

Chapter 2

Women at work: who are they and how are they faring?

This chapter analyses the diverse labour market experiences of women in OECD countries using comparable and detailed data on the structure of employment and earnings by gender. It begins by documenting the evolution of the gender gap in employment rates, taking account of differences in working time and how women's participation in paid employment varies with age, education and family situation. Gender differences in occupation and sector of employment, as well as in pay, are then analysed for wage and salary workers.

Despite the sometimes strong employment gains of women in recent decades, a substantial employment gap remains in many OECD countries. Occupational and sectoral segmentation also remains strong and appears to result in an under-utilisation of women's cognitive and leadership skills. Women continue to earn less than men, even after controlling for characteristics thought to influence productivity. The gender gap in employment is smaller in countries where less educated women are more integrated into the labour market, but occupational segmentation tends to be greater and the aggregate pay gap larger. Less educated women and mothers of two or more children are considerably less likely to be in employment than are women with a tertiary qualification or without children. Once in employment, these women are more concentrated in a few, female-dominated occupations. In most countries, there is no evidence of a wage penalty attached to motherhood, but their total earnings are considerably lower than those of childless women, because mothers more often work part time. These findings suggest that policies to facilitate the participation of women in paid employment should address both family-work reconciliation and the special difficulties faced by low-skilled women.

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Introduction

One of the most profound labour market developments in OECD countries over the post-war period has been the continued progress made by women. Female participation and employment have expanded considerably and the wage gap relative to men has narrowed virtually everywhere. These developments reflect changes in the labour supply behaviour of women, who are more and more educated and a growing proportion of whom remain in the labour market throughout their working lives and combine paid work with raising children. The outsourcing of traditional female household activities to the labour market has eased women's transition from the home to the labour market, while at the same time creating new work opportunities for them. Furthermore, the accommodation of a wider range of labour market participation patterns has led to diversified employment and working-time arrangements. A variety of forces have driven such developments: changes in family patterns and household formation that increasingly highlight the importance of women's earnings in household income; increasing aspirations of women for the independence and fulfilment that paid employment can bring as well as for further progress towards gender equity; and the realisation by governments that raising female employment rates can be an important policy goal, not least, in the interest of providing a sounder base for funding social protection systems in the context of an ageing society. The structure of employment has also changed in a way that has favoured women, with a shift of employment from agriculture and manufacturing towards services, where women are over-represented.

Alongside such evidence of progress, however, there remain concerns that women still have not attained equality with men and that their productivity potential is not used at its best: unemployment rates are higher for women than for men in most OECD countries; there is continuing gender differentiation in job opportunities, pay and working-time arrangements; and a continuation of the belief that care work is mainly the responsibility of women, wherever it is performed. Furthermore, the improvements in female employment performance are by no means uniform for all women.

This chapter examines the diversity in the labour market experience of women across countries, based on a set of comparable and detailed data on the structure of employment and earnings by gender. The analysis concentrates on gender differences in employment, the organisation and characteristics of jobs and their remuneration, leaving aside the examination of unemployment or inactivity. It goes beyond the simple observation of aggregate gender differences in the labour market with a view to identifying the groups of women on which the gender disadvantage is concentrated. Employment and earnings patterns of men as well as of women are examined in order to test the hypothesis that the success of women over recent years has been partly fuelled by deterioration in the labour market conditions for men.

The key personal dimensions along which the analysis is conducted are age, education and the family situation. Contrasting the employment experience of women belonging to different age groups offers an indirect measure of the evolution of opportunities, constraints, preferences and outcomes over time, as well as over the life-cycle, even in the

absence of long time-series data. A focus on education flows naturally from its role as a key determinant of individual labour performance and social well-being. As for the family situation, the presence of children is a crucial variable when observing both employment and earnings patterns, in line with recent studies that have pointed to the existence of a “family gap” – *i.e.* employment and pay gaps between mothers and childless women.

The chapter starts by documenting the evolution of the aggregate gender gap in employment rates over the past two decades. The analysis then looks more closely into the gender gap in employment for a recent year: taking account of differences in working time and of different age, education and family situation groups of women and men. When comparing employment patterns for individuals belonging to different age groups, the examination of cross-sectional data for a recent year is combined with a cross-cohort analysis of the life-cycle evolution of employment. Longitudinal data are also used to assess differences in how rapidly labour market experience accumulates by gender and other factors, like the presence of children and education. The analysis then restricts its attention to wage and salary workers to examine the two other main ways in which gender differences manifest themselves within employment: patterns of occupational and sectoral segmentation, both horizontal and vertical; and differences in pay. The gender pay gap is explored by means of a decomposition method. This provides insights into the relative importance of gender differences in human capital endowments, job characteristics and the wage structure in accounting for pay inequality between women and men. The same technique is then used to explore the impact of motherhood on female wages.

Main findings

- The narrowing of the gender gap in employment has continued throughout the 1980s and the 1990s. In some countries, the gap has closed due to a massive entry or re-entry into the labour market of women of all ages, whereas in others cross-cohort changes are concentrated around child-rearing age, as a growing proportion of women combine paid work with raising children. Employment gains for women in Greece, Italy and Spain, however, have not been sizeable enough to generate an appreciable narrowing of the gender gap in employment.
- As a consequence, in 2000, the gender employment gap was largest in Greece, Italy and Spain, together with Mexico. The gender gap in employment is lowest in Sweden and the other Nordic countries. Even these relatively low differentials understate women’s presence in Nordic labour markets given their high employment rates for men.
- Comparisons of headcount measures of employment by gender overstate the degree of women’s presence in employment in all countries, as they take no account of the higher incidence of part-time employment for women. On average in OECD countries, 26% of women and less than 7% of men work part time. The incidence of part-time work is by far the highest in the Netherlands, and is lowest in eastern European countries, Greece and Korea.
- Employment rates are generally much higher, and the gender gap lower, among women with a tertiary qualification than among low-educated women. Higher education is likely to give women access to more interesting and well-paid occupations, making paid employment more attractive and formal child-care arrangements more affordable. Japan and Korea are exceptions in that employment

rates of women with a tertiary qualification are similar to or lower than the rates of low-educated women.

- The balance in educational attainment between women and men is more and more equal across both sexes, not to say favouring women in several OECD countries, suggesting that women are increasingly well positioned for successful labour force participation. Important differences remain, however, in the fields of study typically undertaken by men and women. To a large degree, the educational choices of young women are still directed at fields that are less well paid on the labour market.
- The impact of parenthood on employment rates works in opposite directions for women and men: while women's workrates generally decrease as the number of children raises, men's increase. Furthermore, parenthood increases the incidence of part-time work among mothers, particularly those with a tertiary qualification.
- The available evidence on movements into and out of employment and transitions between full-time and part-time work confirms that women spend less and more discontinuous time in employment than men, especially if they have children or if they have a low level of educational attainment. Career breaks or reductions in time worked are particularly frequent immediately after child birth. The negative impact of child birth on employment appears to be particularly strong in Germany and the United Kingdom.
- The distribution of employment by occupation or sector is still very much gender-segmented. Women are over-represented in clerical occupations, sales jobs and the life-science/health and teaching professions, whereas they remain under-represented in managerial and top administrative occupations, as well as in manual and production jobs. The large majority of both women and men are concentrated in a small number of occupations that tend to be either female or male dominated. Furthermore, the degree of occupational segmentation tends to be higher, the higher is the degree of women's presence in the labour market.
- There are some signs of falling occupational segmentation among younger workers, as the younger generations appear to be more occupationally integrated than the older ones. On the other hand, workers with a low level of educational attainment and with children tend to be more occupationally segregated than highly educated and childless workers, respectively.
- The gender wage gap has narrowed over the past two or three decades in virtually all OECD countries, but women still earn, on average, 16% less than men per hour worked. When account is also taken of the fact that women work fewer hours than men, they appear to be earning considerably less than men. Gender differences in observable characteristics that influence productivity, such as education, potential experience and job tenure, account for little of the remaining gender gap in wages.
- Cross-country differences in the overall wage structure and women's employment rates provide important proximate explanations of much of the variation in the gender wage gap: in a few countries, notably the United Kingdom, the wage gap would be considerably lower if the wage structure were as compressed as in the OECD average; and larger wage gaps are found in countries where less educated and less skilled women are more integrated into the labour market. However, it is difficult to identify the most important economic and social factors underlying these associations.

- Except for a few countries, there is little evidence of an hourly wage penalty attached to motherhood (*i.e.* the so-called “family gap”). However, in some countries, mothers earn considerably less than their childless peers when account is taken of the fact that they work fewer hours.

1. The gender gap in employment

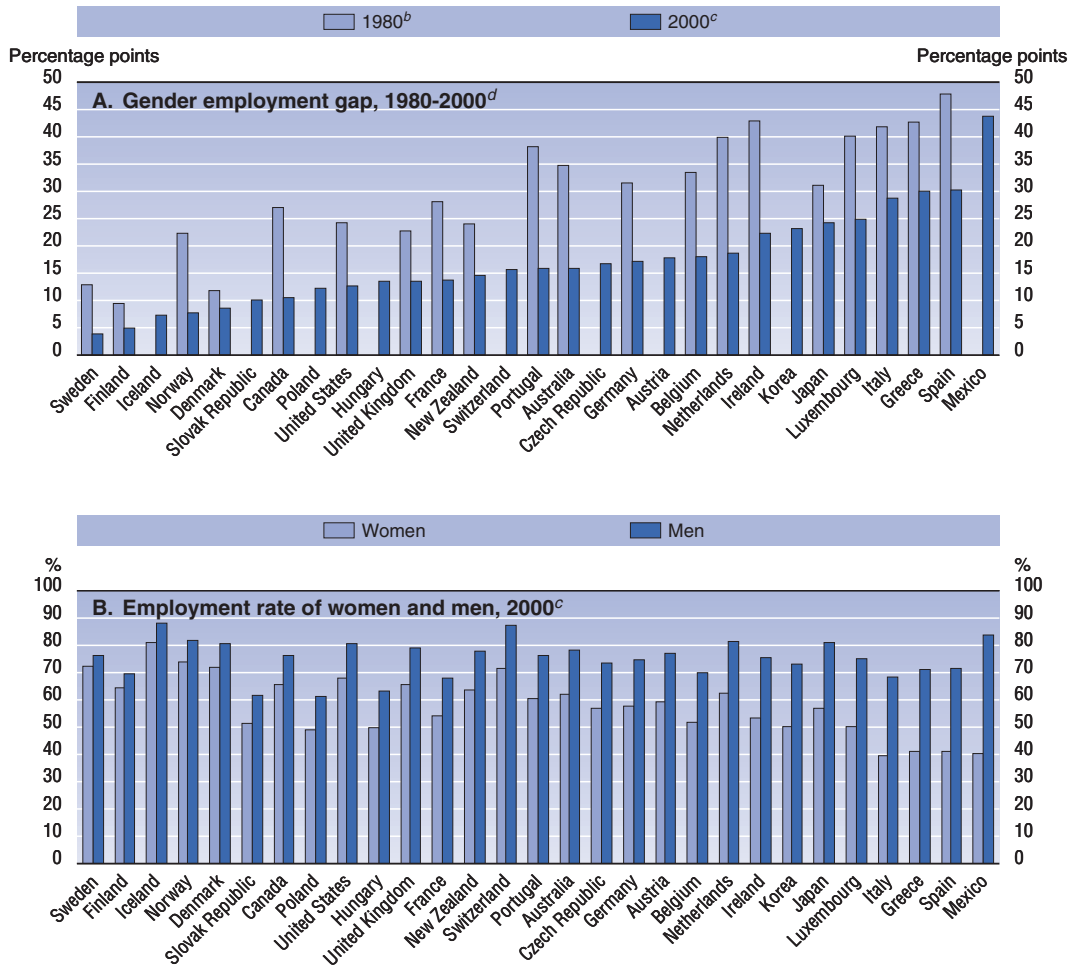
A. A headcount measure

A common feature of labour markets across all OECD countries has been the narrowing of the gender gap in employment over the past three or four decades as a result of, on the one hand, employment gains for women and, on the other, reductions for men. Panel A of Chart 2.1 shows the evolution of the employment gap (calculated as the difference between the employment rates of men and women) since 1980. In Ireland, the Netherlands and Portugal, the gap has narrowed by more than 20 percentage points from a relatively high level, whereas little improvement has been recorded in Denmark, Finland and Japan. This latter picture applies in two very different contexts: that of an already quite small employment gap at the beginning of the 1980s in Denmark and Finland and that of a persistently high differential in Japan. Also in Greece, Italy and Spain, employment gains for women over the past two decades have not been large enough to generate an appreciable closing of the gap by 2000. Information on the gender employment gap in 1980 for eastern European countries is not available, but it is likely that the situation in these countries was very different from that of the other OECD countries: the employment gender gap was probably smaller, or in any case not much larger, than in 2000. The planned economy required a large workforce, and the State encouraged women’s participation through family-related supports and benefits. The transition has changed the labour market landscape in the region enormously and weakened job security for both women and men, although women have tended to lose somewhat more than men in almost every dimension of labour market activity (UNICEF, 1999).

The narrowing of the gender gap in employment is almost entirely due to a closing of the gender difference in labour force participation rates, rather than to variations in the incidence of unemployment. It reflects a variety of socio-cultural, institutional and economic factors, and countries vary in the timing and degree to which these factors have come into play. First, the increase in female participation rates reflects changing social norms, life styles and family patterns. In some countries, women’s accession to the labour market was mainly completed in the 1960s and 1970s, whereas in others it is a more recent phenomenon. The Nordic countries are a notable example of countries belonging to the first group.¹ A more pronounced closing of the gap over the 1980s and 1990s in countries like Ireland, the Netherlands and Portugal, on the other hand, reflects a later emergence of these new societal values. Second, structural changes in the economy, with the shift of employment from agriculture and manufacturing towards services, where female employment is concentrated, is another major factor that has favoured the employment of women over men. Of course, the causal relationship between increased employment in the service sector and rising female activity rates runs in both directions. Finally, institutional changes in the labour market, in particular favouring part-time employment, have also played a major role, generally reflecting the commitment of governments to raise either overall or specifically female employment rates. In the Netherlands, for example, most of

Chart 2.1. **The narrowing of the gender employment gap^a**

Persons aged 15 to 64 years



a) Countries are ranked by increasing gap in employment in 2000.
 b) 1981 for Ireland; 1983 for Belgium, Denmark, Greece and Luxembourg; 1984 for the United Kingdom; 1986 for New Zealand.
 c) 1999 for Austria.
 d) Percentage point difference between the employment rates for men and for women.
 Source: See Annex 2.A.

the increase in employment rates was made possible through the creation of a huge new part-time workforce. The introduction of a separate taxation system in Sweden in the early 1970s is another example of a reform that has encouraged women’s entry into the labour market. However, it is also true that the relationship between institutional changes and increased female participation is bi-directional: the entry of women into the labour market is encouraged by greater availability of more flexible working-time arrangements, but higher female participation also generates greater demand for such institutional changes.

In 2000, the smallest employment gap is found in Sweden, followed by the other Nordic countries. At the opposite end of the ranking are Italy, Greece, Spain and Mexico. Panel B of Chart 2.1 sheds light on the level of the employment gap in 2000. The small

employment gap in the Nordic countries (excluding Finland) and in Switzerland understates the degree of women's presence in the labour market, given the high levels of employment rates for *both* men and women in these countries. The assessment of the female employment situation in Italy, Greece and Spain, on the other hand, is aggravated by the fact that male employment rates are relatively low. Indeed, the low rate of employment of working-age women in these countries is a product of both gender relations and the overall employment system. Policy action aimed at raising overall employment is therefore likely to benefit women disproportionately, since most of job creation is likely to occur in services, where women are over-represented.

B. Accounting for hours worked

In the present circumstances – in which the responsibilities for child-rearing and other unpaid household work are still unequally shared among partners (OECD, 2001*b*) – part-time work is the preferred working arrangement for many women because it makes it easier to reconcile family responsibilities with employment. As a consequence, comparisons of headcount measures of employment by gender understate the size of the gender gap in employment, as they take no account of the higher incidence of part-time employment among women.

On average in OECD countries, 26% of women and less than 7% of men work part time (Table 2.1, first two columns). The incidence of part-time work is by far the highest in the Netherlands, where 57% of employed women hold part-time jobs. Australia, Norway, Switzerland and the United Kingdom follow with a share of part-time work in total female employment of over 40%. By contrast, less than one in ten women in eastern European countries, Greece and Korea work part time.

Looking at overall employment rates and the incidence of part-time work jointly, there is no consistent association between the two: above-average female employment rates can co-exist with either a high incidence of part-time work (*e.g.* in some Nordic countries, Switzerland and the United Kingdom) or a low one (as in the Czech Republic, Finland and the United States), and *vice versa* (*e.g.* Japan and Korea record similarly low female employment rates but in the former the incidence of part-time work among women is relatively high whereas it is low in the latter). Differences in the incidence of part-time work may relate, on the one hand, to regulatory frameworks and labour market organisation, with working-time regulations, wage structures, fiscal incentives, and child-care systems playing important roles, and, on the other, to gender relations and societal values. Bosch (2001) suggests that a high level of part-time work among women may be a transitional phase between the single male breadwinner model and men's and women's integration into the labour market on an equal footing, at least in terms of volume. This might explain why the part-time share in Scandinavian countries may already have peaked at the high level of around 25%, since there are now signs of a fall in the incidence of part-time work among women (OECD, 1998*a*). However, in the Netherlands – a late starter in terms of integrating women into the labour market – a new model of labour force participation seems to be emerging, as the very high part-time share may persist as a consequence of preferences and social norms, which have been accommodated by regulatory arrangements. Notably, since July 2000, many employees have a *right* to change their working hours, with employers being given a veto power only if they can show that it is impractical or solvency-threatening (OECD, *forthcoming*).

The last three columns of Table 2.1 show the female share in total employment and, separately, in part-time and full-time employment. On average, around three-fourths of all

Table 2.1. **Women and part-time work, 2000**

Persons aged 15 to 64 years

	Incidence of part-time work ^a		Female share ^b		
	Women	Men	Full-time work	Part-time work	Total
Australia	44.6	12.6	33.1	73.6	43.9
Austria	24.3	2.3	37.9	89.2	44.1
Belgium	34.4	6.9	35.1	79.4	42.3
Canada	27.0	9.8	41.0	70.3	46.2
Czech Republic	5.0	1.1	42.7	77.4	44.0
Denmark	23.9	8.6	42.4	71.2	46.9
Finland	13.5	6.6	45.7	64.9	47.6
France	24.8	5.3	39.2	79.2	44.9
Germany	33.7	4.4	35.2	85.8	43.9
Greece	9.2	2.9	36.4	66.5	38.0
Hungary	5.1	1.6	53.3	79.7	51.8
Iceland	32.1	8.5	40.1	77.4	47.4
Ireland	32.9	7.5	33.6	75.6	41.2
Italy	23.4	5.5	32.3	71.3	37.0
Japan	39.4	11.8	20.1	69.7	40.8
Korea	9.1	4.5	39.8	58.6	41.0
Luxembourg	28.4	1.9	32.2	90.5	39.4
Mexico	25.6	7.1	22.4	65.1	34.2
Netherlands	57.1	13.0	27.1	76.8	42.9
New Zealand (2001)	35.4	10.6	37.7	73.6	45.6
Norway	42.5	9.7	35.7	79.1	46.7
Poland	17.9	8.8	32.3	61.7	44.9
Portugal	12.6	3.0	42.7	77.9	45.3
Slovak Republic	2.4	0.8	49.9	74.5	50.8
Spain	16.4	2.5	33.8	79.5	37.3
Sweden	22.6	7.6	43.8	73.3	48.2
Switzerland	45.8	8.4	31.9	81.2	44.1
United Kingdom	40.2	7.6	34.6	81.3	44.9
United States (1999)	19.4	7.3	43.1	69.7	46.6
OECD unweighted average^c	25.8	6.5	37.1	75.0	43.9

a) Percentage of women (men) working part time in total female (male) employment.

b) Percentage of women in total employment by category.

c) For above countries only.

Sources and definitions: See Annex 2.A.

part-time jobs are occupied by women. There is some variation across countries, but the female share in part-time work is higher than 60% in all countries except Korea, where it is 59%. In Austria, Germany, Luxembourg, Switzerland and the United Kingdom, women occupy more than four in five part-time jobs. Women account for a much lower share of total full-time work: only in 9 out of 29 countries is this share above 40%.

