professional associations as organizations that involve or may build leadership skills and social networks. Religious, educational, or arts organizations constitute a category of personal involvement, while charitable, environmental, and any other organizations constitute a category of philanthropic involvement. An advantage of using ‘*volunteering in religious or church organizations*’ to capture religiosity is that it is costly activity and thus denotes a deeper involvement than ‘*going to church*’, a variable used in Guiso *et al.* (2003).²⁷ Also, volunteering indicates revealed preferences for an alternative use of one’s time. However, with a change in the volunteering question across the waves, it cannot be used to capture changes over time.

Table 1 displays the means of the gender role attitudes and work values by birth cohorts, separately for women and men.²⁸ While there are gradual changes (not displayed) across survey waves, especially from 1990–3 to 1999–2001, it is the stabilization in the proportions agreeing with the ‘*working mother warm with children*’ and ‘*housewife fulfilling*’ statements across the post-Second-World-War birth cohorts which is the most striking.²⁹ The stabilization of these gender role attitudes among post-Second

World War cohorts contrasts with the continuing changes in anti-egalitarian views, work values, and ideal number of children. The larger drop for ‘*scarce jobs should go to men first*’ among post-Second-World-War women than among comparable men, may reflect a change associated with the war effort. Trying to link these drops in traditional attitudes with contraceptive technology, following Goldin and Katz (2002), I report the number of children, actual and desired. Interestingly for women born between 1925 and 1935, likely to have completed their fertility before the arrival of the Pill, the number of actual children exceeds the number of desired children. For subsequent cohorts, this is no longer the case. In effect, for the second pre-Second-World-War cohort, women aged between 25 and 35 in 1970, likely to have completed their education by 1970 and their fertility by 1990, the number of actual children is equal to the number of desired children. For post-Second-World-War cohorts, the number of actual children may reflect incomplete fertility at the time of the surveys.

Table 1 also shows gender differences in gender role attitudes and work values. Men tend to favour traditional roles and value good pay (greed) and competition more than women. Women give more importance in a job to good hours, being useful to society (altruism), and meeting people than men do.³⁰ Note, however, a striking gender convergence across cohorts in greed and altruism.

IV. EMPIRICAL RESULTS

The empirical analysis first considers individual-level outcomes, both employment status and part-time status among employees, and focuses, second, on country-level outcomes, namely employment rates and the gender pay gap. At the individual level, since the dependent variables are binary, I estimate a Probit model and report the marginal effects of gender role attitudes, work values, and volunteering

²⁷ Another question, which would have been helpful in discerning whether religious beliefs acted earlier in the life-cycle, ‘*Were you brought up religiously at home?*’, was asked only in the earlier waves.

²⁸ Appendix Table 2 displays average female and male gender role attitudes and work values by country.

²⁹ This stabilization is also seen among respondents less than 40 years old. Since data on ‘*Both spouses should contribute income*’ are available only in selected countries in 1995–7 and in most countries in 1999–2001, the number of respondents in the older cohorts is relatively small, so that it is difficult to analyse differences across birth cohorts.

³⁰ These gender differences are similar to those reported in Fortin (2005). The issue of selection into the labour force may be at play, since women from early cohorts were more likely to be nurses and teachers, professions for which this work value is higher (Fortin, 2005).

Table 1
Average Gender Role Attitudes and Work Values across Birth Cohorts

Birth cohort:	Women					Men				
	<1935	1936–45	1946–55	1956–65	>1965	<1935	1936–45	1946–55	1956–65	>1965
Gender role attitudes										
Scarce jobs should go to men first	0.36	0.32	0.23	0.20	0.15	0.38	0.32	0.26	0.23	0.21
Working mother warm with children	0.66	0.75	0.80	0.79	0.80	0.59	0.67	0.71	0.71	0.73
Being a housewife fulfilling	0.69	0.65	0.58	0.58	0.57	0.72	0.67	0.63	0.61	0.63
Both should contribute income ^a	0.79	0.80	0.81	0.77	0.82	0.82	0.75	0.76	0.74	0.78
Important aspects of job										
Good pay	0.63	0.68	0.73	0.75	0.79	0.71	0.73	0.78	0.80	0.83
Good hours	0.47	0.49	0.53	0.57	0.59	0.44	0.42	0.46	0.49	0.54
Useful job to society ^b	0.57	0.46	0.44	0.40	0.40	0.28	0.39	0.42	0.37	0.38
Meeting people ^b	0.61	0.53	0.50	0.52	0.56	0.62	0.41	0.44	0.47	0.48
Competition OK	0.63	0.62	0.61	0.61	0.60	0.67	0.65	0.65	0.64	0.64
Number of children										
Actual	2.91	2.60	2.30	2.00	1.11	2.77	2.48	2.25	1.86	0.76
Ideal	2.76	2.63	2.54	2.49	2.39	2.67	2.55	2.51	2.44	2.42

Source: Proportions of respondents computed from 1990–3, 1995–7 (ICPSR 2790) and 1999–2001 (ICPSR 3975) WVS. Individuals aged 18–64 across 25 OECD countries, excluding students and retirees. With approximately 5,000 and 6,000 observations by cohort for women and men, respectively, for cohorts born after 1935, the 90 per cent confidence interval for the above differences in proportions is around 0.013. ^a Asked only in selected countries in 1995–7 and in most countries in 1999–2001. ^b Asked in the EVS 1999.

on the probability of being employed or working part-time, controlling for background variables such as education, age, marital status, and the presence of children.