Part-time employment may offer workers the opportunity to find a balance between the time they want to devote to work and the time they wish to devote to other activities. It also allows workers (and *de facto* especially women) to combine employment with the needs of family life in the absence of adequate and affordable childcare institutions. However, part-time work also carries with it several disadvantages for workers. Part-time jobs are more likely to be found in lower-paid occupations that offer more limited opportunities for career advancement than full-time jobs (OECD, 1999). As a consequence, many women who seek part-time work end up “underemployed” as in order to find part-time work they have to accept less remunerative and less qualified work. Part-time workers are also more likely to hold temporary jobs and to have reduced access to job-related training and occupational benefits. Furthermore, there is some debate as to how much of

the recent expansion of part-time work has been really meeting women's need to accommodate their family responsibilities or has been demand-driven (see OECD, 1998a).

2. Women at work: who are they?

A. Age and cohort effects

The global evolution of female employment rates cannot be fully understood without looking further into the employment rates of different age, education and family-situation groups. Chart 2.2 examines the life-cycle evolution of employment rates for different cohorts of women using so-called “synthetic cohort” data for selected age groups (for further explanations, see footnote *a* to the chart). Chart 2.2 also presents cross-sectional data on employment rates by age and gender for a recent year. The juxtaposition of cross-sectional and cross-cohort data on female employment rates by age highlights the fact that the points making up the cross-sectional age profile reflect an amalgam of the different life-cycle courses of successive cohorts of women.

Beginning with the cross-sectional profiles of employment for women and men, it emerges that the age-employment profile for women closely follows that for men in Denmark, Norway and Sweden. This is not the case in the other countries considered. With few exceptions (Mexico and Turkey), young women start off with employment rates that are not far below those of their male counterparts but the gap opens up for the age groups between 25 and 54 years, although the situation varies a lot across countries. Four broad patterns are observed:

- A curve with a left-hand peak is found in Belgium, Ireland, Luxembourg, Spain and, albeit less pronounced, in the Netherlands. This pattern reflects a situation where many women either withdraw permanently from employment after marriage or child birth or confine their subsequent paid employment to intermittent episodes. It is also the result of a “generation effect” whereby women belonging to older cohorts have lower participation rates than younger women.
- Two peaks separated by a trough around child-rearing age, as in Australia, Japan, Korea and New Zealand. This pattern may be generated where the presence of young children is a major barrier to employment but women return to work when their children get older.
- A curve with a long flat portion, usually between ages 25 and 50, as observed in Austria, Canada, France, Germany, Greece, Italy, Mexico, Portugal, Switzerland, Turkey and the United States. In this situation, there is no major variation in the participation rates for women at different stages of family building, either because employment is often combined with rearing children or because few women enter the labour market, irrespective of their family situation.
- Finally, there is the peculiar situation of eastern European countries and Finland that display a curve with one peak to the right: participation rates are higher (and unemployment rates lower) for the age groups between 35 and 49 years. In the former planned countries, this is the result of increased barriers for women to participate in the labour market during the transition period, partly due to the cutback in family-related assistance and benefits supporting female employment under the previous system (Eurostat, 2000), which appear to have disproportionately affected younger age groups.

Finally, for the older age group of individuals aged 55 to 64 years, two patterns are observed: one where the gap in favour of men remains high due to generational effects and the effect of retirement policies allowing women to retire earlier than men, and the other where the gap closes considerably.

Turning attention to the synthetic cohort data, the following features are worth noting:

- Inter-generation differences in employment patterns are very marked in Ireland and the Netherlands. Fifteen years ago, the employment rates of women born in 1936-40, 1946-50 and 1956-60, respectively, were about 30 percentage points lower than those of women of the same age today. In both countries, the shape of the life-cycle employment profiles for the cohorts of women born after 1936-40 suggests a massive entry or re-entry into employment of women well above school-leaving age. In Belgium, Germany, Luxembourg and Portugal, the same pattern is observed, but it is less pronounced.
- Denmark, France, Greece, Italy and New Zealand display very little cross-cohort variation in employment rates. The stability of Greece and Italy is striking, given their very low overall employment rates at the beginning of the period analysed.
- In Australia, Canada, Japan, Korea, Norway, the United Kingdom and the United States, cross-cohort changes are concentrated around child-rearing age, as the trough becomes less and less apparent over successive cohorts.
- Finally, the picture for Sweden stands out. Although the older generations of women (aged 55 to 64 years in 2000) were working in smaller numbers during their child-rearing years than younger women today, the life-cycle employment profiles of women aged 45 to 54 today lie above those for women of younger generations. This is the result of decreasing participation rates and higher unemployment rates in the 1990s.

B. Employment rates by gender and educational attainment

Further elements towards the understanding of female employment patterns are gathered in Table 2.2, focusing on female employment rates and the gender employment gap by level of educational attainment. It does so for the prime-age population, aged 25 to 54 years, where the gender employment gap is generally more pronounced and the presence of children likely to be a key factor in determining variation of employment rates.

In all countries except Japan and Korea, employment rates are much higher, and the gender gap lower, among women with a tertiary qualification than among low-educated women.² Higher education is likely to give women access to more interesting and better paid occupations, also increasing the opportunity cost of choosing not to work in order to care for children. There is probably also a self-selection effect, whereby the women who are most interested to work will spend more time and effort to obtain higher qualifications than women who are less interested, unless the latter use the educational system to further their personal cultural interests or as a marriage market (Hakim, 1996). In Japan and Korea, the employment rates of women with a tertiary qualification are similar to or lower than those of low-educated women. In these countries, women of all educational levels typically work full time after leaving school, until their marriage or child birth, and re-enter the labour force when their children get older (albeit, in Japan at least, only to work part time). This life-cycle pattern reflects cultural attitudes towards child rearing, but also

Chart 2.2. **The age-employment profile of women**

Cross-cohort comparisons of employment rates by age^a

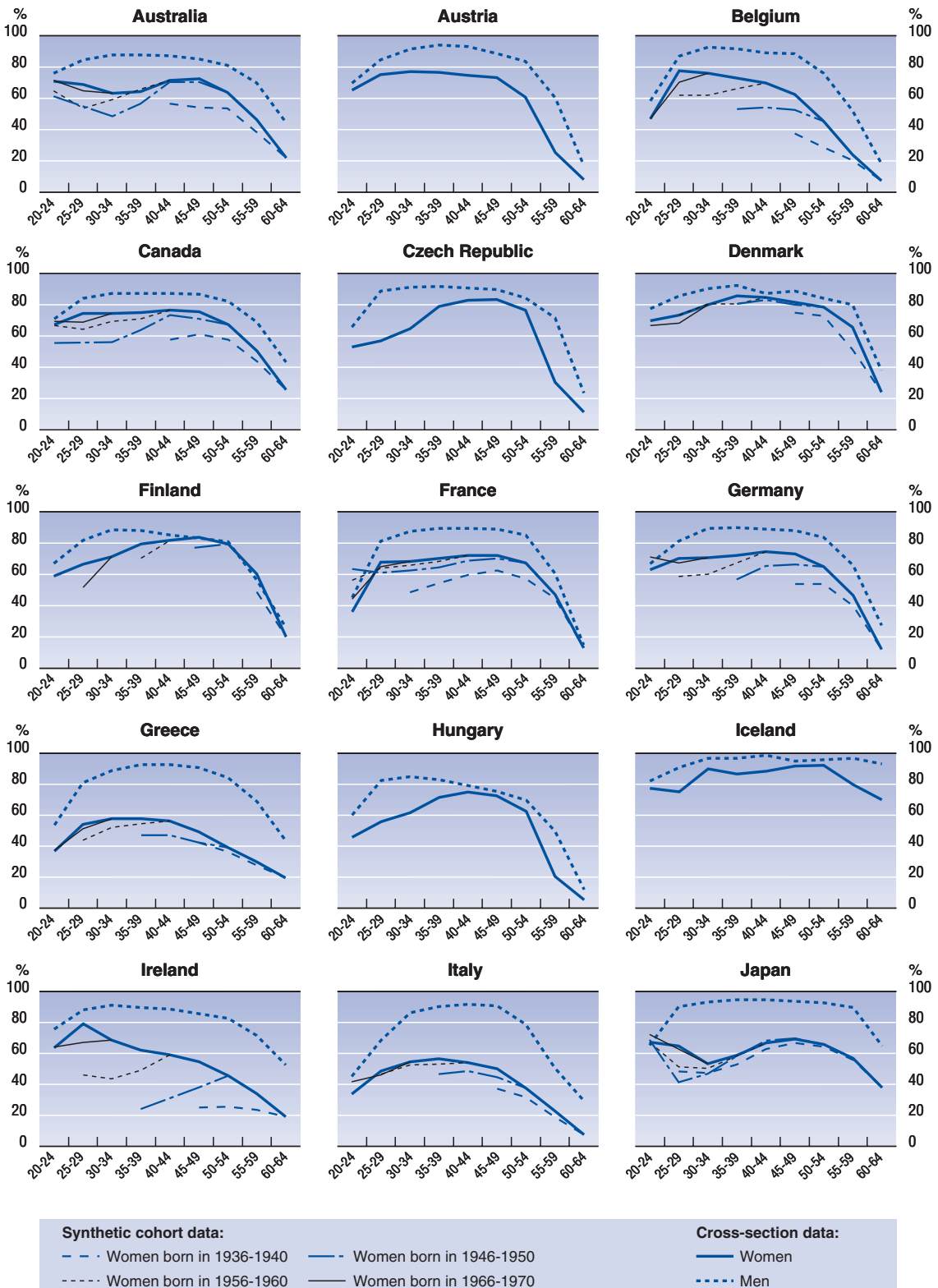
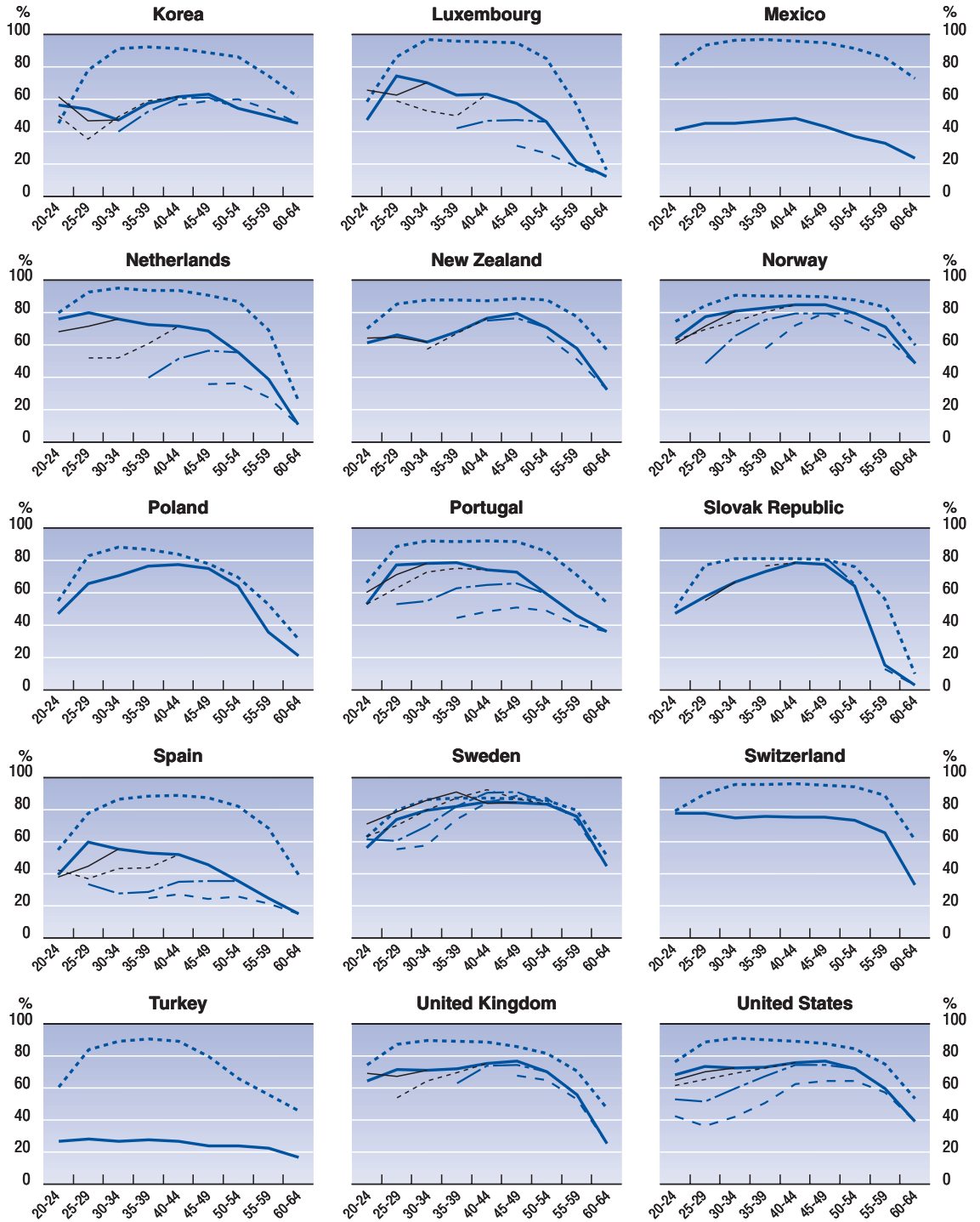


Chart 2.2. **The age-employment profile of women** (cont.)

Cross-cohort comparisons of employment rates by age^a



a) The chart combines cross-sectional data by age and gender for the year 2000 with “synthetic cohort” data for women belonging to selected age cohorts. In the absence of longitudinal data that follow the same women over the life-cycle, synthetic cohort data were constructed by combining cross-sectional data at five-year intervals. This allowed the employment rates of four cohorts of women to be followed over time, despite being unable to follow individual members of these cohorts.

Source: OECD, *Labour Force Statistics, 1980-2000*, Part III; European Union Labour Force Survey (data supplied by Eurostat).

Table 2.2. **Women's employment rates and the gender employment gap by educational attainment, 2000**

Persons aged 25 to 54 years

	Total		Less than upper secondary education		University/tertiary education	
	Employment rate	Gender gap ^a	Employment rate	Gender gap ^a	Employment rate	Gender gap ^a
Australia	66.8	20.0	58.1	21.5	79.9	11.5
Austria	73.5	16.2	61.6	17.6	86.5	9.2
Belgium	67.8	20.1	47.4	32.3	86.7	8.6
Canada	74.0	11.8	52.0	20.8	79.8	9.2
Czech Republic	73.7	15.6	60.5	5.4	82.8	13.3
Denmark	80.5	7.7	68.2	9.2	88.7	4.5
Finland	77.6	7.0	69.5	8.3	84.8	8.0
France	69.6	17.7	56.5	23.6	83.1	8.5
Germany	71.1	16.3	55.4	20.9	83.4	10.5
Greece	52.6	35.9	42.1	45.5	78.4	12.4
Hungary	61.7	16.0	41.3	14.9	78.9	14.7
Iceland	87.4	8.6	86.0	10.5	95.2	3.7
Ireland	53.1	29.0	33.7	39.5	79.9	13.3
Italy	50.7	33.9	35.8	46.8	78.7	12.4
Japan (1999)	62.7	31.6	62.6	25.7	62.7	33.5
Korea	56.3	31.8	64.8	20.3	55.0	34.9
Luxembourg	63.0	29.8	55.4	33.6	79.4	14.0
Netherlands	70.9	21.4	53.4	32.8	86.6	8.8
New Zealand (2001)	70.6	17.0	54.8	21.2	78.7	10.7
Norway	81.5	7.1	63.8	14.6	87.3	4.9
Poland	72.0	9.6	53.6	13.4	92.0	1.5
Portugal	73.9	16.4	71.5	19.7	93.0	2.6
Slovak Republic	64.8	13.7	40.9	5.3	82.5	11.1
Spain	50.6	34.8	38.1	45.1	74.0	14.8
Sweden	81.7	4.1	65.4	14.5	87.8	4.3
Switzerland (2001)	76.8	18.5	70.3	19.8	85.6	12.0
United Kingdom	73.1	14.4	49.7	17.3	86.4	8.0
United States (1999)	74.1	14.8	49.7	26.5	81.9	11.6
OECD unweighted average^b	69.0	18.6	55.8	22.4	82.1	11.2

a) Percentage point difference between the employment rates for men and for women.

b) For above countries only.

Source: See Annex 2.A.

the limited career opportunities available to women: in Japan, while virtually all men enter firms on the management track, only 10% of women, or 50% of female university graduates, are offered this opportunity (Rebick, 1999).

The data in Table 2.2 also show that cross-country variation in employment rates is much higher among prime-age women with less than upper secondary education than among highly qualified women. In particular, Irish, Italian and Spanish low-educated women have employment rates well below 40%, which translate into an employment gap of about 40 percentage points, compared to both men with the same level of educational attainment and to women with a tertiary education. The integration of low-educated women in the labour market is thus far from complete in these countries.

The gender gap in educational attainment is narrowing, or even reversing, in the OECD area. Women account for less than 45% of persons aged 55 to 64 years holding at least an upper secondary qualification, but their share increases to 48 and 51% respectively for the age groups 35 to 54 years and 25 to 34 years (Table 2.3). In transition countries, widespread and relatively equitable access to education is a positive inheritance from their communist past. In these countries, as well as in Finland, Norway, Sweden and

Table 2.3. **Female share by educational attainment and age, 2000**

Percentage of women in the total population in each category

	At least upper secondary education				Tertiary education			
	25-34	35-54	55-64	Total	25-34	35-54	55-64	Total
Australia	47.6	43.6	38.6	44.3	56.0	52.1	45.7	52.6
Austria	47.9	45.3	42.7	45.7	50.3	39.0	25.1	40.2
Belgium	51.4	50.4	46.7	50.3	53.7	50.4	43.3	50.7
Canada	50.6	50.7	49.6	50.5	51.6	49.1	47.1	49.6
Czech Republic	48.5	47.0	46.2	47.3	49.2	40.5	41.7	43.1
Denmark	51.4	47.9	41.8	47.8	55.4	53.1	38.3	51.7
Finland	50.8	50.6	51.1	50.7	59.5	53.9	47.6	54.6
France	50.2	48.0	44.3	48.3	54.0	50.8	46.5	51.6
Germany	48.4	47.1	43.6	46.7	45.8	39.1	29.3	38.7
Greece	52.2	49.3	42.6	49.5	55.2	42.9	30.3	46.0
Hungary	63.8	53.4	54.7	57.4	69.5	61.7	49.2	62.3
Iceland	51.1	42.8	40.2	45.0	55.9	50.5	44.8	51.9
Ireland	54.1	53.7	52.8	53.7	52.0	48.1	44.9	49.4
Italy	52.0	48.3	42.2	49.1	55.3	46.9	39.9	48.7
Japan (1999)	50.8	50.2	48.8	50.2	50.7	44.0	45.5	34.2
Korea	48.9	41.3	25.1	43.4	44.6	30.9	15.6	36.5
Luxembourg	49.1	45.3	39.9	45.7	47.4	42.2	29.3	42.4
Netherlands	50.8	46.8	40.3	47.1	50.5	41.8	37.5	43.9
New Zealand (2001)	52.0	50.1	46.8	50.2	49.0	46.5	42.0	47.3
Norway	49.8	48.8	47.5	48.9	55.2	48.9	43.8	50.4
Poland	52.2	51.0	53.2	51.7	62.8	58.0	57.3	59.4
Portugal	55.7	52.8	44.6	53.5	60.5	57.6	50.6	58.1
Slovak Republic	60.9	51.4	49.6	54.9	58.8	53.9	44.2	54.5
Spain	52.9	47.9	38.0	49.2	55.0	46.2	33.4	48.9
Sweden	48.9	50.9	50.7	50.2	53.1	53.8	51.3	53.2
Switzerland (2001)	50.6	46.1	44.3	46.9	34.6	32.4	20.8	31.1
United Kingdom	49.2	47.6	34.5	46.5	46.8	47.0	36.2	45.6
United States (1999)	51.5	51.2	52.1	51.4	53.4	50.0	45.0	50.3
OECD unweighted average^a	51.6	48.5	44.7	49.1	53.1	47.5	40.2	48.1

a) For above countries only.

Source: See Annex 2.A.

the United States, the education gap in favour of men has been negligible or even negative and quite stable across all of the age cohorts currently in the labour force.

The closing of the gender education gap is even more visible for tertiary education.³ In the oldest cohort, men outnumber women among persons with tertiary education by a substantial number in most countries. In 22 of the 28 countries for which data are available the opposite is true for the younger generation aged 25 to 34 years. Among this age group, Hungary, Poland and Portugal record a gender gap of over 10 percentage points in favour of women, whereas Switzerland is the only country with a gap of over 15 percentage points in favour of men. The countries where the proportion of women holding a tertiary degree has increased the most (by at least 20 percentage points) are Austria, Greece, Hungary, Korea and Spain.