In Table 2, I present the marginal effects from the Probit analysis of individual employment status, along with Z-values from robust clustering by country in parentheses. In column (1), we find the expected effects of the control variables: strong positive effect of educational attainment and the absence of children. The effect of being married, although of the expected sign, is not statistically significant, and it is positive, large, and significant for men in column (6). Column (2) introduces the gender role attitudes, work values, and volunteering available in all waves, while column (3) adds some variables available mostly in the more recent wave. As expected, the traditional gender role values, ‘scarce jobs should go to men first’ and ‘being a

housewife fulfilling’, display significant negative associations with the employment status of women, controlling for country fixed-effects, and for country male average attitudes in column (4). The coefficients of these attitudes are larger and still significant among immigrant women in column (5), which is surprising, given the very small sample size of 362. Because immigrant women likely come from societies with more traditional attitudes, this lends support to the view that gender role attitudes are formed earlier in life. The absence of children and the ‘working mother warm with children’ have the strongest marginal effects, emphasizing the important role of ‘mother’s guilt’. Interestingly, the magnitude of the marginal effect of this last variable is the same in the sample of all women and the sample of immigrant women, thus one could argue that this inner-conflict variable is more likely shaped by labour-market experiences than by childhood experiences. None of the gender role attitudes has a

Table 2
Determinants of Employment Status: Marginal Effects from a Probit Model

Sample	Women				Immigrant women	Men
	(1)	(2)	(3)	(4)	(5)	(6)
Education (primary omitted)						
Secondary	0.068 (5.01)	0.053 (4.40)	0.072 (3.58)	0.053 (4.25)	0.194 (1.93)	0.043 (4.47)
Upper secondary	0.137 (6.47)	0.109 (5.28)	0.128 (6.84)	0.101 (5.03)	0.369 (3.35)	0.065 (5.17)
Tertiary	0.251 (9.28)	0.212 (7.91)	0.216 (11.05)	0.189 (8.15)	0.275 (2.31)	0.103 (4.75)
Age	0.001 (0.69)	0.001 (1.46)	0.003 (4.44)	0.001 (1.23)	0.004 (3.78)	0.000 (-0.32)
Married	-0.037 (-1.67)	-0.033 (-1.54)	0.010 (0.44)	-0.038 (-1.90)	-0.083 (-0.88)	0.110 (8.39)
Divorced, separated	0.033 (1.32)	0.034 (1.38)	0.032 (1.21)	0.027 (1.23)	-0.027 (-0.12)	0.010 (0.70)
No children	0.179 (7.67)	0.181 (7.84)	0.165 (8.05)	0.175 (7.61)	0.149 (1.87)	0.003 (0.27)
Gender role attitudes						
Scarce jobs should go to men first		-0.068 (-5.82)	-0.049 (-2.65)	-0.075 (-7.49)	-0.222 (-4.57)	-0.007 (-0.95)
Working mother warm with children		0.147 (7.58)	0.129 (7.49)	0.138 (10.08)	0.129 (6.52)	0.129 (1.02)
Being a housewife fulfilling		-0.084 (-5.92)	-0.078 (-5.82)	-0.088 (-10.39)	-0.141 (-2.41)	-0.004 (-0.70)
Both spouses should contribute income			0.103 (6.08)			
Important in a job						
Good pay		0.029 (1.35)	0.022 (1.39)	0.005 (0.55)	0.048 (0.50)	0.036 (1.62)
Good hours		0.022 (1.66)	-0.002 (-0.14)	0.005 (0.51)	-0.060 (-0.86)	0.011 (0.93)
Useful to society			-0.037 (-2.63)			
Meeting people			0.023 (1.71)			
Competition is OK		0.026 (1.21)	0.032 (1.12)	0.041 (2.89)	0.032 (1.10)	0.032 (2.81)
Volunteer in organizations						
With leadership-building skills		0.125 (11.56)	0.077 (3.67)	0.127 (12.51)	0.274 (3.34)	0.040 (5.53)
Philanthropic		-0.047 (-1.46)	-0.047 (-1.95)	-0.016 (-1.04)	-0.025 (-0.42)	-0.039 (-1.29)
Religious and cultural		0.005 (0.32)	-0.020 (-0.90)	0.001 (0.01)	-0.025 (-0.46)	0.018 (2.53)

Table 2 (continued)

Sample:	Women				Immigrant women	Men
	(1)	(2)	(3)	(4)	(5)	(6)
Men's average gender role attitudes	No	No	No	Yes	No	No
Chi-2	667.37	3,477.8	713.06	7,809.2	481.78	914.38
No. observations	24,433	24,433	6,453	23,286	362	21,079
No. countries	26	26	15	26	8	26

Notes: The independent variable is a binary variable equal to 1 if the individual is employed and 0 otherwise. Time and country dummies included in all regressions. Z-values from robust clustering by country in parentheses.

significant effect for men, which indicates that these variables are not capturing some other economic effect.

The effects of work values are generally not significant, with the exception of *'a job useful to society'* which has the expected negative impact.³¹ The effect of volunteering in leadership organizations is positive and significant in all regressions; it is largest for immigrant women in column (5), sizeable for all women, and smaller for men. Agreement with *'competition is good'* has a positive effect for women, once average country-specific male attitudes are included. That is, once the country social norms about competitiveness are included, women displaying higher levels are more likely to be employed. That coefficient is positive for men in column (6).

Table 3 reports the marginal effects of the same explanatory variables on part-time work status among working women and men. The usual controls, especially education, have less explanatory power for part-time status. The absence of children and being divorced both have a substantial negative impact on the probability of working part-time. As expected, *'working mother warm with children'* and *'housewife fulfilling'* have significant negative and positive effects, respectively, and are unchanged by the introduction of country male average attitudes. By contrast with employment status, work values play a more important and significant role here.³² *'Good pay'* and *'good hours'* have negative and positive significant effects, respectively, on part-time status.

³¹ As explained earlier, it is not clear to which job the opinions of non-employed respondents concerning 'important aspects of a job' refer. Thus this non-significance is not surprising.

³² Because the sample is restricted to workers, there is less ambiguity about important aspects of a job.

'Good hours', in particular, increases by 5 per cent the probability of working part-time, while agreement with *'competition is good'* decreases that probability by 5 per cent. Volunteering for religious and cultural organizations is an activity with high altruistic rewards which can be traded off for pay (Fortin, 2005); it increases the probability of part-time work by 6 per cent. Here, the number of working immigrant women was too small to yield a significant regression. Similarly, in column (3), where only the latest wave is used, the smaller sample size leads to less significant coefficients. Note that gender role attitudes are not significant for men in column (5), but the effects of work values and volunteering for religious organizations are significant and proportionally important.

Figure 1 displays the relationship between women's country- and time-specific employment rates (Appendix Table 1) and women's average gender role attitudes, competitiveness, and volunteering in leadership organizations. The acronyms used to identify the countries are from the WVS as reported in Appendix Table 1. A striking display appears in panel (a) where the country average employment rates line up remarkably well on the *'scarce jobs should go to men'* negative line. The exceptions are Turkey and the transition countries of Poland, the Czech Republic, and Slovakia. The fact that traditional gender role attitudes from these former egalitarian communist countries appear unrelated to employment outcomes is another indication that these attitudes may be formed in youth, rather than

Table 3
Determinants of Incidence of Part-time Work among Employees: Marginal Effects from a Probit Model

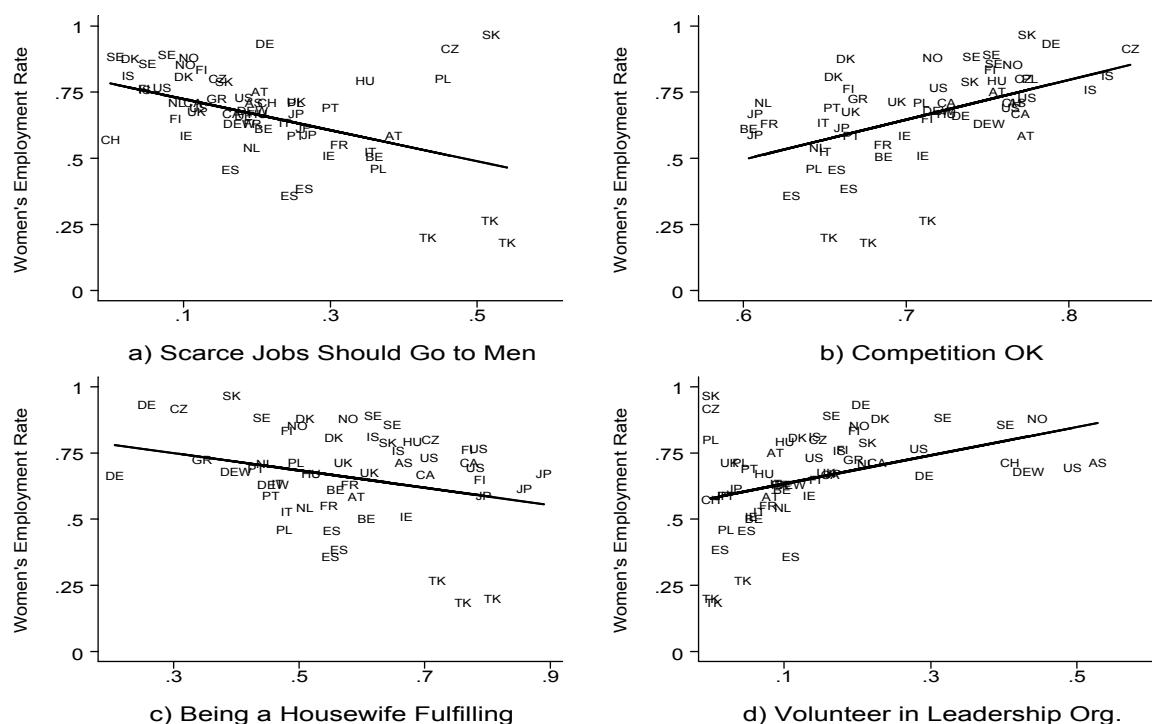
Sample:	Women				Men
	(1)	(2)	(3)	(4)	(5)
Education (primary omitted)					
Secondary	-0.052 (-3.55)	-0.049 (-3.54)	-0.056 (-2.31)	-0.043 (-2.76)	-0.010 (-2.52)
Upper secondary	-0.032 (-1.95)	-0.027 (-1.67)	-0.041 (-1.55)	-0.022 (-1.21)	0.002 (0.36)
Tertiary	-0.045 (-2.58)	-0.040 (-2.34)	-0.038 (-1.58)	-0.031 (-1.74)	0.009 (1.60)
Age	-0.001 (-1.02)	-0.001 (-1.42)	-0.002 (-1.91)	-0.001 (-1.33)	0.000 (-1.24)
Married	0.008 (0.46)	0.009 (0.53)	0.043 (1.99)	0.009 (0.55)	-0.048 (-6.93)
Divorced, separated	-0.053 (-2.69)	-0.049 (-2.47)	-0.034 (-1.89)	-0.050 (-2.55)	-0.012 (-1.56)
No children	-0.105 (-4.00)	-0.102 (-3.96)	-0.059 (-1.87)	-0.104 (-4.00)	0.006 (0.80)
Gender role attitudes					
Scarce jobs should go to men first		0.015 (0.89)	-0.014 (-0.49)	0.019 (1.11)	-0.001 (-0.29)
Working mother warm with children		-0.028 (-2.36)	-0.028 (-1.45)	-0.027 (-2.59)	-0.007 (2.09)
Being a housewife fulfilling		0.033 (3.26)	0.012 (1.32)	0.034 (3.79)	-0.003 (-1.26)
Both spouses should contribute income			-0.051 (-3.15)		
Important in a job					
Good pay		-0.034 (-3.53)	-0.027 (-1.35)	-0.033 (-3.29)	-0.009 (-2.34)
Good hours		0.050 (5.26)	0.048 (3.16)	0.052 (5.31)	0.010 (2.32)
Useful to society			-0.016 (-1.38)		
Meeting people			-0.006		
Competition is OK		-0.054 (-3.55)	-0.057 (-1.43)	-0.055 (-3.53)	-0.054 (-1.38)
Volunteer in organizations					
With leader building skills		-0.026 (-2.72)	0.001 (0.06)	-0.028 (-2.80)	-0.010 (-2.39)
Philanthropic		0.014 (1.62)	0.028 (1.41)	0.022 (2.65)	0.002 (0.54)
Religious and cultural		0.063 (4.90)	0.046 (1.38)	0.065 (5.02)	0.015 (2.05)