The observation that the balance in educational attainment between women and men is more and more equal across both sexes, not to say favouring women, in all OECD countries, suggests that women are increasingly better positioned for successful labour force participation. Important gender differences remain, however, in the fields of study typically undertaken by men and women at tertiary level (Eurostat, 2001, OECD, 2001a). To a large degree, the educational choices of young women are still directed at the fields

of health and welfare (especially the more practical/technical/occupationally-specific programmes) and of the humanities, arts and education. Although increasing numbers of women are studying traditionally male fields, such as mathematics/computer science, life and physical sciences and engineering/applied sciences, they are still far from equal representation.⁴ These differences in the content of schooling appear to be important for explaining the differing fortunes of women and men in the labour market, including some part of the female-male wage gap.⁵

It is not clear why women choose different fields of study than men, despite the apparently disadvantageous impact on their career prospects, nor whether and how policy should address this issue. Brown and Corcoran (1997) put forward three possible explanations. On the one hand, it is possible that some majors provide training and skills that enhance students' productivity as workers. If this were the case, encouraging more young women to undertake "profitable" fields of study could be an effective way to reduce the male-female wage gap. On the other hand, students' choices of fields of study may reflect their underlying abilities and preferences. To the extent that this is true, steering women into traditionally male majors may be undesirable and do little to reduce the gender wage gap. Similarly, if women stay out of "male" fields because the labour market rewards men more than women for these fields, either in terms of hiring opportunities or wages, equalising the distribution of study programmes without also promoting equal opportunities in employment would do little to equalise men's and women's wages.

The available evidence suggests that women and men do not differ in many of their underlying abilities,⁶ but they do differ in their attitudes towards work, with a large share of them continuing to attach importance to traditional gender roles. As a result, Hakim (1996) emphasises the role of preferences as important determinants of work-lifestyle choices and behaviour in prosperous modern societies. In particular, she notes that women are heterogeneous in their preferences towards how best to manage the conflict between family and employment and not all those who obtain qualifications will be seeking a career, as distinct from reasonably interesting and well-paid jobs, whenever they decide to work. The choice of field of study is a first, clear indication of such work-lifestyle preferences. While recognising the utility of preference theory in emphasising values, attitudes and personal preferences as potentially important determinants of women's labour market behaviour, it must be noted that this behaviour is influenced by learned cultural and social values that may be thought to discriminate against women (and sometimes against men) by stereotyping certain work and life styles as "male" or "female". While women may rarely be offered work in particular occupations, because they do not have the appropriate education, their educational choices may be dictated, at least in part, by their expectations that these types of employment opportunities are not available to them, as well as by gender stereotypes that are prevalent in society.

C. Employment rates by gender and presence of children

The impact of parenthood on employment rates works in opposite directions for women and men: while women's workrates generally decrease, men's increase, in line with the traditional model of specialisation of gender roles within the household. As a consequence, the gender gap in employment widens dramatically as the number of children increases (Table 2.4): the average gender employment gap in the OECD area being of

Table 2.4. **Women's employment rates and the gender employment gap by presence of children, 2000**
Persons aged 25 to 54 years

	Total		No children		One child		Two or more children	
	Employment rate	Gender gap ^a	Employment rate	Gender gap ^a	Employment rate	Gender gap ^a	Employment rate	Gender gap ^a
Australia	66.8	20.0	68.4	16.1	55.3	33.3	43.2	47.5
Austria	73.5	16.2	76.0	10.5	75.6	18.5	65.7	29.0
Belgium	67.8	20.1	65.6	17.4	71.8	23.5	69.3	24.7
Canada	74.0	11.8	76.5	6.0	74.9	14.9	68.2	23.6
Czech Republic	73.7	15.6	80.8	5.4	72.3	21.2	59.4	33.5
Denmark (1998)	80.5	7.7	78.5	7.7	88.1	3.5	77.2	12.9
Finland (1997)	77.6	7.0	79.2	0.1	78.5	11.8	73.5	19.7
France	69.6	17.7	73.5	9.6	74.1	18.7	58.8	32.9
Germany	71.1	16.3	77.3	7.2	70.4	21.2	56.3	35.6
Greece	52.6	35.9	53.1	31.1	53.9	40.3	50.3	45.4
Hungary	61.7	16.0	..	..	..	..	..	..
Iceland	87.4	8.6	89.1	..	89.3	..	80.8	..
Ireland	53.1	29.0	65.8	14.1	51.0	33.2	40.8	43.2
Italy	50.7	33.9	52.8	26.2	52.1	40.9	42.4	49.9
Japan (1999)	62.7	31.6	..	..	..	..	..	..
Korea	56.3	31.8	..	..	..	..	..	..
Luxembourg	63.0	29.8	68.7	21.3	65.8	30.4	50.1	46.1
Netherlands	70.9	21.4	75.3	15.6	69.9	24.3	63.3	30.8
New Zealand (2001)	70.6	17.0	80.7	5.7	66.9	20.2	58.9	30.9
Norway	81.5	7.1	82.9	5.9	83.3	..	78.0	..
Poland	72.0	9.6	..	..	..	..	..	..
Portugal	73.9	16.4	72.6	13.4	78.5	16.6	70.3	24.8
Slovak Republic	64.8	13.7	..	..	..	..	..	..
Spain	50.6	34.8	54.6	26.0	47.6	44.7	43.3	48.6
Sweden	81.7	4.1	81.9	-0.4	80.6	9.8	81.8	9.4
Switzerland (2001)	76.8	18.5	84.3	9.4	75.5	19.7	65.5	32.5
United Kingdom	73.1	14.4	79.9	5.4	72.9	17.1	62.3	28.2
United States (1999)	74.1	14.8	78.6	7.2	75.6	17.4	64.7	29.0
OECD unweighted average^b	69.0	18.6	73.7	11.8	70.6	22.9	61.9	32.3

.. Data not available.

a) Percentage point difference between the employment rates for men and for women.

b) For above countries only.

Sources and definitions: See Annex 2.A.

12 percentage points for childless persons but of 32 points for persons with two or more children. Other notable patterns include:

- In Australia, Ireland and New Zealand, having one child under 15 years of age has a significant dampening effect on mothers' employment rates, of 10 percentage points or more. By contrast, in Belgium, Denmark, and Portugal, the employment rate is actually higher for women with one child than for childless women by at least five points.
- The negative impact on women's employment is more visible when there is more than one child.⁷ Workrates of mothers of at least two children are systematically lower than those of only one, with the notable exceptions of Belgium and Sweden where the presence of children has no impact on the female employment rate (however, if the observation is restricted to the age group of 25 to 34 years, where it is more likely that there are young children, employment rates do decrease with the number of children).
- The impact of two or more children is particularly pronounced in Australia, the Czech Republic, Germany, Ireland and New Zealand, as the employment rate of

mothers of two or more children is more than 20 percentage points lower than that of childless women. Besides in Belgium and Sweden, it is negligible in Denmark, Greece, Norway and Portugal.

- The negative impact of motherhood on employment does not imply that employment rates of women without children are high in all countries: they range from a low of just 53% in Italy to a maximum of 89% in Iceland. Furthermore, some of the countries with low overall female employment rates (Greece, Italy, Spain) do not display an above-average size of the impact of parenthood on employment rates. Accordingly, cross-national differences in employment rates of women are *not* only due to variation in the extent of labour market integration of mothers.

Parenthood is also associated with a higher incidence of part-time work among mothers, especially if there are two or more children, whereas it reduces the already low incidence of part-time work for men⁸ (Table 2.5). In the Netherlands, the large majority – over 80% – of mothers of two or more children work part time. In Australia, Germany, Switzerland and the United Kingdom, this share is also very high, 60% or more.

Table 2.5. **Part-time work, by gender and presence of children, 2000**

Percentage of persons working part time in total employment by category, workers aged 25 to 54 years

	Women				Men		
	No children	One child	Two or more children	Total	No children	With children	Total
Australia	40.8	54.1	63.1	41.8	8.0	5.5	6.9
Austria	17.4	33.6	43.7	26.7	2.1	1.7	1.9
Belgium	29.2	34.7	46.1	34.7	6.5	5.1	5.9
Canada	17.0	22.9	30.7	21.4	5.2	3.2	4.3
Czech Republic	2.6	4.5	7.5	4.0	1.0	0.4	0.7
Denmark (1998)	18.5	13.3	16.2	16.6	..	..	3.7
Finland (1997)	7.5	8.6	13.6	9.2	..	..	3.7
France	20.0	23.7	31.8	23.7	5.2	3.6	4.4
Germany	24.0	45.3	60.2	35.2	4.2	2.3	3.4
Greece	8.4	9.7	11.2	9.2	2.8	2.5	2.7
Hungary	..	..	..	4.9	..	..	1.2
Iceland	..	..	..	28.4	..	..	3.3
Ireland	16.6	37.2	46.4	29.7	4.3	3.6	4.0
Italy	20.0	27.2	34.4	24.1	5.5	4.5	5.1
Japan	..	..	..	38.4	..	..	6.2
Korea	..	..	..	8.7	..	..	3.3
Luxembourg	19.9	32.7	48.1	29.0	1.4	1.6	1.5
Netherlands	38.3	72.6	82.7	55.9	6.2	4.6	5.5
New Zealand (2001)	20.6	37.6	50.8	32.4	5.9	5.3	5.6
Norway	24.7	33.5	41.1	31.8	5.0	..	5.0
Poland	..	..	..	15.1	..	..	5.8
Portugal	11.5	10.5	11.3	11.2	2.7	1.3	2.0
Slovak Republic	..	..	..	2.3	..	..	0.8
Spain	13.7	17.4	18.6	15.3	2.6	1.2	1.9
Sweden	14.6	16.7	22.2	17.9	5.2	3.4	4.3
Switzerland (2001)	34.2	58.0	66.5	47.1	6.1	3.6	4.9
United Kingdom	23.7	46.6	62.8	38.6	4.1	3.2	3.7
United States (1999)	10.1	15.8	23.6	14.6	3.5	1.8	2.7
OECD unweighted average^a	18.7	28.7	36.6	23.2	4.2	2.9	3.6

.. Data not available.

a) For above countries only.

Sources and definitions: See Annex 2.A.

The strongly negative impact of children on women's employment in many OECD countries should not be allowed to obscure the importance of low educational attainment as a barrier to employment. Indeed, employment rates of mothers of two or more children are in most cases higher than for women with less than upper secondary education, irrespective of whether they have children or not. While the recent policy debate has tended to focus on work-family reconciliation policies, increased attention may need to be paid to expanding employment opportunities and reducing supply-side constraints on the participation of low-educated women. On the other hand, the difficulties of combining work and family in some countries may discourage labour market entry of women, especially those with low-earnings potential, who expect to become mothers or they may be manifesting themselves in low fertility rates (for a discussion of the relationship between fertility and employment, see OECD, 2001*b*), suggesting that reconciliation policies must remain a policy priority. In order to inform better policy design on this issue, Section 2.D focuses on the combined effect of education and the presence of children on female employment rates.

D. The combined effect of education and presence of children on female employment

Table 2.6 compares the relative frequencies of different employment statuses for women with different family situations and levels of educational attainment. The two panels of Table 2.6 represent two different ways of looking at the same picture and must be seen in combination: Panel A focuses on the impact of motherhood on female employment patterns at two different levels of educational attainment, whereas Panel B focuses on the impact of raising the level of education, from less than upper secondary to tertiary, on employment rates for women with and without children.

Panel A shows that the impact of motherhood on female employment patterns has both an employment-rate and a working-time effect. Mothers are less likely to be employed, and in particular full-time employed, than childless women. This occurs at any level of educational attainment, with the only notable exception of Portugal. However, while at low levels of educational attainment motherhood has only limited influence on the frequency of part-time work, the substitution of part-time for full-time work is generally more important than the employment effect for women with a tertiary qualification. On average, having children reduces the employment rate by about 8 percentage points, irrespective of educational attainment, and increases the frequency of part-time work by only 2 percentage points for women with less than upper secondary education and by 11 percentage points for women with higher education. This average pattern hides important differences across countries. At a low qualification level, the working-time effect makes up for more than one half of the total reduction in full-time employment in Austria, Belgium, Greece, the Netherlands and the United States, whereas it is virtually absent or even has opposite sign in most other countries. At a high level of educational attainment, the frequency of part-time work is more than 15 percentage points greater for mothers than for childless women in Austria, Germany, the Netherlands, Switzerland and the United Kingdom, whereas it remains virtually unchanged in the Czech Republic, Greece, Portugal and Spain.

Cross-country variation in the impact of children on the employment status of their mothers may be due to differences in the coverage and cost of formal child-care systems for young children. Furthermore, variation in the impact of motherhood at different education levels is likely to reflect differences in the ability to afford child-care. Nevertheless, part of the observed cross-country variation may also be ascribed to differences in

Table 2.6. **Combined effects of the presence of children and educational attainment on women's employment**

Women aged 25 to 54 years

Panel A. Effect of the presence of children

Percentage point difference in the frequency of each category between women with children and women without children

	Less than upper secondary education			University/tertiary education		
	Non-employed	Part time	Full time	Non-employed	Part time	Full time
Australia	21.3	-3.5	-17.8	4.0	9.9	-13.9
Austria	4.0	4.4	-8.5	10.8	16.9	-27.7
Belgium	-0.8	3.6	-2.8	0.1	8.9	-9.0
Canada	3.0	1.4	-4.4	6.9	7.2	-14.2
Czech Republic	19.4	-0.6	-18.8	21.3	1.9	-23.2
France	13.6	0.1	-13.7	4.4	7.6	-12.1
Germany	17.2	3.8	-21.0	10.8	17.3	-28.1
Greece	0.6	1.2	-1.9	-0.6	1.8	-1.2
Italy	6.0	1.5	-7.5	2.7	4.5	-7.2
Luxembourg	5.5	2.0	-7.5	14.5	7.6	-22.1
Netherlands	5.5	8.6	-14.2	7.5	35.5	-43.0
Portugal	-3.4	-0.6	4.0	-2.0	1.0	1.0
Spain	4.1	1.4	-5.5	9.2	-0.3	-8.9
Sweden	5.5	1.9	-7.5	-2.2	5.1	-2.9
Switzerland	11.5	1.9	-13.5	19.4	26.4	-45.8
United Kingdom	18.2	1.8	-20.0	10.5	21.2	-31.7
United States	1.0	1.6	-2.8	10.9	7.7	-18.7
OECD unweighted average^a	7.8	1.8	-9.6	7.5	10.6	-18.2

Panel B. Effect of increasing the level of educational attainment

Percentage point difference in the frequency of each category between women with tertiary education and women with less than upper secondary education

	Without children			With children		
	Non-employed	Part time	Full time	Non-employed	Part time	Full time
Australia	-19.8	-3.7	23.5	-37.1	9.7	27.4
Austria	-28.4	-8.7	37.1	-21.6	3.7	17.9
Belgium	-37.6	9.0	28.6	-36.8	14.3	22.5
Canada	-30.2	1.5	28.7	-26.3	7.3	19.0
Czech Republic	-25.1	1.6	23.5	-23.1	4.0	19.1
France	-22.5	-1.7	24.2	-31.6	5.9	25.7
Germany	-24.8	-9.0	33.8	-31.1	4.4	26.7
Greece	-37.1	10.8	26.3	-38.4	11.4	26.9
Italy	-47.4	25.0	22.3	-50.7	28.0	22.7
Luxembourg	-30.7	1.1	29.6	-21.7	6.6	15.1
Netherlands	-34.0	-9.7	43.6	-32.0	17.2	14.8
Portugal	-24.9	7.0	17.9	-23.4	8.6	14.8
Spain	-43.5	-0.9	44.4	-38.3	-2.6	40.9
Sweden	-16.2	-6.5	22.7	-23.9	-3.3	27.2
Switzerland	-22.1	-12.1	34.2	-14.2	12.3	1.9
United Kingdom	-32.8	-13.3	46.1	-40.4	6.1	34.3
United States	-36.5	1.2	35.6	-26.7	7.2	19.7
OECD unweighted average^a	-30.2	-0.5	30.7	-30.4	8.3	22.2

a) For above countries only.

Source: See Annex 2.A.

women's preferences and in social norms regarding the appropriateness and desirability of women working when they have young children. As was stressed in OECD (2001b), the two factors are closely inter-related, in that a developed system of child care must be viewed both as an outcome of women's integration in the labour market and as a catalyst for changing cultural gender roles.

Panel B looks at the impact of different educational attainment levels on employment for women with and without children. The effect of increasing the level of education, from less than upper secondary to tertiary, on both full-time and total employment is always positive, regardless of the presence of children. On average, employment rates of both mothers and childless women increase to a similar extent – by about 30 percentage points – when comparing women with tertiary education to women with less than upper secondary education. It is, rather, the composition of the increase in employment that is affected by the presence of children, as highly-educated mothers opt for part-time work more often than their childless peers (with the sole exception of Spain). This difference might reflect the higher hourly wages available to more educated mothers, who may consider themselves better able to “afford” part-time work. The observation that higher educational attainment significantly increases women’s employment, whether or not they have children, lends support to the policy conclusion that family-friendly policies are not the only relevant policy area for governments wishing to raise female employment rates. Expanding employment opportunities for low-educated women appears to be at least as important.

E. A dynamic view: the accumulation of employment experience

It is not only weekly working hours that differ for men and women but also the total time worked over the life-cycle. The observation of cross-sectional information on employment hides movements into and out of activity and transitions between full-time and part-time work in the labour market experience of individuals. Understanding how labour market experience accumulates is important for policy purposes since work interruptions may impede human capital formation and thereby productivity and wages.⁹ Labour market experience for women is likely to be shorter, on average, than for men insofar as it is interrupted by child birth and looking after children. Cross-national evidence on the *actual* labour market experiences of individuals is, however, scarce, given the lack of longitudinal data spanning a sufficiently long period to cover the working life of individuals. However, longitudinal data covering only a few years may still be useful to gather an insight into how rapidly labour market experience accumulates in relation to gender and other factors like the presence of children and education. The analysis in this section uses five waves from the European Community Household Panel (ECHP) for European Union countries and a slightly longer observation period from other panel datasets for Canada, Germany, the United Kingdom and the United States (see Annex 2.A for details on the data used).

Table 2.7 is a transition table showing, for women and men separately, movements between the working-time status of employed individuals in a given year and their labour force and working time status 4 or 5-7 years later. The following features are common across all countries: of those who are working full-time at the beginning of the period, men are more likely than women to be still working full-time at the end of the period; conversely, of those who start as part-time workers, women have a higher propensity to remain in this state than men; men leaving full-time employment end up more often without a job than with a part-time job, whereas this is not always the case for women. In general, part-time work seems to be a more volatile state than full-time work since it changes more often into either non-employment or full-time work. However, this is not true in the case of Dutch women working part time, who are more likely to continue working part time than are full-time workers to remain in full-time employment. By contrast, in France

Table 2.7. **Employment transitions by gender**Percentage of persons aged 20 to 50 years in the starting year
by employment status in the final year

Employment status in the starting year	Women			Men		
	Employed, full time	Employed, part time	Not working	Employed, full time	Employed, part time	Not working
A. Transitions over 5 years (1994-98)						
Belgium						
Employed, full time	82	11	8	96	..	..
Employed, part time	21	65	15	..	..	..
Denmark						
Employed, full time	83	7	10	95	..	..
Employed, part time	46	38	17	59	..	24
France						
Employed, full time	80	6	14	92	1	7
Employed, part time	26	39	35	47	32	22
Greece						
Employed, full time	74	7	19	94	2	4
Employed, part time	37	35	28	70	27	..
Ireland						
Employed, full time	71	19	10	94	3	3
Employed, part time	18	63	20	46	37	..
Italy						
Employed, full time	80	7	13	92	1	7
Employed, part time	32	50	18	55	28	17
Netherlands						
Employed, full time	64	28	8	96	2	2
Employed, part time	16	71	14	61	26	13
Portugal						
Employed, full time	83	6	11	95	1	5
Employed, part time	51	39	11	80	..	..
Spain						
Employed, full time	78	4	17	92	1	6
Employed, part time	29	34	37	72	9	19
Germany						
Employed, full time	81	9	11	91	2	7
Employed, part time	24	64	12	52	38	..
United Kingdom						
Employed, full time	79	12	9	95	1	4
Employed, part time	28	56	16	70	..	..
Unweighted average						
Employed, full time	78	10	12	94	2	5
Employed, part time	30	50	20	61	28	19
B. Transitions over 6 or 8 years^a						
Canada (1993-98)						
Employed, full time	75	17	8	89	7	4
Employed, part time	46	38	16	67	23	10
Germany (1991-98)						
Employed, full time	62	17	21	89	7	5
Employed, part time	24	57	19	74	15	11
United Kingdom (1991-98)						
Employed, full time	58	15	26	79	3	18
Employed, part time	32	40	28	58	5	37
United States (1990-97)						
Employed, full time	73	17	10	86	7	7
Employed, part time	43	38	19	66	16	18

.. Less than 10 observations.

a) An individual is classified as "employed full time" in a given year if he/she has worked at least 1 560 hours (30 hours per week on average) and "employed part time" if he/she has worked between 52 and 1 560 hours (between 1 and 30 hours per week).