Table 3 (continued)

Sample:	Women				Men
	(1)	(2)	(3)	(4)	(5)
Men's average gender role attitudes	No	No	No	Yes	No
Chi-2	1,104.11	477.14	174.26	822.5	3,938.23
No. obs	15,028	15,028	4,469	14,756	18,221
No. countries	26	26	15	26	26

Notes: Time and country dummies included in all regressions. Z-values in parentheses are from robust clustering by country.

Figure 1
Women's Employment Rate Across Countries



influenced by current labour-market outcomes. In panel (b), there is a positive association between 'competition is OK' and employment rates, confirming the Beckerian hypothesis. The negative relationship between 'being a housewife fulfilling' and employment rates is displayed in panel (c). Interestingly, some of the transition economies have very low levels of satisfactory housewifery, while Japan has the highest level.³³ Panel (d) displays the

relationship between country-specific employment rates and the proportion volunteering in leadership organizations. The relationship appears concave, but most of the countries are located on the positive slope.³⁴

The impacts of gender role attitudes and work values on employment rates at the country level are explored more formally in Table 4. Column (1)

³³ This is consistent with the analysis of Rindfuss *et al.* (2004), who explore the evolution of traditional attitudes in Japan.

³⁴ The negative portion of the relationship is likely due to an income effect.

Table 4
Determinants of Women's Employment Rates across Countries

	(1)	(2)	(3)	(4)	(5)	(6)
Women's education (primary omitted)						
Secondary	0.383 (1.96)	0.181 (1.37)	0.226 (1.57)	0.181 (1.12)	0.203 (1.30)	0.395 (2.09)
Upper secondary	0.376 (1.61)	0.266 (2.16)	0.347 (2.41)	0.396 (2.10)	0.287 (2.63)	0.531 (2.69)
Tertiary	0.499 (2.86)	0.177 (1.01)	0.214 (1.35)	0.327 (2.48)	0.288 (1.65)	0.569 (3.12)
Log of public expenditures on child care ^a				0.115 (7.50)	0.047 (2.38)	
Averages by country		Women's	Men's		Women's	Women's lagged ^b
Gender role attitudes						
Scarce jobs should go to men first		-0.764 (-4.17)	-0.546 (-3.25)		-0.498 (-2.41)	-0.909 (-5.86)
Being a housewife fulfilling		-0.109 (-1.08)	-0.232 (-2.07)		-0.042 (-0.26)	-0.204 (-1.26)
Competition is OK		0.493 (1.79)	0.893 (2.74)		0.471 (1.98)	0.304 (0.74)
Volunteer in organizations						
With leader-building skills		0.371 (1.85)	0.195 (1.35)		0.347 (2.03)	0.054 (0.21)
Religious and cultural		-0.359 (-1.55)	-0.347 (-1.41)		-0.320 (-1.60)	-0.261 (-1.26)
Time trend	-0.002 (-0.40)	-0.006 (-1.58)	0.000 (-0.09)	0.004 (1.22)	0.000 (0.00)	0.007 (0.84)
Adjusted R square	0.221	0.674	0.652	0.675	0.791	0.830
No. observations	50	50	50	42	42	21
No. countries	26	26	26	21	21	16

Notes: The women's employment rates by country are reported in Appendix Table 1. T-values in parentheses are from robust clustering by country. ^a The 1999 public expenditures on formal day-care and pre-primary education per child (in 1995 PPP-US\$) are from Jaumotte (2003, Table 3). ^b The lagged average attitudes by country about 5–10 years lagged from the employment rates.

reports the effects of educational attainment only, which are important and largely significant. Columns (2) and (3), respectively, add women's and men's average gender role attitudes and work values as additional controls. This reduces the impact of education, in particular higher education, indicating a strong correlation between higher education and egalitarian views. Including either women's or men's average attitudes and values in-

creases the adjusted R-square of the OLS regression for employment rates from 0.22 to 0.65–0.67, which seems quite remarkable given the small number of observations. The small number of observations, as well as the fact that some countries are represented only once, precluded the inclusion of country fixed-effects.³⁵ However in columns (4) and (5), I introduce the measure of public expenditures on child care used by Jaumotte (2003) to

³⁵ Because of this degrees-of-freedom problem, I also exclude variables that are not significant.

capture country-specific institutions shown to have an impact on women's employment rates. This increases the adjusted R-squared up to 0.79. Note, comparing columns (4) and (5), that the introduction of attitudes and values cuts by more than half the coefficient of child-care expenditures. This supports Algan and Cahuc (2004)'s claim that the effect of policy variables may be over-estimated when values giving rise to them are not controlled for. In column (6), I include lagged values of women's attitudes to address the issue of reverse causality.

In all specifications, the attitude measured by '*scarce jobs should go to men first*' has the most significant negative effects on women's employment rates. An increase of 10 per cent in the proportion of countrymen who think that '*scarce jobs should go to men first*' reduces women's employment rate by 5–9 per cent. It is the only effect that passes the reverse causality test. The coefficient of '*being a housewife is fulfilling*' is also negative, but not always significant. Attitudes favourable to competition and volunteering in leader organizations show positive associations with women's employment rates. The coefficient of '*competition is OK*' is only significant when measured by men's attitudes, possibly reflecting the fact that it is the attitudes of employers, most likely men, which matter. Volunteering in religious organizations has a negative effect on women's employment rates, but it is not significant. The time trend is also never significant, reflecting the stagnation of female employment rates.

Finally, I analyse the impact of the 'soft' variables on the gender pay gap. It is measured as the logarithm of 1 minus the ratios of women's to men's earnings reported in Appendix Table 1. The gender pay gap averages 0.227 across countries and time periods, ranging from 0.12 to 0.445. In the spirit of the Oaxaca–Blinder decomposition, the explanatory variables are measured as male averages minus female averages by country. In comparison with other analyses of the gender pay gap, I unfortunately cannot capture the effects of occupational gender segregation: here these effects will end up in the unexplained part of the gap.³⁶

Figure 2 illustrates the relationship between the gender pay gap and gender differences in the explanatory variables, and the regressions results are reported in Table 5. The average gap in tertiary education is 3.4 per cent across countries and time periods. However, there are many countries, mostly Scandinavian countries, as illustrated in Figure 2 (panel (a)), where the proportion of women with a tertiary education is larger than the corresponding proportion of men. Nevertheless, column (1) of Table 5 shows that the gender gap in higher education accounts for half of the gender pay gap, as reflected by the adjusted R-square.

Consistent with the interpretation proposed in section II(ii), gender differences in gender-role attitudes and work values also play significant roles. As illustrated in panel (b) of Figure 2, I find that when more men than women think that '*scarce jobs should go to men*', male employers are more likely to discriminate against female employees and this is associated with a higher gender pay gap. In the second row of Table 5, when 1 per cent more men than women believe that '*scarce jobs should go to men*', there is almost a half-point increase in the pay gap. In the third row and panel (c) of Figure 2, when fewer women than men think that '*being a housewife is fulfilling*' (i.e. the gender difference with respect to housewifery is positive), fewer women may adopt the 'mommy track' and this is associated with a lower gender pay gap. In the fourth row and panel (d) of Figure 2, when relatively more men prefer good hours, more men may adopt the 'daddy track' and this is associated with lower gender pay gap.

Finally, to investigate the impact of the stabilization in women's traditional gender role, I include in column (4) an interaction between the appeal of housewifery and the time trend. Over time, the gender differences for housewifery have become larger, going from 0.018 in 1990, to 0.031 in 1993, and 0.065 in 1999, mostly as a result of changes in men's attitudes. I find that this change leads to a higher gender pay gap; it is the only interaction with the time trend that comes out mildly significant. One interpretation is that men's continued support over

³⁶ Gender differences in the incidence of part-time work turned out to be insignificant.