Sources and definitions: See Annex 2.A.

and Spain, more than one in three women working part time at the beginning of the period are no longer working 4 years later, whereas in Portugal half the women working part time in 1994 are working full-time in 1998.

When a longer period is observed, of six years for Canada and eight years for Germany, the United Kingdom and the United States, the transition patterns are consistent with those noted above, even if part-time employment is defined differently, to include both part-year, full-time workers and full-year, part-time workers. Transitions for women, especially towards non-employment, become more apparent for Germany and the United Kingdom, the two countries for which data are available for both observation periods. Canada and the United States display very similar transition patterns, although for Canada transitions towards non-employment are less frequent. In both countries, almost half the women working part time in the initial year are working full-time at the end of the period.

The information presented in Table 2.7 does not say anything about what happens within the observed period, nor does it relate labour market transitions to the presence of children or the level of educational attainment, two factors that affect the probability of women of being employed. Table 2.8 shows the individuals who have been continuously employed over a five- or eight-year period as a share of those who have been employed at least one year during the observation period, by presence of children under 15 years of age and educational attainment. A distinction between time spent in full-time and part-time employment is also made for women. The findings in this table are largely consistent with the employment patterns observed using the cross-sectional data, but add an insight into the extent to which employment is a lasting experience or rather a short or intermittent episode for different groups of women and men.

Irrespective of gender and presence of children, individuals with less than upper secondary education are less likely to be continuously employed than those with a tertiary qualification, particularly so in Ireland and Spain. Low-educated women are also less likely than high-educated women to be continuously in full-time employment, with the notable exception of Italian women. The fact that, once in employment, a large proportion of low-educated women in Italy are continuously employed over five years is not at odds with the results shown in Table 2.2, according to which employment rates for this group of women in Italy are very low: it simply means that a large share of women with less than upper secondary education never work. By contrast, more low-educated women in Ireland and Spain work periodically, but confine their paid employment to intermittent episodes.

At both levels of educational attainment, generally a larger share of men with children than of childless men are continuously employed, whereas the pattern for women is less clear-cut. Children have a negative impact on the probability of staying continuously in employment for low-educated women, whereas for women with a tertiary qualification they can have either a negative or a positive impact. In general, highly educated women appear to combine work and family by reducing their working time rather than by exiting employment.¹⁰ Portugal is an exception, as the share of mothers continuously in part-time employment is lower and in full-time employment slightly higher than for non-mothers. The extent to which the presence of children affects women's labour market experience becomes more visible when a longer period, of six-eight years, is observed for Canada, Germany and the United States. In all three countries, mothers are considerably less likely to be continuously employed, especially full-time employed, than childless women. The negative impact of children on the probability of staying in employment is particularly strong in Germany, irrespective of the level of educational attainment.

Table 2.8. **Continuity in employment status by gender, presence of children and educational attainment**

Persons in each category, as a percentage of persons aged 20 to 50 years in the starting year, who have been employed at least one year during the period

	Women						Men	
	Without children			With children			Without children	With children
	Continuously employed	Continuously full time	Continuously part time	Continuously employed	Continuously full time	Continuously part time	Continuously employed	Continuously employed
A. Less than upper secondary education								
<i>5-year period (1994-98)</i>								
Belgium	63	38	14	51	30	9	86	89
Denmark	62	47	6	39	31	1	79	77
France	63	48	7	47	35	5	75	74
Germany	72	50	6	52	19	20	67	86
Greece	47	35	1	37	27	0	77	86
Ireland	38	16	9	16	6	5	67	72
Italy	62	52	3	55	36	4	71	82
Netherlands	73	35	25	43	3	28	65	84
Portugal	65	54	1	60	54	1	77	92
Spain	38	32	2	26	16	3	62	66
United Kingdom	76	43	14	54	15	20	82	80
Unweighted average	60	41	8	44	25	9	73	81
<i>6- or 8-year period^a</i>								
Canada (1993-98)	56	26	7	42	11	6	74	82
Germany (1991-98)	61	25	10	31	5	12	65	84
United States (1990-97)	51	22	3	38	12	0	58	66
B. University/tertiary education								
<i>5-year period (1994-98)</i>								
Belgium	87	64	9	88	51	13	89	96
Denmark	78	64	4	83	64	5	85	89
France	79	60	8	70	49	6	79	87
Germany	89	60	9	61	28	16	87	98
Greece	67	44	4	69	37	6	77	91
Ireland	81	49	8	78	32	7	87	98
Italy	67	33	11	83	35	22	79	98
Netherlands	85	48	14	77	8	31	90	94
Portugal	90	64	10	94	67	5	81	84
Spain	55	43	2	70	53	3	64	89
United Kingdom	81	66	4	70	27	13	85	86
Unweighted average	78	54	8	77	41	12	82	92
<i>6- or 8-year period^a</i>								
Canada (1993-98)	80	41	4	70	21	9	85	90
Germany (1991-98)	66	26	8	37	1	12	82	95
United States (1990-97)	73	33	2	60	15	6	78	83

a) An individual is classified as “employed full time” in a given year if he/she has worked at least 1 560 hours (30 hours per week on average), “employed part time” if he/she has worked between 52 and 1 560 hours (between 1 and 30 hours per week).

Source: See Annex 2.A.

The impact of children on the employment experience of mothers likely varies with the children’s age, and is probably strongest when they are youngest. Table 2.9 shows the share of child births that are associated with year-to-year reductions in employment, either labour force exits or reductions in working time (*i.e.* switches from full-time to part-time employment). In Germany and the United Kingdom, one in four women who have had a child have withdrawn from employment the year following the birth, whereas in the Netherlands an even higher share of child births – almost 30% – is associated with a switch from full-time to part-time employment. In France, Greece and Spain, the share of

Table 2.9. **Year-to-year changes in labour force status following child births**

	Percentages ^a	
	Child births associated with an exit from employment	Child births associated with a reduction in working hours
Austria	(23)	..
Belgium	(11)	12
Canada	13	9
Denmark	(7)	(6)
France	22	(10)
Germany	25	21
Greece	24	(9)
Ireland	(18)	20
Italy	17	(8)
Netherlands	19	29
Portugal	10	(9)
Spain	20	..
United Kingdom	25	19
United States	16	10

.. Less than 10 observations.

(Estimates based on less than 30 observations).

a) Percentage of women having worked and had a child during the year preceding the annual interview who appear to have withdrawn from employment or to have switched from full-time to part-time work at the time of the next annual interview.

Sources and definitions: See Annex 2.A.

child births that are followed by an exit from employment is also quite high, 20% or more, and in Germany, Ireland and the United Kingdom reductions in working hours following child births are also quite frequent. The impact of child birth on the continuity of employment may be related to, on the one hand, the effectiveness of family-friendly policies in allowing the reconciliation of work and family life and, on the other hand, the coverage and duration of maternity and parental leave arrangements. For example, parental leave in Germany, mostly taken by mothers, lasts until the child is 3 years of age, with a flat-rate payment for 2 years.¹¹ Women who take up this long leave are likely to declare themselves inactive rather than “normally working”, despite still having a job, and they will therefore appear as exiting employment.

In sum, the available evidence on the accumulation of employment experience confirms the expectation that women spend less and more discontinuous time in employment than men, especially if they have children and/or if they have a low level of educational attainment. This pattern becomes more visible, the longer the period of observation. Career breaks or reductions in time worked are particularly frequent immediately after child birth.

3. Women at work: what do they do?

In examining women’s status on the labour market, it is important to go beyond considering their employment rates to also consider the types of jobs they have. The remainder of this chapter analyses various job characteristics of employed women and men. The analysis is limited to wage and salary employees, leaving aside self-employed and unpaid family workers. This is done for two reasons: *i*) data for wage and salary employees are more widely available and generally more reliable than for the self-employed, notably as far as wages are concerned; and *ii*) the motives and mechanisms underlying participation, employment, job characteristics and rewards of women and men may differ according to status of

employment and, therefore, gender comparisons of job characteristics for wage and salary workers are more easily interpreted than are gender comparisons for all workers.¹²

A. The occupational and sectoral segmentation of employment by gender

This section examines the occupations and sectors in which women and men are employed. While participation and employment rates of women and men are converging, some studies (Anker, 1998, Rubery and Fagan, 1993) have shown that the distribution of employment by occupation or sector is still very much gender-segmented. The occupational or sectoral distribution of employment by gender can be measured in various ways, each of which provides a different perspective (Anker, 1998). Simple descriptive statistics can be used to measure the extent to which women and men are over or under-represented in occupations (ratio of the percentage female in an occupation to the average percentage female for the labour force as a whole) or are concentrated in a limited number of

Table 2.10. **Female employment by occupation and sector, 1998-2000, OECD averages**

Panel A. ISCO-88 major and sub-major occupation groups^a

	Average female share ^b (%)	Female representation ratio ^c		
		OECD average	> = 1 (nr of countries)	< 1 (nr of countries)
100 – Legislators, senior officials and managers	30	0.7	0	24
110 – Legislators, senior officials and managers	32	0.7	2	21
120 – Corporate managers	29	0.6	1	22
130 – General managers	35	0.8	2	20
200 – Professionals	48	1.1	18	6
210 – Physical, mathematical and engineering science professionals	16	0.3	0	23
220 – Life science and health professionals	64	1.4	18	5
230 – Teaching professionals	65	1.4	23	0
240 – Other professionals	48	1.1	16	7
300 – Technicians and associate professionals	54	1.2	21	3
310 – Physical and engineering science associate professionals	21	0.5	0	23
320 – Life science and health associate professionals	83	1.8	23	0
330 – Teaching associate professionals	76	1.7	19	3
340 – Other associate professionals	56	1.2	18	5
400 – Clerks	69	1.5	24	0
410 – Office clerks	67	1.5	23	0
420 – Customer service clerks	77	1.7	23	0
500 – Service workers and shop and market sales workers	69	1.5	24	0
510 – Personal and protective service workers	66	1.5	22	1
520 – Models, salespersons and demonstrators	73	1.6	23	0
600 – Skilled agricultural and fishery workers	27	0.6	2	22
610 – Skilled agricultural and fishery workers	27	0.6	2	22
700 – Craft and related trades workers	12	0.3	0	24
710 – Extraction and building trades workers	3	0.1	0	23
720 – Metal, machinery and related trades workers	4	0.1	0	23
730 – Precision, handicraft, craft printing and related trades workers	31	0.7	2	21
740 – Other craft and related trades workers	43	1.0	8	15
800 – Plant and machine operators and assemblers	19	0.4	0	24
810 – Stationary-plant and related operators	13	0.3	0	23
820 – Machine operators and assemblers	35	0.8	4	19
830 – Drivers and mobile plant operators	4	0.1	0	23
900 – Elementary occupations	52	1.2	20	4
910 – Sales and services elementary occupations	68	1.5	23	0
920 – Agricultural, fishery and related labourers	37	0.8	8	12
930 – Labourers in mining, construction, manufacturing and transport	28	0.6	1	22

occupations (e.g. percentage female in the top-ten occupations). Studies of gender segregation have tended to focus on indices of inequality – one of the most commonly used is the so-called “dissimilarity index” – or on the extent to which the labour force can be divided into gender-dominated and gender-integrated occupations. The analysis in this and the next section discusses a selection of these measures, based on recent, relatively detailed and internationally harmonised data,¹³ in order to draw a broad-brush picture of how occupations and sectors are distributed across the sexes, both horizontally and vertically. It then examines the occupational distribution of women by different age, education and family situation groups.

Table 2.10 examines the distribution of women across aggregated occupations and sectors by presenting the OECD average of the degree of representation of women within each occupational and sectoral group and, relative to their share in total wage and salary employees, of their over- or under-representation. The classification used for occupations is the two-digit

Table 2.10. **Female employment by occupation and sector, 1998-2000, OECD averages** (cont.)

Panel B. Sectors and sub-sectors^d

	Average female share ^b (%)	Female representation ratio ^c		
		OECD average	>= 1 (nr of countries)	< 1 (nr of countries)
Goods-producing sectors and utilities	23	0.5	0	24
Agriculture, hunting and forestry	29	0.7	3	21
Mining and quarrying	13	0.3	1	23
Manufacturing	30	0.7	1	23
Electricity, gas and water supply	18	0.4	0	24
Construction	8	0.2	0	24
Service sectors	52	1.2	24	0
Producer services	45	1.1	18	6
<i>Business and professional</i>	43	1.0	10	14
<i>Financial services</i>	51	1.2	19	5
<i>Insurance services</i>	51	1.2	21	3
<i>Real estate</i>	46	1.1	15	9
Distributive services	40	0.9	6	18
<i>Retail trade</i>	52	1.2	23	1
<i>Wholesale trade</i>	32	0.7	1	23
<i>Transportation</i>	20	0.5	0	24
<i>Communication</i>	37	0.9	5	19
Personal services	57	1.3	24	0
<i>Hotels and restaurants</i>	56	1.3	24	0
<i>Recreation and amusement</i>	44	1.0	18	6
<i>Domestic services</i>	88	2.1	24	0
<i>Other personal services</i>	62	1.4	19	5
Social services	63	1.5	24	0
<i>Government proper</i>	43	1.0	12	12
<i>Health services</i>	77	1.8	24	0
<i>Education</i>	66	1.6	24	0
<i>Miscellaneous</i>	50	1.2	14	10

a) Average values for the years 1998-2000, except 2000 values for Canada and New Zealand. The following countries are included in the calculations: EU countries, Canada (only in the major occupational groups), Czech Republic, Hungary, Iceland, New Zealand (without the occupation 130: General Managers, 330: Teaching associate professionals and 920: Agricultural, fishery and related labourers), Norway, Poland, Slovak Republic and Switzerland.

b) The female share is calculated as the share of women over the total workforce in the occupational group or sector.

c) The representation ratio is calculated as the female share in the occupational group or sector divided by the female share in total wage and salary employment. A value of the ratio of less than 1.0 indicates that women are under-represented in a relative sense; a value greater than 1.0 indicates that women are over-represented.

d) Values for 1998. The following countries are included in the calculations: EU countries, Australia, Czech Republic, Hungary, Mexico, New Zealand, Norway, Switzerland and United States.

Sources and definitions: See Annex 2.A.

ISCO-88 (COM), that divides occupations into 26 sub-major groups. For sectors, the classification scheme corresponds to that used in OECD (2000), which divides employment into five goods-producing sectors and utilities and four service sectors, divided into 16 sub-sectors.¹⁴

On average for the OECD countries for which data are available on a harmonised basis, women are over-represented in 11 occupational groups and under-represented in 15, with very little variation across countries. Clerical occupations, sales jobs and the life-science/health and teaching professions (both at the level of professionals proper or technicians and associate professionals) are highly feminised. Within the elementary occupations, women are over-represented in the sales and services occupations. By contrast, the female representation ratio is less than one in all three sub-major groups of the administrative and managerial occupations (Major group of “Legislators, senior officials and managers”), and among physical, mathematical and engineering science professionals. Manual and production jobs are also predominantly male. As for the representation of women across sectors, they are largely under-represented in the goods-producing sector whereas they are over-represented in services. There is quite a lot of variation, though, across sub-sectors and across countries. In more than half the countries, women are over-represented in financial, insurance and real estate services and under-represented in distributive services. The presence of women in the government sector varies across countries: they are over-represented in half the countries and under-represented in the other half.

Levels of occupational or sectoral segmentation by gender based on very aggregated data may obscure the full extent of gender segmentation if women and men work in different detailed occupations or sub-sectors. Table 2.11 uses occupational information at the most detailed level available to analyse the extent to which employed women and men are concentrated in a small number of occupations. In the OECD area, the vast majority of the female workforce – at least three quarters – is concentrated in just 19 out of 114 occupations. These 19 occupations tend to be strongly female-dominated, with women representing 70% of total employment on average. Large numbers of women, across all OECD countries, are found working as salespersons, domestic helpers and cleaners, secretaries, personal care and related workers. Slightly lower down in terms of female concentration ranking are primary and secondary school teachers. On average, three quarters of male wage and salary employees are employed in 30 out of 114 occupations, in which the male share of employment averages 73%. Drivers, construction workers, mechanics and, at a higher skill level, physical and engineering science technicians are typical occupations for men in most of the countries examined. Architects, engineers and finance and sales professions are other professional profiles that occupy large numbers of men in virtually all countries.

Measuring occupational concentration by these simple counts of occupations suggests that women are much more concentrated into a few occupations than men. However, this is misleading because the national occupational classifications tend to divide typically male production occupations into finer sub-categories than typically female service occupations. For example, the typically female occupation “housekeeping and restaurant service workers” includes many more workers than the male-dominated occupation “miners, shot-fires, stonecutters and carvers”. As a consequence, the simple count of occupations overstates the difference between occupational concentrations of men and women. This is why Table 2.11 also reports counts of occupations that are adjusted for differences in the share of each occupation in the total workforce. This indicator is based on the extreme assumption that the share of each occupation in the total workforce is an indicator of the heterogeneity of jobs associated with each occupation. The picture that emerges based on this alternative indicator is very different:

Table 2.11. **Occupational concentration of women and men, 2000**

Occupations that employ at least 75% of wage and salary employees, by gender

	Women			Men			Total number of occupations ^d
	Count of occupations ^a	Average female share ^b	Adjusted count of occupations ^c	Count of occupations ^a	Average male share ^b	Adjusted count of occupations ^c	
Australia	24	66	55	38	72	64	81
Austria	17	74	49	29	77	55	115
Belgium	16	66	47	25	76	55	115
Canada	32	68	67	53	71	66	139
Czech Republic	27	73	48	31	73	53	115
Denmark	19	67	54	31	72	55	115
Finland	21	77	51	29	75	56	115
France	17	68	51	31	73	51	115
Germany	20	70	52	32	71	56	115
Greece	14	69	46	29	74	62	115
Hungary	23	71	50	29	72	55	115
Iceland	18	77	44	29	74	50	115
Ireland	17	72	52	28	70	58	115
Italy	19	59	53	30	72	65	115
Luxembourg	13	65	48	26	81	60	115
Netherlands	21	65	52	31	72	58	115
New Zealand (2001)	17	74	48	28	70	49	96
Norway	16	73	53	30	75	51	115
Poland	20	74	48	29	77	53	115
Portugal	16	72	49	27	71	56	115
Slovak Republic	24	73	49	28	74	52	115
Spain	15	64	46	30	75	58	115
Sweden	20	75	53	31	71	52	115
Switzerland	20	66	52	31	75	58	115
United Kingdom	17	69	54	29	70	57	115
United States (1999)	21	65	54	26	68	56	107
OECD unweighted average^e	19	70	51	30	73	56	114

a) Minimum number of occupations accounting for at least 75% of total female (male) employment, obtained by ranking occupations according to their female (male) employment, from highest to lowest.

b) Average female (male) share in the occupations that employ at least 75% of female (male) wage and salary employees.

c) Each occupation has been assigned a standardisation factor, which is proportional to the share of the total workforce in each occupation. The standardisation factors are constructed in such a way that they sum to the total number of occupations in the national classification. Hence, they can be higher, lower or equal to one. They are calculated as follows: $S_i = (w_i/W) * OCC_{tot}$, where w_i = wage and salary employment in occupation i ; W = total wage and salary employment; OCC_{tot} = total number of occupations in the national classification. The adjusted count of occupations is the minimum sum of standardisation factors accounting for at least 75% of total female (male) employment, obtained by ranking occupations according to their female (male) employment divided by their corresponding standardisation factor, from highest to lowest.

d) Total number of occupations included in the national occupational classification. See also Annex 2.A.