Figure 2
Gender Pay Gap Across Countries

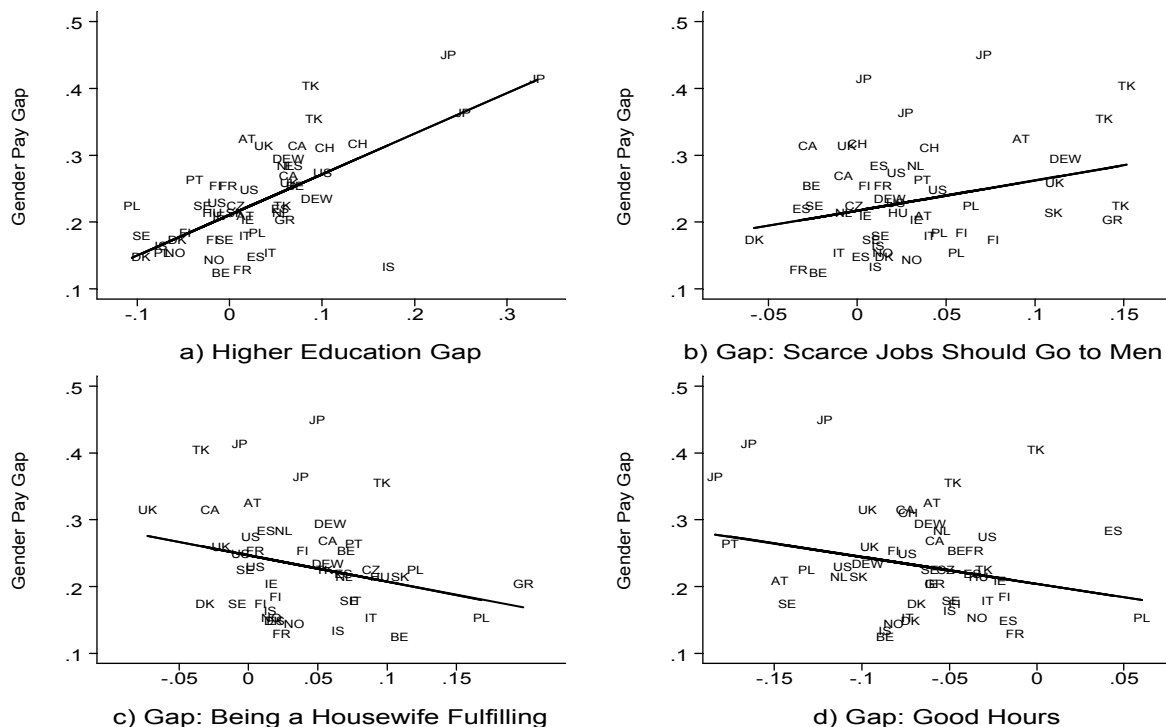


Table 5
Determinants of the Gender Pay Gap across Countries

Gender gap in	Mean	(1)	(2)	(3)	(4)
Tertiary education	0.034	0.568 (4.65)	0.544 (4.56)	0.486 (4.21)	0.518 (4.93)
Gender role attitudes					
Scarce jobs should go to men first	0.029		0.402 (3.17)	0.410 (3.24)	0.436 (3.33)
Being a housewife fulfilling	0.041		-0.313 (-1.93)	-0.254 (-1.44)	-0.694 (-1.97)
Important in a job					
Good hours	-0.066			-0.220 (-1.31)	-0.211 (-1.28)
Time trend		-0.004 (-2.10)	-0.003 (-1.33)	-0.004 (-1.62)	-0.006 (-3.07)
Time trend*Being a housewife fulfilling					0.069 (1.80)
Adjusted R-square		0.518	0.553	0.557	0.580

Notes: The dependent variable is the logarithm of 1 minus the gender pay ratios displayed in Appendix Table 1; its mean is equal to 0.227. The explanatory variables are the country-specific male averages minus the female averages of each variable. There are 45 observations and 24 countries. T-values in parentheses are from robust clustering by country.

time for housewifery is another counter-current, which women face as they continue 'swimming upstream' (Blau and Kahn, 1997) towards gender equality in the labour market. This parallels the thesis proposed by Fernandez *et al.* (2004) who argue that husbands' attitudes toward working women are more important than the wives'. Of course, the results here provide only suggestive evidence and more research is needed to confirm the hypothesis that the stabilization in perceptions of women as homemakers may be a contributing factor to the recent stabilization of women's labour-market outcomes.

V. CONCLUSION

The issue of whether gender differences in labour-market outcomes are the result of discrimination against women or partially reflect women's own attitudes and preferences is of great importance for the formulation of gender-equality policies. The present analysis shows that both sets of factors are at play and highlights the important impact of beliefs and ideology. Whether some attitudes with respect to traditional gender roles are formed in youth or whether they are sensitive to current outcomes also has important implications in terms of the anticipated effectiveness of gender-equality policies.

I find that the attitude most strongly and negatively associated with female employment rates and the gender pay gap across countries is measured by agreement with the statement '*When jobs are scarce, men should have more right to a job than women*'. Country-specific averages of this variable exhibit the largest and most significant coefficients in both regressions on female employment rates and the gender pay gap; past values are found to be strong predictors of future employment rates. This shows that discriminatory attitudes continue to play an important role in hindering women's quest for

equality in the labour market. Fortunately, the prevalence of these views continues to diminish across cohorts and over time, by contrast with views on women's traditional role which are more stable. Further, counteracting anti-egalitarian views may be more easily justified given that many female heads of household, because of widowhood, divorce, or out-of-wedlock pregnancy, are arguably as entitled to scarce jobs as men.³⁷ Favourable attitudes towards competition, especially male attitudes, are found to be positively associated with women's employment rates. Policies fostering a competitive environment may thus ultimately be favourable to working women.

Perceptions of women as homemakers, measured as agreement with the statement '*Being a housewife is just as fulfilling as working for pay*', are also found to be closely associated with women's labour-market outcomes. Views on traditional gender roles, where the man is the main breadwinner and the woman the homemaker, appear to be formed in youth and have been found to be strongly influenced by religious ideology (Thornton *et al.*, 1983; Vella, 1994; Guiso *et al.*, 2003; Algan and Cahuc, 2004). The role of policy with respect to religious ideology is likely to be controversial. Some bold steps were taken by the French government, as Islam is becoming France's second religion after Catholicism. In the spring of 2004, the then Interior Minister, Dominique de Villepin, deported an Algerian imam, Abdelkader Bouziane, who said that the Koran authorized the beating and stoning of adulterous wives, and that women should not be allowed to share a workplace with men because 'they could be tempted into adultery'. The Minister suggested that France must urgently begin training foreign Muslim clerics in a moderate 'French Islam' that would respect human rights and the Republican Code: 'We must make sure they can get to know our practices, language and culture. That will take many years of work.'³⁸

³⁷ This is not to say that married women are not as entitled to scarce jobs as men are, but the argument is straightforward in sole-parent families headed by women.

³⁸ As a first prerequisite, the French form of Islam would never clash with the values of the Republic, such as the absolute equality between man and woman and the freedom of partner choice. A second prerequisite would entail giving up rulings preached by 'Arab Islam', such as the enforcement of the Shari'ah (Islamic law) and its punishments.