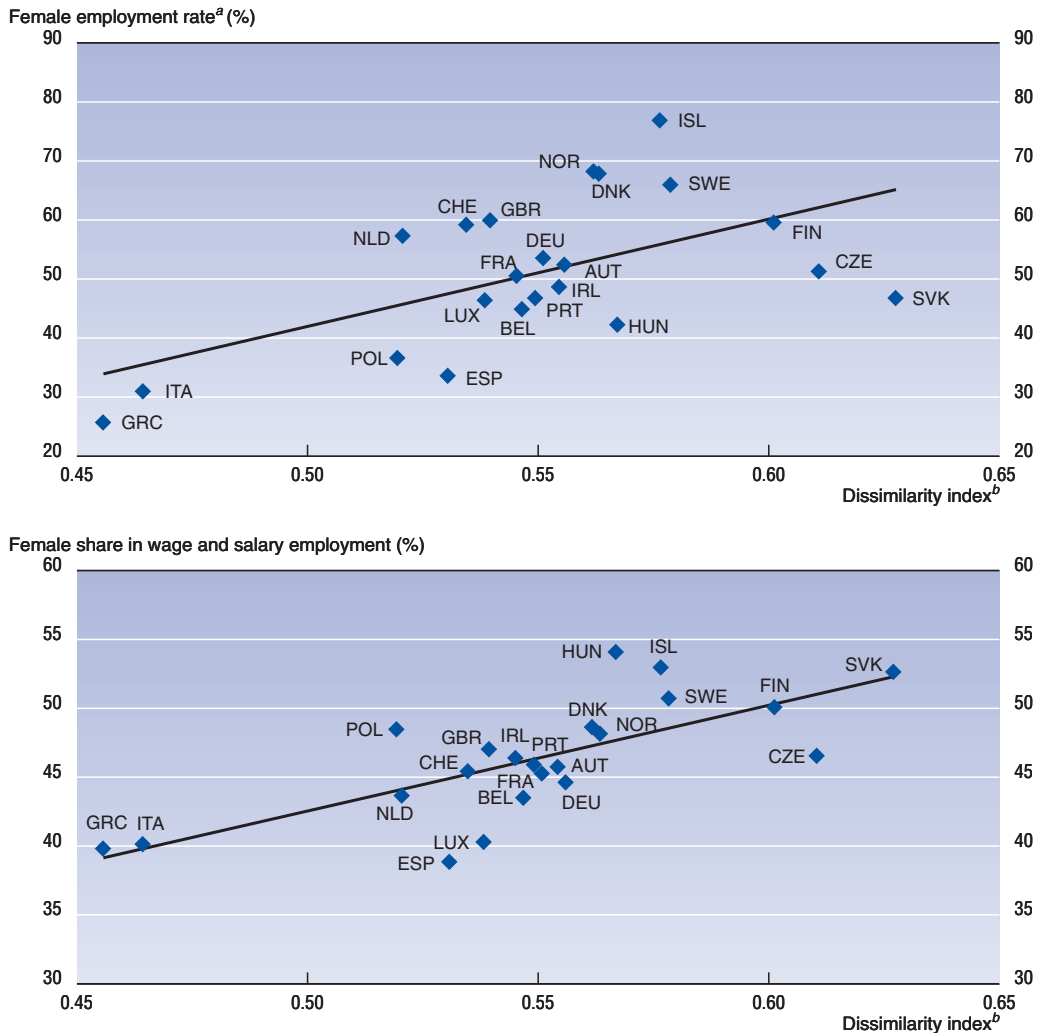
e) For above countries only.

Sources and definitions: See Annex 2.A.

gender differences in terms of occupational concentration are very limited, with women appearing to be less concentrated than men in Scandinavian countries and Canada. Only in Australia, Greece, Italy, Luxembourg and Spain do women appear to be employed in far fewer occupations than men. Admittedly, given its extreme assumptions, this indicator understates the difference in occupational concentration between men and women.

The same detailed data used in Table 2.11 have been used to construct the dissimilarity index¹⁵ that is plotted in Chart 2.3 against the overall female employment rate (calculated for wage and salary employees only) and the female share in wage and salary employment. The relationship between the dissimilarity index and either the female employment rate or the female share in wage and salary employment is positive. The dissimilarity index is very low in Greece and Italy, where relatively few women are employed. Conversely, the Slovak Republic, the Czech Republic and the Scandinavian

Chart 2.3. Occupational segregation by gender and women’s employment, 2000



a) Women in wage and salary employment divided by the female population aged 15 to 64 years.
 b) Dissimilarity index calculated for the occupations at the 3-digit level of the ISCO-88 (COM). The index has a minimum value of 0 – no segregation; same percentage female and male in each occupation – and a maximum value of 1 – complete segregation; each occupation is completely female or completely male. For the definition of the dissimilarity index, see Footnote 15 in the text.
 Sources and definitions: See Annex 2.A.

countries, with among the highest rates of female employment, are also found to have the highest levels of gender segregation. This finding is in line with well-established findings in the literature on this subject (Anker, 1998).

The fact that high employment rates in the Nordic countries have not led to a better integration of women and men into occupations may be viewed as a paradox. One might expect that as women enter employment in increasing numbers, the diversity of their labour market experience should increase. Furthermore, along with higher women’s labour force commitment, equity laws should become increasingly important and employers’ opinions towards women workers more positive. On the other hand, the rise in the

labour force participation of women involves a reorganisation of work so that tasks that women traditionally performed at home have been transferred to the labour market. Many women moving into the labour market have taken up jobs in healthcare, social care and education, thus producing services that are similar to those produced at home.

Signs of falling occupational segregation are observed when comparing the dissimilarity index for workers in the age group of 25 to 34 years to that for older workers (Table 2.12). The younger generations appear to be more occupationally integrated than the older ones in all countries except Austria, Belgium, Germany, Greece, Italy and Spain (in the latter three countries, though, the dissimilarity index for the overall workforce is relatively low). The generation gap in occupational segmentation is particularly pronounced in Ireland, Korea, the United Kingdom and the United States. On the other hand, the division of the labour market into a female and a male segment is more pronounced for the low-educated and for women and men with children. The explanation for the

Table 2.12. **Gender differences in the occupational distribution of employment by age, presence of children and education, 2000**

Relative dissimilarity indices^a

	By age ^b	By presence of children ^b	By education ^b
Australia ^c	99	102	139
Austria	103	113	134
Belgium	100	111	171
Czech Republic	94	110	109
Denmark	92	..	119
Finland	93	..	115
France	95	110	135
Germany	100	115	125
Greece	100	117	195
Hungary	95	..	152
Iceland	92	..	156
Ireland	88	120	..
Italy	108	106	139
Korea ^c	71	..	131
Luxembourg	95	119	217
Netherlands	99	116	182
New Zealand ^c (2001)	94	114	..
Norway	91	..	134
Poland	92	..	149
Portugal	96	107	186
Slovak Republic	94	..	136
Spain	101	102	136
Sweden	90	102	138
Switzerland ^c	99	96	120
United Kingdom	83	123	116
United States ^d (1999)	86	124	183
OECD unweighted average^e	94	111	145

.. Data not available.

a) Ratio of the dissimilarity indices (DI) for the two groups indicated below multiplied by 100. A relative index greater than 100 indicates greater occupational segregation by gender for the group in the numerator than for the group in the denominator. DIs have been calculated over the population of wage and salary employees based on 26 sub-major occupational groups of ISCO-88 (excluding the Armed Forces). For the definition of DI, see Footnote 15 in the text.

b) By age: ratio of DI for the age group 25 to 34 years to DI for the age group 35 to 64 years; by presence of children: ratio of DI for employees with children to DI for employees without children; by education: ratio of DI for employees with less than upper secondary education to DI for employees with a tertiary qualification.

c) For Australia (age and presence of children), Korea, New Zealand, Sweden and Switzerland (presence of children) the dissimilarity indices are calculated based on 9 major groups of occupations (digit-1 level).

d) For the United States, the indices are calculated based on 19 groups of occupations (2-digit level of SOC).

e) For above countries only.

Sources and definitions: See Annex 2.A.

former observation is rather intuitive, as low-skilled occupations in the bottom rung of the occupational classification are more clearly gender-stereotyped than medium- or high-skilled occupations. Low-educated women and men are more likely to make gender-typed choices of occupations than the highly educated, and, as a consequence, it may be particularly difficult for women (or men) to break into typical male- (or female-) dominated jobs, even should they desire to. This rigidity adds another dimension to the labour market penalty attached to low education for both women and men, besides higher unemployment and lower employment rates. It also explains why the younger generations, who are better educated, appear to be more occupationally integrated than the older ones.

The reason why parents are more occupationally gender-segregated than childless workers is less obvious. In general, differences in the occupational distribution of mothers and non-mothers account for more of the difference in the dissimilarity index for parents and non-parents than differences in the distribution of jobs for fathers and non-fathers (data not shown). Compared to childless women, women with children are found more often among “service workers and shop and market sales workers”, where women are over-represented, and less often in the managerial major group, where women are under-represented. Similarly, fathers tend to reinforce their representation ratio in those occupations where men are already over-represented, and *vice versa*.

These results need to be considered in the light of the other findings discussed earlier in the chapter as well as the theoretical and empirical literature on the subject. As was shown above, women with children are more likely to be in part-time jobs than childless women. To the extent that part-time jobs are more likely to be feminised and less evenly distributed across the occupational spectrum (OECD, 1999), this partly explains why mothers are more occupationally segregated than childless women. Furthermore, family responsibilities of mothers and the limited availability of adequate child-care facilities may reduce the effort that they can put into market work and they may choose, as a result, less-demanding jobs that are compatible with a family life (Becker, 1985) and/or where the wage penalty due to interruptions of their market work in the event of childcare is minimised (Polacheck, 1981). Mothers therefore apply a filter in their occupational choices that limits the types of jobs they can take. There can also be a discrimination effect, whereby some employers prefer not to hire mothers if they think that they are less committed or motivated for work than childless women.

The appropriate policy stance towards occupational segmentation by gender depends on its causes. A number of competing theories attempt to explain occupational sex segregation. Neo-classical or human capital theories focus on supply-side factors (*i.e.* heterogeneous endowments, constraints and preferences of workers), or demand-side factors (*i.e.* employers’ preferences that are determined by a rational investment behaviour). These theories highlight the role played by differences in personal preferences and the human capital accumulated by men and women and, in terms of policy, stress the need to address factors such as education, training and family-work reconciliation policies. By contrast, labour market segregation and gender theories tend to assign a prominent role to discrimination as a prime determinant of the occupational segregation of women. According to these views, policy should try to promote equal opportunity and affirmative action, as well as consciousness-raising policies to remove gender stereotypes and prejudices. In the absence of such policies, gender segmentation may result in lower pay¹⁶ and fewer career options for women (OECD, 1998b) and increase labour market rigidity. Occupational segmentation by gender appears also to result in an under-utilisation of women’s cognitive skills (Box 2.1).

Box 2.1. **Facts and perceptions concerning the utilisation of one's skills on the job**

The indicators presented in the table below, which have been derived from a variety of surveys, look at the job content for women compared to that for men from a different angle, that of the extent of utilisation of their skills on the job and of individual perceptions about the complexity of their work tasks.

In spite of educational attainment levels that are similar for women and men or even in favour of women, white-collar women engage in writing and reading at work less frequently and/or with less variety than white-collar men in all the countries examined. Furthermore, fewer women than men declare that they are carrying out complex tasks in their jobs. This is of concern to the extent that individuals who engage in informal learning at work through reading and writing have more opportunities to maintain and enhance their foundation skills than people who do not use their skills regularly.

Work tasks may be perceived as too onerous or too light according to personal taste and expectations as well as relative to one's skills and qualifications, and if women's expectations towards their jobs are lower than men's, they may not think that their skills are under-utilised. More women than men, however, feel that the demands imposed on them by their jobs are too low relative to their skills; and, conversely, fewer women than men think they are too high. True, the picture becomes a bit blurred at this stage: in six of the fourteen countries for which the information is available, women appear to believe that the demands imposed on them by their jobs are too high relative to their skills, without there being any evidence of their writing or reading engagement at work being higher than for men or for women in other countries, nor literacy skills or educational attainment levels being any lower. What is more, women are less prone than men to feel that they have the skills or qualifications to do a more demanding job than the one they occupy (indicator 7). This last subjective indicator may reflect both one's perceptions about the adequacy of one's skills and qualifications for the job's demands as well as one's aspirations for a more demanding job. For example, a worker can feel that the demands imposed on her/him match his/her skills, and still feel that he/she can do a more demanding job.

The picture that emerges from this table is one where the skill requirements of many men's jobs are higher than women's. Even if women are aware of this, they do not appear to feel that they could or would like to do a more demanding job. Does this imply that women's satisfaction on the job is different from that of men's? A number of studies for Great Britain and the United States (Blanchflower and Oswald, 1999, Brown and Mc Intosh, 1998, Clark, 1997) show that women are indeed more satisfied with their jobs than men. Clark (1997) suggests that this paradox may be explained by the possibility that women's labour-market expectations are more than being met. Based on evidence on work orientations from the 1997 International Social Survey Program, however, Sousa-Poza and Sousa-Poza (2000) show that in most countries there is no such gender/job-satisfaction paradox. Men display higher levels of job-satisfaction than women in all countries except the United Kingdom and the United States, although the differences are small (but statistically significant). Consistent results are found on the basis of the European Community Household Panel: among the 12 countries for which data are available, women appear to be significantly more satisfied with their job than men (at conventional statistical level) only in the United Kingdom.

Box 2.1. Facts and perceptions concerning the utilisation of one's skills on the job (cont.)

Indicators of the extent of utilisation of skills in the job, female workers aged 20 to 64 years

Ratio of women to men, men = 100

	Cross-country median value	Share of countries with index >= 100
1. Reading index score ^a	82	0/19
2. Writing index score ^a	76	0/19
3. Percentage of workers carrying out complex tasks ^b	81	0/19
4. Percentage of workers carrying out monotonous tasks ^c	100	8/14
5. Percentage of workers who think the demands imposed on them by their job are too high relative to their skills ^d	94	6/14
6. Percentage of workers who think the demands imposed on them by their job are too low relative to their skills ^d	117	11/14
7. Percentage of workers who feel they have the skills or qualifications to do a more demanding job than the one they occupy	96	2/12

a) Index score for engagement in reading and writing at work for white-collars. Given six different types of texts – reports, letters, schemas, manuals, invoices and instructions – the reading index records how many of these texts and how often the respondent said that she/he reads during the week. The writing index is constructed in the same way based on four kinds of writing activities in the workplace: letters and memos, reports, financial documents and specifications. Thus, the indices reflect both variety and frequency. Someone with a writing index may either read more frequently and/or have a greater variety of literacy experiences each week.

b) Percentage of workers answering yes to “generally, does your main paid job involve, or not, complex tasks?”.

c) Percentage of workers answering yes to “generally, does your main paid job involve, or not, monotonous tasks?”.

d) “How well do you think your skills match the demands imposed on you by your job?” (“Too high, match, too low”).

Source: Indicators 1 and 2: International Literacy Survey (IALS); indicators 3 to 6: Third European Survey of Working Conditions 2000; indicator 7: European Community Household Panel (ECHP), fifth wave.

B. The vertical segregation of employment

If women are more likely to be in work than ever before, is there any evidence that they are moving up the occupational hierarchy as well? And, if yes, which groups of women are more likely to be found in managerial positions? Table 2.10 showed that, on average in OECD countries, women are under-represented in the top administrative and managerial occupations. The first four columns of Table 2.13 add country-specific information on each of the three sub-major groups of occupations included in this category. The more detailed picture drawn in this table still displays a high degree of similarity across countries in the structure of female occupational representation. With very few exceptions – *i.e.* “legislators and senior officials” in the United Kingdom, “corporate managers” in Ireland, “general managers” in Austria and Belgium – women are under-represented in all three sub-major groups, and considerably so in Italy. These results, however, need to be interpreted with great caution, as cross-national comparability of occupations in Major group 1 of ISCO-88 (COM) is particularly susceptible to national differences of definitions. In particular, the definition of managers in the United Kingdom (and probably also in Ireland) is looser than in other countries (Elias and Mc Knight, 2001).¹⁷

However, occupations with a supervisory role may also be found within other groups of occupations but the level of occupational disaggregation available does not reveal such underlying vertical gender segregation. To overcome this problem, the last two columns of

Table 2.13. **Women in managerial occupations and in jobs with a supervisory role**
Female representation ratios^a

	ISCO-88 sub-major occupation groups within "Legislators, senior officials and managers"				Jobs with a supervisory role ^b	
	110 – Legislators and senior officials	120 – Corporate managers	130 – General managers	Total	Great supervisory role	Some supervisory role
Austria	0.5	0.6	1.4	0.7	0.6	0.7
Belgium	0.7	0.6	1.1	0.7	0.6	0.7
Canada	..	..	..	0.8	0.6	0.9
Czech Republic	0.5	0.7	0.6	0.6	0.1	0.8
Denmark	0.4	0.4	1.0	0.5	0.5	1.3
Finland	0.8	0.6	0.4	0.6	0.6	1.1
France	0.7	0.7	1.0	0.7	0.7	0.9
Germany	0.5	0.5	0.9	0.5	0.5	0.7
Greece	0.5	0.6	0.6	0.6	0.4	0.9
Hungary	0.8	0.8	0.7	0.8	0.7	1.2
Iceland	0.6	0.7	0.4	0.6	..	..
Ireland	0.9	1.0	0.7	0.9	0.7	1.0
Italy	0.4	0.3	0.4	0.3	0.5	0.9
Luxembourg	0.5	0.4	0.7	0.5	..	..
Netherlands	0.5	0.4	0.8	0.5	0.5	0.7
New Zealand	1.0	0.8	..	0.8	..	..
Norway	0.9	0.5	0.6	0.5	..	..
Poland	0.5	0.7	0.9	0.8	0.6	0.9
Portugal	0.5	0.6	0.7	0.6	0.6	1.0
Slovak Republic	0.9	0.7	0.9	0.8	..	..
Spain	0.7	0.4	0.6	0.5	0.6	0.8
Sweden	0.7	0.6	0.7	0.6	..	..
Switzerland	0.7	0.2	0.6	0.5	0.7	0.9
United Kingdom	1.1	0.7	0.7	0.7	0.8	1.0
OECD unweighted average^c	0.7	0.6	0.7	0.6	0.6	0.9

.. Data non available.

a) For the definition of the female representation ratio, see note c), Table 2.10.

b) Information on the degree of supervisory role in the job is taken from the ECHP for Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain and United Kingdom. For the remaining countries, the information is derived from the IALS. In the ECHP, great supervisory role corresponds to "supervisory role with a say on the pay and promotion of staff", and some supervisory role corresponds to "supervisory role and no say on the promotion of staff". In the IALS interviews, no definition of great and some supervisory role was provided to respondents. The results based on the two different surveys, therefore, may not be fully comparable.

c) For above countries only.

Source: For the ISCO-88 data: European Labour Force Survey (see Annex 2.A); for the degree of supervisory role: European Community Household Panel (ECHP) and OECD, International Adult Literacy Survey (IALS), 1994-97.

Table 2.13 measure the vertical distribution of jobs based on an alternative indicator, that is the degree of supervisory role in the job. Also in this case, though, comparability across countries is limited as two different data sources have been used, using slightly different notions of degree of supervisory role (see footnote to the table). In all countries women appear to be under-represented in jobs with great supervisory role. Among European Union countries, for which the data are more comparable, the representation ratio is closest to 1 in the United Kingdom, whereas it is below 0.5 in Greece.

There are two hypotheses to explain why women are under-represented at higher job levels relative to men. The "glass ceiling" argument is that women have less chance of being promoted to higher job levels than men even if both women and men are in jobs that offer promotion opportunities. Social attitudes and cultural biases are regarded as major factors discriminating against women and holding them back from attaining higher-level jobs. Another constraint for women to achieve high-level positions, especially if these involve long hours, frequent travels and relocation, is the disproportionate responsibility they still have for raising children and performing household tasks. Table 2.14, however,

Table 2.14. **Career progress over five years by gender**Percentage of workers^a whose supervisory responsibilities increased between 1994 and 1998

	Women			Men		
	With children	Without children	Total	With children	Without children	Total
Belgium	10	18	14	24	19	21
Denmark	19	15	17	24	20	22
France	16	14	15	23	17	20
Greece	7	7	7	15	9	12
Ireland	18	16	17	21	20	21
Italy	14	12	13	20	15	17
Netherlands	6	12	10	22	18	20
Portugal	9	9	9	8	9	8
Spain	16	11	13	24	16	20
United Kingdom	21	25	23	27	26	26
Unweighted average	14	14	14	21	17	19

a) Persons aged 20 to 50 years who were employed and had no or only some supervisory role in the starting year.

Source: See Annex 2.A.

does not display a lower promotion probability for mothers compared to childless women, whereas it confirms that there are differences in career mobility between women and men. The apparent absence of a motherhood effect on the career mobility of women could reflect a more subtle constraint affecting women without family responsibilities, which is that they may nevertheless be seen by their employers as potential mothers and, as a consequence, they are unwilling to invest as much in their future careers. Furthermore, a closer analysis of the data in Table 2.14 suggests that the hypothesis of a penalty attached to motherhood in terms of career mobility cannot be ruled out. In fact, if fathers display more career mobility than childless men because promotions are more likely to occur during the child-rearing ages, the fact that mothers are no more likely than childless women to step up to jobs with greater supervisory role implies that they are actually penalised.

The second hypothesis to explain why women have less promotion probability than men, called the “dead-end explanation”, states that women are promoted to higher hierarchical levels less frequently because they are in jobs that offer fewer opportunities for promotion. The fact that women and men are distributed across different occupations and sectors lends plausibility to this second hypothesis, but the available evidence does not allow any further investigation of this issue.

4. Women at work: how much do they earn?

A. The unadjusted gender pay gap

The other main way in which gender differences manifest themselves within employment are differences in pay. Table 2.15 shows the unadjusted ratio of gross hourly earnings of women relative to men for a recent year and carries out a sensitivity analysis of its measurement based on alternative measures (*i.e.* the ratio of mean and of median hourly earnings, and the ratios at the break-points for the bottom and top quintiles of the earnings distributions) and populations (*i.e.* full-time only and all wage and salary employees). Cross-country comparability is somewhat limited by the fact that hourly earnings are calculated on the basis of slightly different definitions of wages and hours worked across

Table 2.15. **Gender wage ratio, 1998**

Unadjusted indicators^a of wage and salary employees aged 20 to 64 years^b

	Hourly earnings, full-time wage and salary employees				Hourly earnings, all wage and salary employees			
	Ratio of means	Ratio of medians	Ratio of the 20th percentiles	Ratio of the 80th percentiles	Ratio of means	Ratio of medians	Ratio of the 20th percentiles	Ratio of the 80th percentiles
Australia (2000)	91	92	96	87	89	90	96	85
Austria	79	80	76	80	79	79	76	80
Belgium	91	94	91	91	93	93	91	92
Canada (2000)	82	81	81	86	81	78	81	81
Denmark	89	93	96	87	89	92	95	88
Finland	82	87	92	77	82	87	92	77
France	87	93	89	89	89	93	90	91
Germany	80	83	80	80	81	83	78	80
Greece	80	80	84	82	87	82	85	88
Ireland	81	81	80	83	79	76	75	82
Italy	85	91	90	87	91	93	91	93
Netherlands	80	86	85	80	79	87	86	81
New Zealand (2001)	86	91	92	85	84	87	93	83
Portugal	92	85	89	95	95	85	89	98
Spain	88	93	86	95	86	88	84	91
Sweden (2000)	86	90	92	84	83	88	91	81
Switzerland (2001)	76	79	74	78	78	80	74	77
United Kingdom	80	85	85	80	75	79	79	76
United States (1999)	79	79	83	78	78	76	82	78
OECD unweighted average^c	84	86	86	85	84	85	86	84

a) Percentage ratios of female to male wage.

b) Australia, Canada, New Zealand, Sweden: 18-64 years and Switzerland: 15 to 64 years.

c) For above countries only.

Sources and definitions: See Annex 2.A.

countries: in some cases (*e.g.* the ECHP countries) overtime pay and/or bonuses are included, in other cases (*e.g.* Canada and Sweden) they are not; hours worked normally refer to usual hours, including overtime, but in the case of Sweden they relate to contractual hours. These differences affect the gender pay gap only to the extent that they are gender-biased.¹⁸ Furthermore, there may be some measurement errors due to the fact that the available information on earnings has been derived from household surveys (except for Sweden), where the risk of mis- or under-reporting by the interviewees is quite high; however, there appears to be no reason to expect systematic differences by country in the extent of gender bias in this phenomenon.

No matter how the gender wage gap is measured, women's hourly earnings are below those received by men in all countries. On average, hourly rates of pay for women are 84% of men's wages, corresponding to a wage gap of 16%, either when measured for full-time workers only or for all workers, including part-timers. In both cases, the wage gap at the median is slightly lower. The measure of the wage gap based on the median rather than the average is more robust, since the former is not affected by extreme values at both ends of the earnings' distribution. Based on this measure, the wage gap between men and women working full-time appears narrowest – at 6% – in Belgium, followed by Australia, Denmark, France, Italy, Spain and Sweden, whereas it is largest – at 21% – in Switzerland and the United States.

Because a large fraction of the female workforce holds part-time jobs, especially in the Netherlands and Switzerland, looking at full-time workers only is a potentially serious omission. The hourly pay gap estimated on the basis of median wages for all workers,

both full-time and part-time, is 4-5 percentage points higher than that estimated for full-time workers in Ireland, New Zealand, Spain and the United Kingdom, reflecting lower hourly wages for part-time workers, most of whom are women. In the remaining countries, however, there is little difference between the two measures of median wage gap. Particularly, in the two high part-time economies, the Netherlands and Switzerland, the median wage gap is even slightly lower when measured over all workers than over full-time workers only. This finding suggests that women in part-time jobs are not subject to an additional pay penalty in many OECD countries, perhaps thanks to recent changes in pay setting such as the collective bargaining initiatives in the Netherlands to equalise pay in full- and part-time jobs. The lack of a part-time effect for most countries could, however, also relate to the bias introduced by calculating hourly earnings on the basis of actual hours worked, rather than contractual hours. As men and full-timers are more likely to work overtime hours than part-timers, the hourly earnings measure will be biased downward most for full-time men, causing the gender wage gap to be under-estimated to a greater extent when part-time workers are included in the calculations.

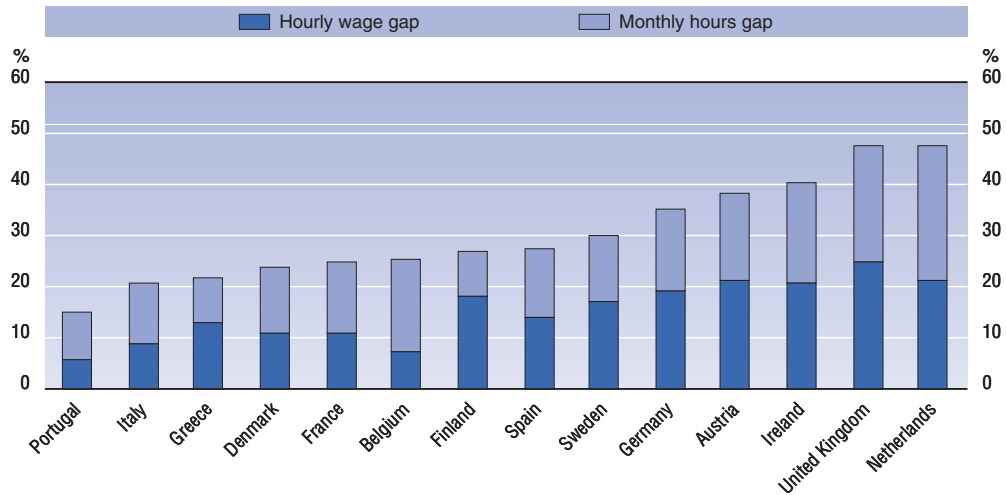
Table 2.15 presents two additional measures of the wage gap: the ratio of gross hourly earnings of women's to men's at the 20th and 80th percentiles of the female and male earnings distributions. The gender pay gap is significantly smaller at the 20th than at the 80th percentile in Nordic and English-speaking countries, particularly Finland and Denmark, and Australia and New Zealand, respectively. Conversely, for approximately half of the countries considered there appears to be either no clear difference or a greater female disadvantage in the bottom part of the earnings distribution than in the top part. The gender wage gap in Portugal and Spain is 6 and 9 percentage points greater at the 20th than at the 80th percentile of the earnings' distribution. This result could, however, partly reflect measurement error introduced by the self-declared nature of the available data, at least in part. If top earners – presumably for the majority men – have greater propensity to under-report their earnings than low or middle earners, the male-female wage gap at the 80th percentile is likely to be under-estimated.

Although the hourly wage can be thought of as the “true” price of labour, thus representing the most appropriate basis for the calculation of the gender pay gap, total weekly, monthly or annual earnings provide a better idea of how much women “take home” compared to men. Chart 2.4 shows the gender gap of monthly earnings for all workers, including part-timers, by adding to the gender hourly pay gap the gender gap in hours worked. As women are more likely to work part-time than men, and, once in full-time work (*i.e.* 30 hours of work per week or more), they work, on average, shorter hours than men (OECD, 1999), they earn considerably less, on a monthly basis, than men. In the Netherlands and the United Kingdom women earn just over half of what men earn.

As for the gender gap in employment rates, the size of the remaining gender pay gap is the result of different wage developments for women and men and may reflect different stages of development in gender equality. Table 2.16 shows changes of the gender wage gap over the past two decades for a small selection of OECD countries. Over the 15-20 year periods analysed, the wage gap fell by between 14 and 38%, indicating substantial progress. The wage gap decreased most in the United States and France, whereas the figures for Sweden and Canada display less rapid movement. The strong narrowing of the gender wage gap in the United States is all the more remarkable as it occurred against the background of rising wage inequality, which Blau and Kahn (1997) find to have a positive correlation with the gender pay gap. Using their own expression, American women

Chart 2.4. **The gender gap in monthly earnings, 1998**

The contribution of hourly wages and hours worked^a



a) Percentage difference between male and female average hourly wages and hours worked per month.
Source: See Annex 2.A.

have been “swimming upstream”, mainly thanks to improvements in their relative qualifications that were sufficient to counterbalance changes in the wage structure that worked against women. By contrast, in Sweden, much of the narrowing of the wage gap had already been accomplished in the 1970s. The relative stagnation of the gender pay gap in Nordic countries, in particular Denmark, has been attributed by Datta Gupta *et al.* (2001) to unfavourable wage structure effects that more than wiped out any gains that Danish women have made in their human capital over the period.¹⁹

A reduction of the gender pay gap, however, is not always a favourable development for women. Relative wage growth of women, in fact, may be strongly influenced by changes in workforce composition. The experience of transition countries,

Table 2.16. **The narrowing of the gender wage gap since the early 1980s, selected OECD countries**

Gender wage gap (initial year = 100)

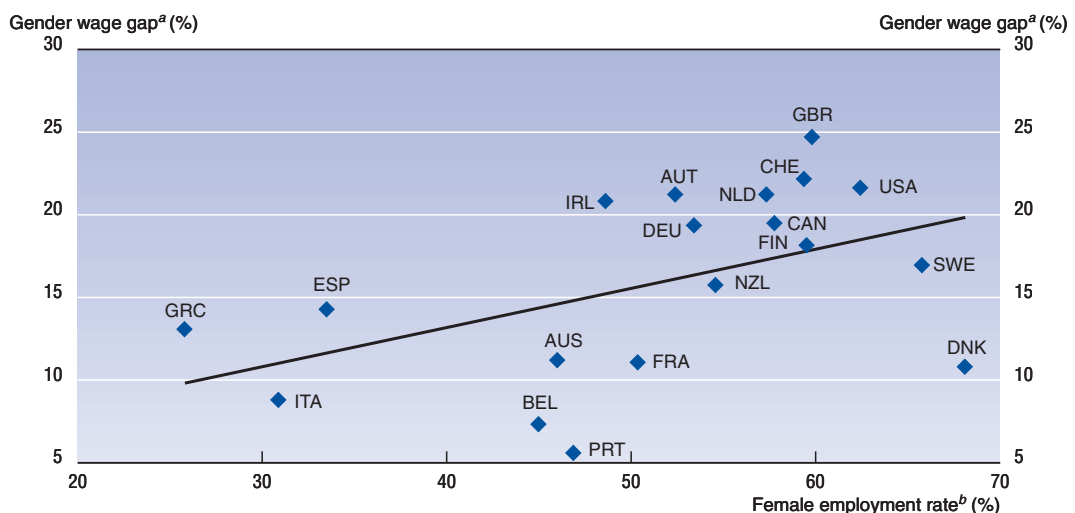
	Period	Index
Australia	1984-2001	82
Canada	1980-1999	85
France	1980-1999	66
Japan	1980-2000	81
Korea	1977-1997	70
Portugal	1975-1999	70
Sweden	1975-1995	86
United Kingdom	1980-2000	70
United States	1979-1999	62

Sources and definitions: See Annex 2.A.

where employment losses during the transition period have hit less skilled women particularly hard, illustrates this possibility. For example, Hunt (2002) attributes almost half the narrowing of the gender wage gap in East Germany to exits from employment of low-skilled workers who were disproportionately women. International comparisons also confirm that differences in the composition of the female workforce have an important effect on the gender wage gap. Chart 2.5 displays a positive relationship between the female employment rate and the gender wage gap across countries. As in the case of the positive relationship between occupational segmentation by gender and the degree of women's presence in the workforce (*cf.* Chart 2.3), the association between low employment rates and lower-than-average wage gaps may be viewed as a paradox: one would expect more women to be encouraged to enter employment if there is gender equality in pay and, in turn, pay equity regulations and practices to become increasingly important as more women enter the labour force. However, the apparent paradox is easily resolved. The evidence presented earlier in this chapter has shown that cross-country differences in female employment rates are mainly accounted for by the degree of integration of less educated, lower-paid women into employment. In countries where a higher proportion of low-educated women are employed, the gender pay gap will tend to be wider, all other things being equal. Composition effects are therefore important for explaining cross-country differences in the gender pay gap. The analysis in the remainder of this section further investigates this issue using decomposition techniques. As the relationship between female employment rates and the gender pay gap could reflect a tendency for increases in the supply of labour from women to depress their wages, the analysis will also control for differences in relative wages by gender and skill level.²⁰

Chart 2.5. **The gender wage gap and women's employment**

Persons aged 20 to 64 years



a) Percentage difference between male and female average hourly wages.

b) Percentage share of women in wage and salary employment.

Sources and definitions: See Annex 2.A.

B. A decomposition of the wage gap

Possible sources of pay inequality between women and men are differences in human capital endowments and productivity-relevant characteristics (*e.g.* age, education and employment experience, but also less easily observed characteristics like motivation to work and effort); differences in jobs held; and differences in pay “all other things equal”. Identifying these different components is important for policy purposes. In particular, differences in pay “all other things equal” reflect pay discrimination and are subject to being redressed through conventional legislation on equal pay, as well as through the forces of competition (Becker, 1957). The analysis that follows tries to identify the different components of the gender wage gap through the methods devised by Oaxaca (1973) and by Juhn *et al.* (1991). In reality, it is very difficult to determine when the condition “all other things equal” is met on the basis of the available information, since only a small portion of the many characteristics that affect the wage paid can be observed, and women and men often perform very different jobs.²¹ As a consequence, the type of analysis performed here can only suggest upper and lower bounds to the different components, corresponding to different assumptions on the role played by labour market discrimination, once the effect of differences in observed human capital endowments and productive characteristics is taken into account.

The first step in the decomposition of the gender wage gap is to identify the contribution of observed endowments and productive characteristics. To do this, one needs to know how much the labour market “pays” for such endowments and characteristics. Different approaches exist in the literature on how to estimate these remuneration rates. Here, following Blau and Kahn (1996, 1997), it is assumed that the best estimate can be obtained through the estimation of country-specific male wage regressions, where selectivity problems are minimised.²² Based on an OLS regression model and individual data, earnings functions for wage and salary male workers aged 20 to 64 years and working full-time (excluding apprentices) are estimated. A necessary condition to ensure cross-country comparability is to have the same specifications of wage regressions for all countries: for this reason, the analysis is restricted to 13 European countries only. Following the standard Mincerian specification, the natural logarithm of gross hourly wages is used as the dependent variable, while education, potential experience (age minus age of first entry into the labour market after leaving full-time schooling) and potential experience squared, together with controls for occupations, tenure, permanent contracts and public/private sector, are included in the model (Annex Table 2.B.1). These variables will be called “observed characteristics” hereafter, to distinguish them from unobserved characteristics (such as motivation or the difference between actual and potential experience), whose effect is reflected in the residual.

The estimated coefficients from the male regressions can be interpreted as the market price for the observed characteristics that would apply to both men and women in the absence of discrimination. The product of these coefficients and the average gender gaps in the corresponding variables leads to a simple decomposition of the differential between average hourly wages of men and women into a part due to gaps in observed characteristics and an unexplained residual (Oaxaca, 1973, Blinder, 1973, and Oaxaca and Ransom, 1999). The latter reflects gender differences in unobserved characteristics and/or discriminatory wage-setting practices that are unrelated to productive characteristics. Formally, this decomposition can be written as:

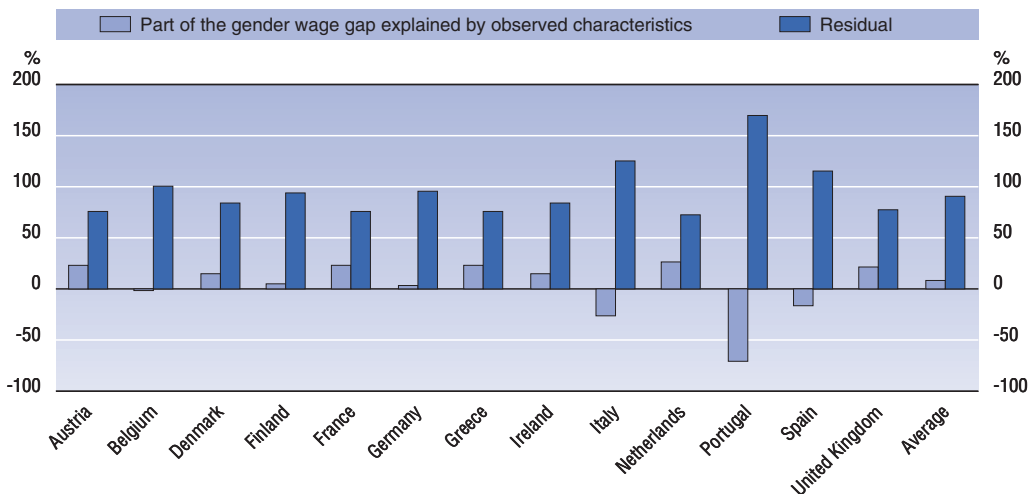
$$\Delta \log \bar{W}_i = \Delta \bar{X}_i \beta_i + \Delta \bar{\varepsilon}_i, \quad [1]$$

where i indexes countries, $\bar{\cdot}$ and Δ refer to country averages and gaps between men and women, respectively, W stands for gross hourly wages, X for the matrix of observable endowments and characteristics, β for the vector of estimated coefficients from the male regressions and ε for the residuals from these regressions (that is, difference between actual and predicted values, the latter computed using the estimated coefficients from the male wage regressions). As shown in Chart 2.6, even after gender differences in observed characteristics are controlled for, there remains a substantial gap between the hourly earnings of men and women. Indeed, on average, once the effects of education, tenure, potential experience and other observable characteristics are controlled for, gross hourly wages are still 15% greater for men than for women. These results must be interpreted with some caution, given the difficulty of measuring *actual* labour market experience, which is only partially circumvented through the inclusion of potential experience and actual tenure. The analysis in Section 2 suggests that potential experience overstates women's actual labour market experience, as women spend less and more discontinuous time in employment than men, especially if they have children or a low level of educational attainment. As a consequence, the use of estimated male returns to experience overestimates the female rate of return to experience, thereby inflating the unexplained part of the wage differential.²³

The components underlying Chart 2.6 cannot be fully compared across countries. In fact, each term of the decomposition is not only the result of gender gaps in observed and unobserved characteristics (or of discriminating wage-setting practices), but also reflects the structure of remuneration rates and wage premia, which differ across countries. Applying the decomposition method devised by Juhn, Murphy and Pierce (J-M-P hereafter,

Chart 2.6. **A decomposition of the gender wage gap^a**

Percentage of total hourly wage gap, persons aged 20 to 64 years



a) The gender wage gap (*i.e.*, percentage difference between male and female average gross hourly wages) is decomposed as follows: $\Delta \log W_i = \Delta \bar{X}_i \beta_i + \Delta \bar{\varepsilon}_i$, where i indexes countries, $\bar{\cdot}$ and Δ refer to country averages and gaps between men and women respectively, W stands for gross hourly wages, X for the vector of observable endowments and characteristics, β for the vector of estimated coefficients from each country-specific male regression (see Annex Table 2.B.1), and ε for the unexplained residuals. For each country, the two bars represent the two terms on the right-hand side of the equation expressed as a percentage of the left-hand side term.

Sources and definitions: See Annexes 2.A and 2.B respectively.

Juhn *et al.*, 1991) in a cross-country perspective, this problem can be overcome by taking one country as a benchmark and evaluating gaps in observed characteristics using the wage structure of that specific country. This way, cross-country differences in the gender wage gap can be decomposed into *i*) a component due to cross-country differences in gender gaps in observed characteristics; *ii*) a component due to cross-country differences in market prices for these characteristics; and *iii*) a residual difference reflecting differences in pay discrimination and/or in unobserved characteristics. The residual difference can be further decomposed under the extreme hypothesis that it can be entirely ascribed to differences in unobserved characteristics and/or in their remuneration. In this case, cross-country differences in remuneration rates for unobserved characteristics are estimated by assuming that they are fully reflected by differences between male residual distributions (that is, a greater residual male wage dispersion reflects steeper returns to marketable characteristics),²⁴ and differences in gender gaps in unobservable characteristics are obtained by subtraction.