Preachers who advocate violence, hate, racism, or abuses of human rights may be restrained as performing unlawful acts in countries with hate-crime laws.³⁹ It is, however, unclear what measures, if any, should be taken in response to religious views that simply foster anti-egalitarian values or are unfavourable to working women. Given the tight relationship between egalitarian views and higher education, facilitating women's access to higher education stands out as a policy instrument that has both direct and indirect effects. As Machin and Puhani (2005) recently argued, the structure of higher education systems—for example, the presence of elite and business schools—may have an impact on the likelihood that women will choose fields of study that yield higher labour-market rewards.

I also find the labour-market outcomes of individual women to be hampered by inner conflicts, such as the so-called 'mother's guilt'. Views on whether '*A working mother can establish just as warm and secure a relationship with her children as a mother who does not work*' may be influenced by a woman's experience in family formation and market work and may be formed later in her life-

cycle. In this area, firm practices and government policies that facilitate the work-life reconciliation (maternity leave, affordable/on-site day-care, flexible work hours) have been shown (Evans, 2002) to be an effective tool for increasing female employment rates.

To the extent that part-time work status captures some aspects of occupational gender segregation, I find that women's preferences are implicated in those choices. Indeed, work values, such as '*good hours*', gender role attitudes, such as '*being a housewife fulfilling*', and alternative use of time for altruistic purposes, such as volunteering in religious and cultural organizations, are all positively associated with part-time work status. Much research remains to be done on the long-term consequences of part-time work status for occupational upgrading.

More generally, further research on the processes involved in the evolution of gender role attitudes is called for. The continued quest for gender equality in the labour market may involve ideological battles such as that fought by the women's liberation movement in the 1970s.

³⁹ There were similar calls in the Netherlands to prosecute or deport imams who support violence towards women and killing gay people, as advocated in books sold at the El Tawheed mosque in Amsterdam. Spain, Britain and Germany also considered measures to control radical imams. See <http://www.pluralism.org/news/intl/> from the Harvard University Committee on the Study of Religion.

Appendix Table 1
Women's Employment Rates and Gender Earnings Ratio by Country

WVS country no.	Acronym	Women's employment rates (18–64-year-olds)				Gender earnings ratio			
		WVS			OECD	Secondary sources			
		1990–3	1995–7	1999– 2001	2000 (25–54)	1990–3	1995–7	1999– 2001	
17	Australia	AS	—	69.8	—	66.8	0.80	0.83	0.84
42	Austria	AT	57.3	—	73.9	73.5	0.68	0.79	0.80
7	Belgium	BE	49.2	—	60.1	67.8	0.75	0.89	0.88
12	Canada	CA	65.7	—	69.8	74.0	0.69	0.74	0.74
33	Czech Republic	CZ	90.4	—	78.7	73.7	0.73	0.77	0.78
6	Denmark	DK	79.6	—	86.7	80.5	0.83	0.86	0.86
23	Finland	FI	82.2	64.0	75.1	77.6	0.75	0.83	0.82
1	France	FR	53.9	—	61.8	69.6	0.75	0.81	0.88
87	Greece	GR	—	—	71.4	52.6	0.79	0.79	0.80
16	Hungary	HU	78.2	—	65.8	61.7	0.81	0.79	0.79
21	Iceland	IS	74.8	—	79.9	87.4	0.87	0.84	0.84
9	Ireland	IE	49.8	—	57.6	53.1	0.80	0.80	0.80
4	Italy	IT	51.6	—	62.3	50.7	0.83	0.82	0.85
13	Japan	JP	57.7	65.8	60.4	62.7	0.56	0.59	0.64
5	Netherlands	NL	53.1	—	69.6	70.9	0.72	0.78	0.79
18	Norway	NO	84.0	86.8	—	81.5	0.85	0.86	0.86
25	Poland	PL	78.7	45.0	—	72.0	0.82	0.78	0.85
41	Portugal	PT	67.8	—	57.6	73.9	0.71	0.74	0.74
85	Slovakia	SK	95.6	—	77.6	64.8	0.66	0.78	0.79
8	Spain	ES	37.5	35.0	44.5	50.6	0.72	0.79	0.86
19	Sweden	SE	87.9	84.6	87.0	81.7	0.78	0.83	0.83
26	Switzerland	CH	55.9	69.9	—	76.8	0.69	0.70	0.78
44	Turkey	TK	18.7	25.7	17.2	—	0.60	0.65	0.78
11	United States	US	71.9	68.1	75.4	74.1	0.73	0.76	0.78
2	United Kingdom	UK	70.1	—	66.3	73.1	0.69	0.72	0.75
3	West Germany	DEW	61.7	66.6	—	71.1	0.71	0.77	0.80
Unweighted average		65.6	61.1	69.8	66.6		0.74	0.78	0.81

Sources: The employment rates in the first three columns are computed among women aged 18–64 from the three WVS waves; the 4th column is from OECD (2002). The gender earnings ratio are 2-year averages, where available, from various secondary sources: OECD (2002); Eurostat at <http://epp.eurostat.cec.eu.int/>: series SDI_PS1210, 'Gender pay gap in unadjusted form'; Melkas and Anker (2003) for 1990 figures; and others (CA: Fortin and Schirle (2004); CZ, HU, and SK: Newell and Reilly (2000); GR, IE, and NO: Barth *et al.* (2002); PL: Grajek (2003); PT: Vieira *et al.* (2003); ES: Moltó (2002); TK: Selim and İlkkaracan (2002); USA: US-DL (2004)). See references for details of computations. As in other studies, there are substantial limits to comparability across countries.