Formally, the J-M-P decomposition can be written as follows (see also Blau and Kahn, 1996):

$$\Delta \log \bar{W}_i - \Delta \log \bar{W}_k = \Delta \bar{X}_i (\beta_i - \beta_k) + (\Delta \bar{X}_i - \Delta \bar{X}_k) \beta_k + (\Delta \bar{\varepsilon}_i - \Delta \bar{\eta}_{ik}) + (\Delta \bar{\eta}_{ik} - \Delta \bar{\varepsilon}_k), [2]$$

where *i* and *k* index countries (with *k* denoting the benchmark country), $\bar{\cdot}$ and Δ refer to country averages and differences between men and women, respectively, *W* stands for gross hourly wages, *X* for the matrix of observable endowments and characteristics, β for the vector of estimated coefficients from the male regressions, ε for the residuals from these regressions and η for the “theoretical” residuals that would be obtained in country *i* if it had the same residual wage structure as country *k*. These “theoretical” residuals deserve some explanation: they are obtained calculating for each individual of country *i* the residual that an individual with the same ranking position with respect to the male distribution would have in the benchmark country *k*. Indeed, provided that the ranking of individuals reflects the distribution of unobserved characteristics, and that the distribution of unobserved characteristics in the male population is the same in all countries, cross-country differences between the residuals of individuals with the same ranking position reflect cross-country differences in remuneration rates for unobserved characteristics. Following this intuition, the first and third terms of the right-hand side of equation [2] represent the effect of cross-country differences in remuneration rates of observed and unobserved characteristics, respectively, for given gender gaps in characteristics. Conversely, the second and fourth terms represent the effect of cross-country differences in gender gaps in observed and unobserved characteristics, respectively, that would be obtained if country *i* had the same wage structure as country *k*.

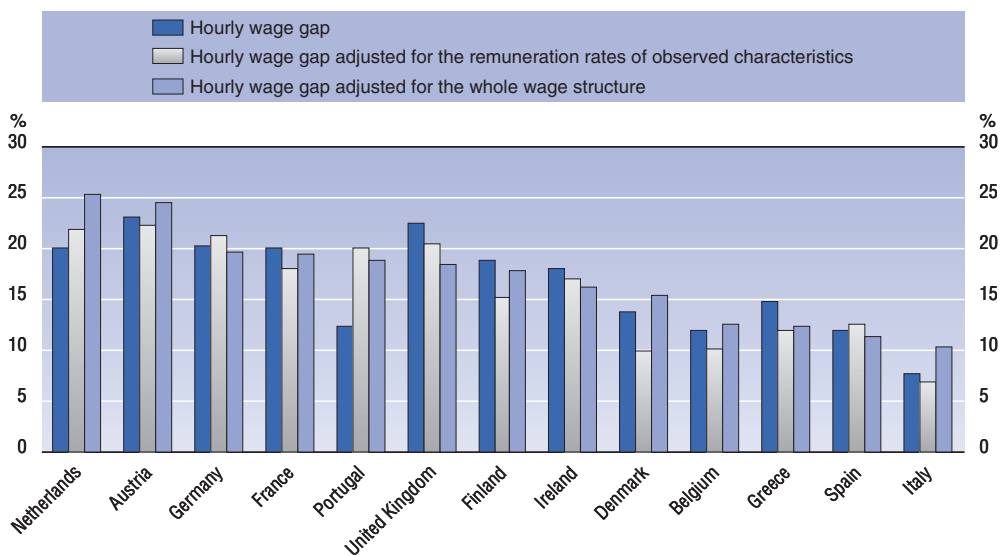
The choice of the benchmark country depends on the objectives of the analysis. In the pioneering work of Blau and Kahn (1996), the authors try to establish what the gender wage gap in OECD countries would be if they had the same wage structure as the United States. The choice of the United States as benchmark country then follows immediately. Conversely, Kidd and Shannon (1996), being concerned with a comparison of just two countries (Australia and Canada), decompose the wage gap of each country using the wage structure of the other. For the analysis in this chapter, the choice is less obvious. A somewhat natural approach is to compare each country with the cross-country average. Accordingly, a virtual “benchmark country” is constructed by pooling together observations from all 13 countries, with remuneration rates estimated from a pooled male wage regression that includes also country dummies in order to make the estimation meaningful

(cf. Annex Table 2.B.1 for estimation results). It must be noted that decomposition outcomes are only partially robust to the choice of the benchmark country (Blau and Kahn, 1996) and a different choice might lead to somewhat different results from those presented below. Similar problems arise as regard to the choice of the reference group for categorical variables (Oaxaca and Ransom, 1999).

Before proceeding further with the examination of the decomposition results, the reader deserves some guidance to their interpretation. On the basis of the available evidence, it is not possible to determine whether the residual term can be ascribed only to gender differences in unobserved characteristics and/or in their remuneration or rather to labour market discrimination.²⁵ However, comparing the full decomposition with one focussing on the first and second terms of equation [2] only, thus leaving the residual unexplained, provides estimates of upper and lower bounds to the effect of gender gaps in productive characteristics and the effect of the wage structure. This comparison is highlighted in Chart 2.7, which presents three different measures of the gender wage gap: *i*) the unadjusted wage gap, defined as the percentage difference between male and female average gross hourly wages; *ii*) the wage gap adjusted for cross-country differences in remuneration rates for observed characteristics, computed by subtracting the first term on the right-hand side of equation [2] from the unadjusted wage gap; and *iii*) the wage gap adjusted for cross-country differences in the whole wage structure, computed by subtracting both the first and third terms of the right-hand side of equation [2]. This way, the

Chart 2.7. **The gender wage gap adjusted for the effect of the wage structure^a**

Percentage difference between male and female average gross hourly wages, persons aged 20 to 64 years^b



a) The gender wage gap adjusted for cross-country differences in the remuneration rates of observed characteristics is obtained as follows: $\Delta \log W_i^{adjobs} = \Delta \log W_i - \Delta X_i(\beta_i - \beta_k)$, where i indexes countries, k denotes the benchmark country, $\bar{\cdot}$ and Δ refer to country averages and differences between men and women, respectively, W stands for gross hourly wages, X for the vectors of observed characteristics, and β for the vector of estimated coefficients from the male wage regressions (cf. Annex Table 2.B.1). The gender wage gap adjusted for cross-country differences in the whole wage structure is obtained as follows: $\Delta \log W_i^{adj} = \Delta \log W_i - \Delta X_i(\beta_i - \beta_k) - (\Delta \varepsilon_i - \Delta \bar{\eta}_{ik}) = \Delta X_i \beta_k + \Delta \bar{\eta}_{ik}$, where ε stands for the residuals from the male wage regressions (defined as the difference between actual and predicted values) and η for the theoretical residuals that would be obtained in country i if it had the same residual wage structure as country k .

b) Countries are ranked by decreasing hourly wage gap adjusted for the whole wage structure.

Sources and definitions: See Annexes 2.A and 2.B respectively.

difference between the middle and left-hand columns of Chart 2.7 gives a measure of the effect of the wage structure on the gender wage gap that takes account only of cross-country differences in prices for observed characteristics. Conversely, the difference between the right-hand and left-hand columns gives a measure of the contribution of the whole wage structure, based on the assumption that the entire residual reflects unobserved characteristics and their remuneration rates.

Chart 2.7 shows that the unadjusted gender wage gap would be substantially reduced or inflated for some of the countries analysed, if the structure of remuneration rates were similar to that of the average benchmark country. Particularly, in the United Kingdom, it would be between 2 and 4 percentage points smaller if this country had as compressed a wage structure as the benchmark country. By contrast, in the Netherlands, a narrower wage structure contributes to a smaller gender pay gap, moderating penalties due to the concentration of women into lower paid occupational groups.²⁶

Less dispersed wage structures, however, are not always favourable to women. For instance, women usually benefit from their large presence in the public sector because, on average, public sector hourly wages are higher than wages in the private sector, all other things equal. As a consequence, a narrower-than-average wage differential between the private and the public sector in Belgium, Denmark, Finland and the Netherlands (*cf.* Annex Table 2.B.1) contributes to a widening of the gender wage gap in these countries. This is particularly the case in Denmark, where the contribution of observed characteristics to the gender wage gap is positive mainly because wages in the public sector, where women are over-represented, are even slightly lower than in the private sector (*cf.* Annex Table 2.B.2). Similarly, given that working women in Portugal are on average more educated than men and in high-pay occupations, greater than average returns to education and dispersion in occupational premia significantly reduce the gender wage gap. Indeed, the gender wage gap in Portugal would be 8.6 percentage points greater if it had the same wage structure as the benchmark country. Overall, these results show that Blau and Kahn's finding that the more compressed the wage structure the smaller the gender wage gap (Blau and Kahn, 1996), while pertinent to the comparison between the United States and other countries, cannot be generalised.

Once adjusted for the effect of the wage structure, the gender wage gap appears to be smallest in Greece, Italy and Spain, that is those countries that have a particularly low female employment rate. Indeed, the cross-country correlations reported in Table 2.17 confirm that the positive relationship between the female employment rate and the gender wage gap remains, and is slightly stronger, after adjusting for cross-country differences in the wage structure. The decomposition of the gender wage gap allows investigating this relationship more deeply. As shown in Table 2.17, two components appear to be particularly correlated with the female employment rate: gender gaps in educational attainment and in unobserved characteristics.²⁷ Female wage and salary employees tend to be more educated than their male peers in countries where there are fewer women in employment. Similarly, the gaps in unobserved characteristics between men and women (computed assuming that all the residual is due to gaps in unobserved characteristics and their remuneration rates) tend to be smaller in these countries. This seems to confirm the hypothesis put forward earlier in this section that the relationship between the employment rate and the gender wage gap is, at least partially, the result of a simple composition effect. While in countries with low female employment rates women less endowed with marketable productive characteristics remain outside the labour market (unlike their male peers), in other

Table 2.17. **Employment rates, occupational segregation and the gender wage gap**
Simple correlations with gender wage gap components^d

	Employment rate ^b	Dissimilarity index ^c
Hourly wage gap ^d	0.58*	0.45
Hourly wage gap, adjusted for the whole wage structure ^e	0.62**	0.43
Gaps in observed characteristics ^e	0.28	-0.02
of which: Education	0.69**	0.28
Gaps in unobserved characteristics ^e	0.72**	0.73**

a) * and ** mean significant at the 5% and 1% level, respectively.

b) Women in wage and salary employment divided by the female population aged 15 to 64 years.

c) Dissimilarity index calculated for the occupations at the 3-digit level of the ISCO-88 (COM). See Chart 2.3.

d) Percentage difference between male and female average wages.

e) The gender wage gap adjusted for the whole wage structure is obtained as follows: $\Delta \log \bar{W}_i^{adj} = \Delta \bar{X}_i \beta_k + \Delta \bar{\eta}_{ik}$, where i indexes countries, k denotes the benchmark country, $\bar{\cdot}$ and Δ refer to country averages and differences between men and women respectively, X stands for the vectors of observed characteristics, β for the vector of estimated coefficients from the male wage regressions (cf. Annex Table 2.B.1), and η for the theoretical residuals (that is, the difference between actual and predicted values from the wage regressions) that would be obtained in country i if it had the same residual wage structure as country k . The first term on the right-hand side corresponds to the gap in observed characteristics, while the second term on the right-hand side to the gap in unobserved characteristics.

Sources and definitions: See Annexes 2.A and 2.B, respectively.

countries these women manage to get a foothold into employment, although with low pay, thereby widening the gender wage gap.

The correlations presented in Table 2.17 also shed some light on the possible relationship between occupational segmentation by gender and the wage gap. The occupational controls used in this decomposition analysis, based on 15 major groups, are probably far too aggregate to capture fully the effect of occupational segmentation on the gender wage gap. If there is a significant effect of occupational segmentation on the gender wage gap that cannot be captured by the available occupational controls, this effect should then show up in the gap in unobserved characteristics. Indeed, Table 2.17 shows that there is a strong cross-country correlation between gaps in unobserved characteristics and the dissimilarity index (computed on 115 occupational categories) that was used in Section 2 to quantify the extent of occupational segregation by gender.²⁸ Furthermore, consistently with this hypothesis, Table 2.17 displays no significant correlation between the dissimilarity index and the other components of the gender wage gap. This evidence suggests, on a somewhat tentative basis, that the same differences in unobserved characteristics or discriminating practices that are at the origin of occupational segregation by gender also explain cross-country differences in the residual gender wage gap that are not attributable to cross-country differences in the wage structure.

C. The family wage gap

In the earlier sections of this chapter, the presence of children has been shown to play an important role in determining the labour market situation of women. Mothers are less likely to be employed and, once in employment, they work fewer hours and appear to be more occupationally segregated than childless women. Is there an additional labour market “penalty” associated with motherhood in terms of pay? The remainder of this section tries to answer this question.

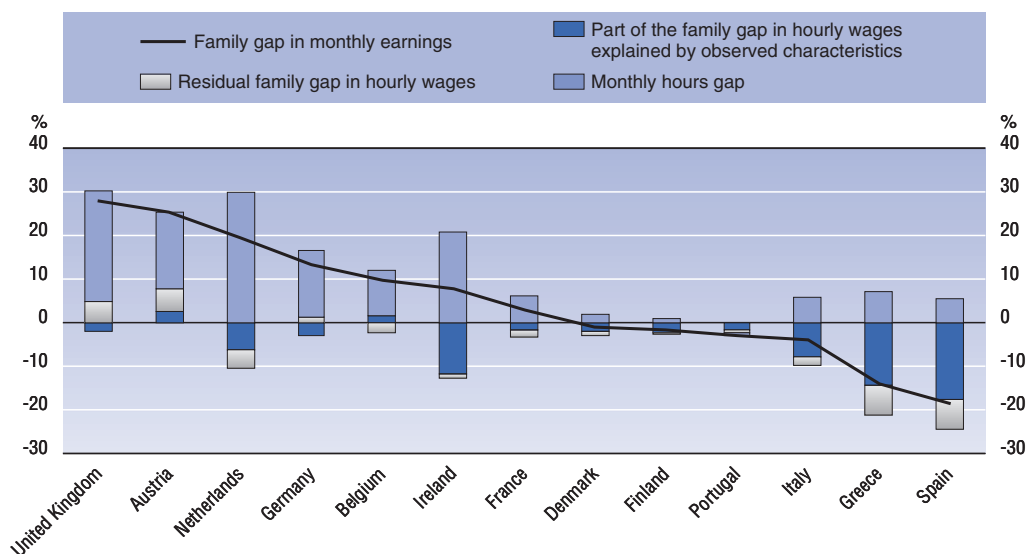
Three main theoretical explanations for a wage gap between childless women and women with children – *i.e.* the so-called family gap – have been put forward in the literature (see Waldfogel, 1995, and Section 3): *i)* there may be differences in life long accumulation of human capital reflected in actual labour market experience, job tenure, and

on-the-job training among women with and without children of the same age; *ii*) women with family responsibilities might prefer jobs that do not require overtime work or high work intensity; *iii*) mothers may be less motivated to work than childless women. There can also be a discrimination effect, whereby some employers offering high-pay jobs prefer not to hire mothers because they think that mothers are less committed to work or more costly than childless women.

In the analysis that follows, the family wage gap is defined as the average wage difference between childless women and mothers expressed as a percentage of the average wage of childless women. Similarly, the family gap in monthly earnings is defined as the average difference in monthly earnings between childless women and mothers expressed as a percentage of the average earnings of childless women. Chart 2.8 shows that monthly earnings of childless women are often higher than those of women with children (about 5% on average), although cross-country variation is quite large. As seen in Section 2, childless women spend on average considerably more time at work than women with children, mainly because women with children tend to work part-time more frequently. As a consequence, in countries where there is a substantial family gap in monthly earnings to the disadvantage of women with children (*e.g.* Austria, Belgium, Germany, Ireland, the Netherlands and the United Kingdom), the gap in hours worked is the main explanatory factor. Only in Austria and the United Kingdom, does there appear to be a family gap in gross hourly wages. In five countries (Greece, Ireland, Italy, the Netherlands and Spain), hourly wages for mothers are more than 10% higher than for women without children.

Chart 2.8. **A decomposition of the family gap in monthly earnings^{a, b}**

Women aged 20 to 54 years



a) Percentage difference between average gross monthly earnings of childless women and women with children.

b) The family gap in monthly earnings is decomposed as follows: $\Delta \log \bar{Y}_i = \Delta \bar{X}_i \beta_i + \Delta \bar{\varepsilon}_i + \Delta \log \bar{H}_i$, where i indexes countries, $\bar{\cdot}$ and Δ refer to country averages and gaps between childless women and mothers respectively, Y stands for gross monthly wages, X for the vector of observable endowments and characteristics, β for the vector of estimated coefficients from each country-specific male hourly-wage regression (see Annex Table 2.B.1), ε for the unexplained residuals, and H for hours worked per month.

Sources and definitions: See Annexes 2.A and 2.B respectively.

Once the effects of hours worked and observed characteristics are netted out, a substantial family wage gap in favour of childless women is still observed only in Austria and the United Kingdom (Chart 2.8). These gaps could reflect greater differences between actual and potential experience or lower effort for mothers than for childless women in these two countries. Alternatively, they might reflect discriminatory treatment by employers, not justified by motivation or work attachment. Overall, these findings on the family wage gap seem consistent with the existing literature, in which a significant impact of children on women's pay is generally found in the United Kingdom and the United States (see Korenman and Neumark, 1992, and Waldfogel, 1995, 1998) but little effect is found in countries of continental Europe (Harkness and Waldfogel, 1999, for Germany, Finland and Sweden, and Datta Gupta and Smith, 2002, for Denmark) with the notable exception of Austria (Gregoritsch *et al.*, 2000). The inclusion of actual instead of contractual hours, however, makes comparisons with some other studies (*e.g.* Waldfogel, 1995 and Datta Gupta and Smith, 2002) rather difficult.

A lack of evidence of a family wage gap based on the unadjusted data shown in Chart 2.8 may conceal a pay penalty associated to motherhood once the effects of differences in productive characteristics and of the wage structure are taken into account. Decomposing the family wage gap on the basis of the same methodology used above for the gender wage gap helps to clarify this issue. While the effect of the wage structure on the family wage gap is small in all countries, mothers appear to be better endowed with productive characteristics than childless women in most countries (see Annex Tables 2.B.3 and 2.B.4). This outcome likely reflects the fact that women with children are on average older, thereby with more experience and longer tenure, and more advanced in their career. This latter hypothesis is confirmed by a sensitivity analysis, where the decomposition has been implemented on smaller samples of women belonging to the narrower age groups (using age classes no wider than 10 years). In these cases, the contribution of observed and unobserved characteristics to the family gap becomes positive in most countries, especially as regards to gaps in occupations, suggesting that childless women tend to work in higher-pay occupations than mothers of the same age, thus confirming the findings of Section 3.

Overall these results show that women with children are not unambiguously at a disadvantage in terms of hourly wages. Nevertheless, a substantial total earnings gap exists in about half the countries examined because reconciling work and family results in mothers spending less time at work. Seen from this perspective, policies directed at facilitating and increasing labour market participation of mothers can also be effective in reducing the family gap in earnings.

Conclusions

The gender gap in employment has narrowed over the past two decades in all OECD countries, as more women pursued working careers. However, a substantial employment gap remains in many countries and it exceeds 25 percentage points in Greece, Italy, Mexico and Spain, where the share of women in employment is still only about 40%. Furthermore, these headcount measures of employment may overstate the progress achieved, since they take no account of the fact that many women work on a part-time basis. OECD labour markets also continue to be characterised by a strong gender segregation that appears to result in an under-utilisation of women's cognitive and leadership skills. Similarly, women continue to earn less than men, even after controlling for observable characteristics that influence productivity. International differences in the overall wage

structure and women's employment rates provide proximate explanations of the cross-country variation in the gender wage gap. In particular, larger wage gaps are found in countries where less educated and less skilled women are more integrated into the labour market. However, it is difficult to identify the most important economic and social factors underlying these associations.

These results suggest that some groups of women may confront especially difficult obstacles to achieving equal participation in the labour market. In this chapter, two factors have been shown to play a large role in determining the labour market situation of women: their level of education and whether they have children. Less educated women and mothers of two or more children are considerably less likely to be in employment than are women with a tertiary qualification or without children. There are, however, wide differences across OECD countries in the impact of education and motherhood on female employment patterns. The labour market integration of low-educated women is very low in Ireland, Italy and Spain, whereas in Japan and Korea employment rates do not vary with qualification level. The reduction in employment rates and/or the volume of hours worked associated with motherhood is especially pronounced in Australia, Germany, Ireland, the Netherlands, New Zealand, Switzerland and the United Kingdom, whereas employment rates in the Nordic countries are always well above average, irrespective of the presence of children.

The labour market "penalty" associated with low education and motherhood manifests itself in another way. The division of the labour market into a female and a male segment is more pronounced for less educated workers and for working parents, than for, respectively, workers with a tertiary qualification and workers without children. Whereas, for the low-educated, the tendency to be in gender-segregated occupations affects both women and men, differences in the occupational distribution of women with and without children account for most of the heightened occupational segmentation of parents versus non-parents. Except for a few countries, there is little evidence of an additional wage penalty attached to motherhood. Nevertheless, the total earnings of mothers are considerably smaller, all other things equal, than those of their childless peers because mothers tend to spend less time at work. The fact that child-rearing – as well as caring for elderly or disabled family members and other unpaid household work – is still considered to be mainly the responsibility of women appears to play a major role in the persistence of large gender differences in labour market outcomes. However, less educated and less skilled women also appear to face particular difficulties, whether or not they are raising children.