Appendix Table 2
Average (over Time) Gender Role Attitudes and Work Values by Country

Country	Women									Men								
	Gender role attitudes				Work values					Gender role attitudes				Work values				
	Scarce jobs	Working mother	Housewife	Both income	Good pay	Good hours	Useful job	People	Comp OK	Scarce jobs	Working mother	Housewife	Both income	Good pay	Good hours	Useful job	People	Comp OK
AS	0.20	0.77	0.67	0.63	0.58	0.40	—	—	0.77	0.22	0.65	0.68	0.65	0.70	0.32	—	—	0.79
AT	0.31	0.57	0.59	—	0.60	0.46	0.35	0.53	0.77	0.34	0.47	0.59	—	0.70	0.36	0.34	0.42	0.80
BE	0.29	0.80	0.58	0.75	0.67	0.46	0.39	0.58	0.64	0.26	0.75	0.67	0.63	0.77	0.39	0.39	0.50	0.66
CA	0.14	0.80	0.73	0.75	0.75	0.54	—	—	0.75	0.12	0.72	0.75	0.75	0.79	0.48	—	—	0.78
CZ	0.32	0.75	0.49	0.93	0.79	0.49	0.34	0.42	0.81	0.37	0.64	0.56	0.90	0.83	0.42	0.26	0.30	0.84
DK	0.06	0.87	0.53	0.67	0.50	0.38	0.25	0.52	0.66	0.04	0.85	0.53	0.66	0.68	0.31	0.23	0.42	0.75
FI	0.09	0.97	0.67	0.76	0.65	0.44	0.28	0.46	0.71	0.13	0.92	0.69	0.73	0.69	0.39	0.29	0.39	0.74
FR	0.26	0.78	0.56	0.78	0.61	0.35	0.29	0.53	0.65	0.25	0.78	0.58	0.79	0.62	0.33	0.30	0.39	0.65
GR	0.15	0.80	0.35	0.90	0.90	0.54	0.53	0.53	0.67	0.29	0.70	0.54	0.85	0.89	0.48	0.48	0.49	0.67
HU	0.28	0.78	0.60	0.89	0.91	0.77	0.82	0.78	0.74	0.29	0.71	0.69	0.87	0.93	0.72	0.77	0.75	0.75
IS	0.04	0.91	0.64	0.65	0.85	0.66	0.42	0.57	0.82	0.05	0.81	0.68	0.58	0.89	0.59	0.45	0.51	0.83
IE	0.20	0.70	0.67	—	0.80	0.55	0.37	0.56	0.70	0.22	0.63	0.69	—	0.83	0.52	0.38	0.48	0.74
IT	0.30	0.71	0.47	0.84	0.77	0.55	0.65	0.68	0.65	0.31	0.62	0.56	0.77	0.81	0.50	0.63	0.66	0.70
JP	0.26	0.95	0.85	0.61	0.86	0.77	—	—	0.63	0.30	0.89	0.87	0.53	0.85	0.62	—	—	0.69
NL	0.15	0.83	0.49	0.43	0.68	0.46	0.36	0.68	0.63	0.13	0.74	0.52	0.33	0.79	0.36	0.37	0.59	0.66
NO	0.10	0.80	0.54	0.79	0.55	0.40	—	—	0.74	0.13	0.64	0.56	0.79	0.68	0.34	—	—	0.80
PL	0.36	0.60	0.49	0.91	0.77	0.51	0.44	0.48	0.71	0.41	0.49	0.63	0.90	0.79	0.47	0.43	0.50	0.73
PT	0.28	0.78	0.44	0.92	0.80	0.60	0.54	0.43	0.66	0.30	0.70	0.51	0.86	0.79	0.47	0.44	0.33	0.67
SK	0.36	0.73	0.50	0.89	0.88	0.60	0.27	0.29	0.76	0.42	0.64	0.56	0.89	0.90	0.51	0.20	0.20	0.78
ES	0.22	0.74	0.55	0.92	0.77	0.47	0.44	0.40	0.65	0.22	0.73	0.59	0.88	0.79	0.47	0.42	0.38	0.68
SE	0.05	0.86	0.57	0.90	0.62	0.53	0.27	0.48	0.75	0.04	0.71	0.59	0.89	0.72	0.45	0.22	0.46	0.79
CH	0.10	—	—	—	0.60	0.45	—	—	0.76	0.14	—	—	—	0.74	0.38	—	—	0.80
TK	0.50	0.60	0.76	0.94	0.92	0.89	0.97	0.88	0.68	0.64	0.55	0.80	0.81	0.92	0.87	0.98	0.88	0.75
US	0.12	0.83	0.76	0.72	0.86	0.63	—	—	0.75	0.15	0.73	0.76	0.78	0.90	0.56	—	—	0.79
UK	0.19	0.78	0.59	0.66	0.75	0.53	0.29	0.48	0.68	0.24	0.71	0.54	0.67	0.83	0.44	0.27	0.36	0.72
DEW	0.18	0.67	0.43	0.77	0.68	0.46	—	—	0.73	0.25	0.49	0.48	0.76	0.74	0.39	—	—	0.77

Source: Proportions of respondents computed from 1990–3, 1995–7 (ICPSR 2790), and 1999–01 WVS (ICPSR 3975). Individuals aged 18–64 excluding students and retirees. The gender role attitudes and work values are as in Table 1. With approximately 1,000 respondents per country, the 90 per cent confidence intervals of a proportion of 0.50 would be around 0.025.

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