This is the summary picture that emerges from the chapter's assessment of how women are faring in the labour market. The empirical description and diagnosis offered here is not sufficient for generating policy prescriptions. However, it does provide an essential factual background and some orientation for the reassessment of policies to further gender equality. A good way to begin building the bridge to policy is to ask if the gender differences in labour market outcomes documented in this chapter are a problem and, if so, for whom?

Most obviously, these inequalities may be a problem for women. Today, women prepare for work and value having a career more than before. However, if women meet their increased aspirations for paid work by combining employment with continued responsibility for child care and housework, and if gender equality in the quality of employment is not guaranteed, then it can be questioned whether increased employment actually raises women's well-being. Much of the current focus in employment policy is on increasing

employment among women. Public policy should address remaining barriers to working faced by many women, notably, by providing an adequate work-family reconciliation package. However, policy initiatives to promote wider occupational choice and more equal wages may also be desirable.

Gender equality is not only a “women’s affair”; it is also a matter of household welfare. The implications of female non-employment and sub-employment for the well-being of their families is complex, because it depends on family structure and the degree of income sharing among household members. However, the increased risks of family dissolution and – in some OECD countries – high male unemployment highlight the importance of women’s earnings in households’ and children’s well-being. Governments cannot simply rely on the traditional family models, such as the breadwinner father and the caring mother, to assure household welfare. Without prejudging the life-course choices of women and their families, it is incumbent on governments to eliminate barriers to work confronting women that stem from inadequate work-family reconciliation policies or labour market discrimination.

The employment of women is also of vital importance for collective well-being. Women, who are more and more educated, constitute a valuable and apparently under-utilised labour reserve. Increasing women’s presence in the labour market, both quantitatively and qualitatively (*i.e.* in terms of the range of jobs that they hold), would provide a sounder base for funding welfare states in the context of an ageing society. Concerns are sometimes expressed that greater integration of women into paid employment would result in undesirably low fertility. However, recent experience suggests that there is no intrinsic incompatibility between promoting female participation in the labour market and ensuring that there are an acceptable number of births. Indeed, the decline in fertility rates has been particularly pronounced in several of the OECD countries where female employment rates remain the lowest (OECD, 2001*b*).

In the current policy debate, much of the attention has focused on public support to working mothers. A generous work-family reconciliation package is certainly indispensable, but it does not appear to be sufficient. The analysis in this chapter shows that the labour market penalty attached to low education is even higher for women than the penalty attached to motherhood. Less educated men are also disadvantaged in the labour market and part of the answer lies in improved education and training opportunities for low-skilled workers in general. However, women with low earnings potential may face additional barriers, potentially including even more limited employment opportunities, unfavourable treatment by tax and benefit schemes, and low expectations as to the possibility and benefits of combining work and family. A comprehensive approach to improving women’s employment opportunities is most likely to benefit women, households and society as a whole.

Notes

1. In fact, the relatively strong reduction of the employment gender gap in Sweden during 1980-2000 (as displayed in Chart 2.1) is entirely due to a sizeable reduction of employment rates for men rather than to employment gains for women.
2. Although unemployment is generally higher among women with less than upper secondary education, most of the employment gap between women at the two levels of educational attainment reflects different activity rates (see Table D of the Statistical Annex).
3. The picture is different at the level of advanced research qualifications. On average in OECD countries, nearly two-thirds of all graduates at this level are men (OECD, 2001a).
4. In 1999, in the OECD, women were awarded 83% and 67%, respectively, of tertiary qualifications in the technically-oriented (Type-B) and the more theoretical (Type-A) health and welfare programmes, and about 70% of tertiary qualifications in the humanities, arts and education. Women accounted for less than 22% of engineering, manufacturing and construction and only 31% of mathematics and computer science Type-A programme qualifications. On the other hand, the gender gap in advanced research qualifications can be observed in all fields of study and is even more pronounced in the humanities and medical sciences, the fields of study with the highest proportions of women among first level university graduates in all countries (OECD, 2001a).
5. Brown and Corcoran (1997), conducting a study on data for the United States, find that gender differences in field of study account for a significant part of the male-female wage gap among university graduates, but not among women and men with less schooling. They also find some evidence that the reward for taking male majors is larger for men than for women. However, controlling for gender dominance of field of study only explains a small fraction of the difference in earnings. Hecker (1998) estimates that the gap in earnings in the United States would be reduced by approximately one-third if women had the same distribution by age, degree level and field of study as men. Abbott, Finnie and Wannell (2000) look at the factors underlying the differentials in earnings growth rates for male and female Bachelor's graduates in Canada and find that they can be traced mainly to hours worked and job characteristics, the field of study playing only a minor role.
6. Test score results from the International Adult Literacy Survey (IALS) do not point to any significant difference between women and men in terms of any of the three literacy scales (document, prose and quantitative).
7. The impact of children on participation is likely to vary by age of child, but evidence on this is not shown here.
8. The incidence of part-time work among men has increased over the past ten years in some countries (*e.g.* Denmark, the Netherlands, the United Kingdom), but is mostly used by young men to combine work and study.
9. The role of skill depreciation in the relationship between work interruptions and subsequent wages has been explored in Edin and Gustavsson (2001), who conclude that a substantial part of the observed wage penalties for work interruptions are due to depreciation of skills. However, other explanations for the negative association between work interruptions and wages are also plausible, including various forms of signalling theories.
10. The share of highly-educated women who are continuously in part-time employment, as well as the share of those who, over the observation period, combine part-time and full-time work generally increase in the presence of children (the latter share can be calculated as the difference between the share of the continuously employed and the sum of the shares of the continuously full-time and continuously part-time employed).
11. Waldfogel *et al.* (1999) investigate the effects of family leave coverage on women's retention after child birth in Japan, the United Kingdom and the United States, countries characterised by very diverse maternity and child-care leave coverage. They find that family leave coverage has a very strong, positive effect on young women's retention with their firms after child birth. The wage effects of family leave policies are not explored in the paper, but the authors note that the direction of wage effects is unclear a priori. Maternity leave policies may result in lower pay for the women involved due to the loss in work experience, although such effects are likely to be small if the periods of leave are short. Conversely, if maternity

- leave allows women to return to their previous employer, leave policies may protect women's wages by raising their levels of experience and tenure and by maintaining good matches.
12. In all OECD countries, women are less likely than men to be self-employed. In turn, they tend to carry out unpaid family work more often than men. Wage and salary employment, however, is the predominant form of work, for both women and men, in all countries. There are several possible reasons for the low share of women in self-employment. Women may have less access to credit, capital, land and materials, which may be necessary to start and maintain a business. Also, they may face time constraints because of their family responsibilities. Differences in cultural attitudes towards entrepreneurship, risk-taking and women's role in society may represent additional barriers faced by women.
 13. There are major problems in comparing data on employment by occupation across countries. First, each country or group of countries applies a different system of occupational classification (see Annex 2.A for a description). Second, the occupational structure of the labour force differs across countries. Third, even when the countries follow the same occupational classification scheme, data may not be completely comparable as coding rules and procedures may differ. Detecting this source of variation in a systematic way is very difficult. For this reason, Elias (1997) concludes that comparisons between countries using the ISCO-88 occupational classification are likely to be reasonably reliable only if made at the sub-major group level (*i.e.* the 2-digit level).
 14. This classification corresponds to 1 digit of the ISIC Rev. 3 classification (United Nations, 1990) for the goods-producing sectors and utilities and the Elfring's classification (Elfring, 1989) for the service sectors (see OECD, 2000, for details).
 15. The dissimilarity index is calculated as follows: $ID = \frac{1}{2} \sum [F_i/F - M_i/M]$. Anker (1998) interprets this as "the sum of the minimum proportion of women plus the minimum proportion of men who would have to change their occupations in order for the proportion female to be identical in all occupations (and the same proportion of men in every occupation but with a different value)". The ID has a minimum value of 0 (no segregation; same percentage female and male in each occupation) and a maximum value of 1 (complete segregation; each occupation is completely female or completely male). Another index of inequality that is often used in the measurement of *changes over time* in occupational segregation by gender is the marginal matching index. For a definition and an explanation of this index, see Anker (1998).
 16. There have been a large number of empirical studies of the impact of occupational segregation, measured in various ways, on the gender wage gap. Bayard *et al.* (1999), Macpherson and Hirsch (1995) and many others have explored the relationship between the female density in occupations and individual wages. Grimshaw and Rubery (1997) have explored the connection between occupational concentration and the gender pay gap. Reilly and Wirjanto (1999) have examined the effect of the proportion of women in the establishment on the male/female wage gap.
 17. In attempting to establish the comparability of the mapping from national occupational classifications to ISCO-88 (COM) for European Union countries, Elias and Mc Knight (2001) note that "Managers are defined in most European countries in line with the ILO definition, as those 'who plan, direct and co-ordinate the policies and activities of enterprises or organisations, or their internal departments or sections'". In revising its national occupational classification the United Kingdom made a significant effort to "tighten" this definition of the managerial categories. However, it remains the case that a significantly larger proportion of occupations remains defined as managerial in the United Kingdom than in most other countries of the European Union. Second, the "owner-manager" is classified within this major group in some countries, or to the relevant occupation in which they work in other countries. This has caused significant problems with occupations that involve a significant proportion of managerial tasks, such as "shopkeeper".
 18. For example, as men are more likely than women to work overtime hours, the gender pay ratio for Sweden, calculated on the basis of contractual hours, will be under-estimated compared to that of the other countries where overtime hours are taken into account.
 19. In the mid-1970s, the Danish government tried to restrict public-sector wage growth in order to reduce wages in the public sector relative to wages in the private sector. Rosholm and Smith (1996) show that this policy not only succeeded in its stated objective, but also widened the gender wage gap because women are much more likely than men to work in the public sector.
 20. According to this explanation, women and men are imperfect substitutes in the labour market and the gender differential is lower when women are in shorter supply relative to the level of the demand for women (Blau and Kahn, 2001).
 21. For this latter reason, policy action in some countries (*i.e.* Australia) has focused on pay differences that exist across different occupations that are deemed to be of equal value or "comparable worth", whereas many other countries have promoted policies and procedures designed to combat job and promotion discrimination ("affirmative action").

22. It might be argued that the comparison of earnings of males and females should take account of the fact that the probability of having a wage and salaried job is not the same for women and men, using the 2-stage Heckman procedure. However, as argued by Manski (1989) and Blau and Kahn (1996, 1997), the 2-stage Heckman procedure may lead to large errors in the presence of mis-specification of the choice equation.
23. This problem is mitigated by the inclusion of actual tenure and occupations in the regressions, especially in countries where returns to tenure are substantial.
24. This latter assumption is also extreme. Indeed, different dispersions of the male wage residual across countries might reflect cross-country differences in the distribution of unobserved endowments rather than their remuneration rate. If this were the case, residual dispersions would not be informative for the purpose of identifying the remuneration rates for unobserved endowments.
25. Furthermore, it must be noted that although differences in observed productive characteristics are generally considered legitimate sources of earnings inequality, they could also reflect the adaptation of women to the biases of the labour market and/or to so-called “pre-market discrimination”, including cultural values and attitudes that discriminate against women. Even in this area, therefore, the distinction between discrimination, constraints and choice can be blurred.
26. See Annex 2.B for the supporting evidence. Note that the standard deviation of the estimated coefficients of occupations in the male wage regressions (Table 2.B.1) can be seen as a summary measure of dispersion in occupational wage premia. Conversely, women are more concentrated in occupations characterised by low wages in the average benchmark country when the decomposition shows a greater-than-average gap in occupations (evaluated at the remuneration rates of the benchmark country, Table 2.B.2).
27. Recall that the second term on the right-hand side of equation [2] – when restricted only to educational variables – represents the contribution of cross-country differences in gender gaps in education to the gender wage gap. Similarly, the fourth term on the right-hand side represents the impact of cross-country differences in gender gaps in unobserved characteristics on the gender wage gap.
28. More rigorously, if there is a significant effect of occupational segregation on the gender wage gap, this should result in a significant correlation between the dissimilarity index and the sum of the gap in unobserved characteristics and the observed occupational gaps (evaluated at the remuneration rates of the benchmark country). Indeed, this correlation is equal to 0.67 in this sample.

Annex 2.A

Definitions and data sources

Sections 1 and 2

The cross-sectional analysis of employment rates by gender, age, education and presence of children are based on data from household and labour force surveys. For EU countries (except Sweden), the Czech Republic, Hungary, Iceland, Poland and the Slovak Republic, the data were provided by Eurostat based on the *European Union Labour Force Survey*. For Australia, the source is the *Labour Force Survey* and the Transition from Education to Work supplement as provided by the Australian Bureau of Statistics. For the United States, data were estimated by the OECD based on microdata from the Outgoing Rotation Group file of the *Current Population Survey*. For the remaining countries, the data are issued from national labour force surveys as provided by the national authorities. Data are complemented by the *OECD Labour Force Statistics* and by data in OECD (2001a) whenever needed (e.g. for the time series data in Charts 2.1 and 2.2 and information on the incidence of part-time work in Japan). Employment rates by presence of children for Denmark and Finland were estimated by the OECD based on the 5th wave of the European Community Household Panel (ECHP).

Part-time work is defined in terms of usual weekly hours in the main job below 30 (35 in Australia) or, for workers whose usual hours of work vary, if they declare themselves to be part-time workers.

Children are individuals aged under 15 years of age, except for New Zealand and Sweden, where they are aged under 16 years of age. The presence of children is proxied by the presence of children in the respondents' household rather than in a particular family group within the household. Adults with children are those who are reference persons or spouses of the reference person whose household contains children. For Canada, on the other hand, information on women and men with children refers to parents proper, but it also only relates to the reference person in the household or his/her spouse. For New Zealand and Sweden, the data relate to the presence of children within the respondent's family group and children are own-children, foster-children and children to husband/wife/cohabitant who live in the same household as the respondent. Finally, in Australia, the presence of children refers to the children in the respondents' households and information on the relationship between the adults and the children is not given.

The longitudinal data on the accumulation of employment experience (Tables 2.7 to 2.9) and career progress (Table 2.14) are OECD estimates based on data from five waves of the European Community Household Panel (ECHP), for European Union countries. Estimates for the longer observation period – six years for Canada and eight years for Germany, the United Kingdom and the United States – are based on data from the Cross-National Equivalent Files (CNEF), that incorporate data from the Canadian Survey of Labor and Income Dynamics (SLID), the German Socio-Economic Panel (GSOEP), the British Household Panel Survey (BHPS) and the United States Panel Study of Income Dynamics (PSID).

Section 3

The data are issued from household and labour force surveys that classify workers according to the job titles given by the survey respondent. For each country, the analysis draws on employment data that classify occupations at the one-, two- and three-digit levels of the relevant occupational classification.

For EU countries (except Sweden), the Czech Republic, Hungary, Iceland, Poland and the Slovak Republic, the data were provided by Eurostat based on the *European Union Labour Force Survey*, that classifies occupations according to the ISCO-88 (COM), which is the European Union variant of the new International Standard Classification of Occupations (ISCO-88).

For the United States, data were estimated by the OECD based on microdata from the Outgoing Rotation Group file of the *Current Population Survey*, that tabulates data for occupations according to the Census classification system, based on the 1980 SOC.

For Australia, Canada, Korea and New Zealand, the data are issued from national labour force surveys as provided by the national authorities. The following occupational classifications are used: for Australia, the Australian Standard Classification of Occupations (ASCO, 2nd edition); for Canada, the Standard Occupational Classification (SOC 91); for Korea, the Korean Standard Occupational Classification (KSOC); and for New Zealand, the New Zealand Standard Classification of Occupations 1995 (NZSCO95).

For each country or group of countries, the number of categories at the 1-, 2- and 3-digit levels of the occupational classifications, excluding the Armed Forces, is the following:

	1-digit	2-digit	3-digit
ISCO-88 (COM) – European countries	9 major groups	26 sub-major groups	115 minor groups
ASCO (2nd edition) – Australia	9 major groups	35 sub-major groups	81 minor groups
SOC (91) – Canada	10 broad groups	47 major groups	139 minor groups
KSOC – Korea	9 major groups	..	..
NZSCO95 – New Zealand	9 major groups	24 sub-major groups	96 minor groups
SOC – United States	23 major groups	107 minor groups	452 broad occupations

In Tables 2.10 and 2.13, only data for the countries that use a classification system compatible with ISCO-88 and for which establishing the correspondence was feasible with the data available have been shown. ISCO 88 was developed by the International Labour Office in Geneva during the mid-1980s with the aim to provide a basis for international comparisons of occupation statistics between Member countries and to provide a conceptual model for the development of national occupational classifications. The classification has been adopted, or is in the process of being adopted, by a large number of countries. The Australian ASCO and the NZSCO95 for New Zealand align closely with ISCO-88, whereas those for Canada and the United States do not. Statistics Canada, however, created the 10 broad occupational categories of ISCO-88 by grouping occupational groups at various digit levels of SOC 91.

Section 4.A

For information on earnings and hours worked, the data for European countries were estimated by the OECD using microdata from the 5th wave of the *European Community Household Panel* (ECHP) and relate to 1998. Hourly earnings refer to gross monthly earnings in the main job divided by 52/12 and then by usual weekly hours of work for employees working for at least 15 hours a week. Overtime pay and hours are included. N.B.: the definitions and data sources used in the decomposition of the gender and family wage gap in Sections 4.B and 4.C are described in Annex 2.B.

Australian data were derived from the August 2000 *Labour Force Survey* and the supplementary survey “Employee Earnings, Benefits and Trade Union Membership”. Average gross hourly earnings are calculated using total weekly earnings divided by actual hours worked.

The data for Canada were derived from the 2000 Labour Force Survey. Earnings refer to wages and salaries of employees in their main job, including bonuses but excluding overtime pay. Hourly earnings are adjusted by usual hours of work.

For New Zealand, the source is the New Zealand Income Survey which is run annually as a supplement to the *Household Labour Force Survey* in the June quarter. Data refer to the June 2001 quarter. Information on earnings includes actual and usual wages and salaries (including ordinary time, overtime and other income) for the main job and up to two other jobs. The earnings measure used in the tables is average usual hourly earnings from all wage and salary jobs.

For Sweden, the data were provided by Statistics Sweden based on the Statistics Yearbook of Salaries and Wages, 2000. The data come from five different sources, three of which pertain to the public sector and cover the entire population; the other two sources are based on enterprise sample surveys covering the private sector. The wages are gross wages and include agreed bonuses but exclude overtime and profit-sharing. In the public sector the hourly wages were calculated by dividing the monthly wage by 165, the average worked hours per month. In the private sector the hourly wages were calculated by dividing the total wage by contractual worked hours (overtime hours are excluded).

For Switzerland, hourly earnings were calculated by the Swiss Statistical Office based on the 2001 *Enquête de la Population Active* by dividing gross annual earnings by 52 and then by usual weekly hours of work.

Data for the United States were estimated by the OECD based on microdata from the Outgoing Rotation Group file of the *Current Population Survey*, 1999. Hourly earnings refer both to hourly earnings of employ-

ees paid by the hour or to usual weekly earnings of employees divided by their usual weekly hours of work. In all cases, the data refer to gross earnings.

Finally, the following definitions and sources have been used in Table 2.16:

- Australia: weekly earnings of full-time employees, all hours (including overtime). Source: *Survey of Average Weekly Earnings*, ABS.
- Canada: annual earnings for full-year, full-time workers, including net income from self-employment. Paid overtime is included. Source: *Income Trends in Canada*, 1980-1999, Statistics Canada.
- France: Annual earnings of full-time workers, net of social security contributions. Source: *Séries longues sur les salaires*, INSEE.
- Japan: gross monthly earnings of regular, full-time employees (including overtime pay plus 1/12th of annual bonuses). Source: OECD Earnings Database.
- Korea: gross monthly earnings of full-time workers. Source: OECD Earnings Database.
- Portugal: monthly earnings for full-time workers in all sectors except public administration and agriculture. Source: *Enquête par Classes de Rémunération* for 1975 and *Tableaux du Personnel* for the other years, national submission.
- Sweden: gross annual earnings of full-time, full-year workers. Source: OECD Earnings Database.
- United Kingdom: average gross weekly earnings of full-time employees whose pay for the survey period was unaffected by absence. Source: *New Earnings Survey*, ONS.
- United States: gross hourly earnings for all workers. Source: Mishel *et al.* (2001).

Annex 2.B

**Sources, definitions and methods of the decomposition
of the gender and family wage gap**

All data used in the decompositions of the gender and family wage gap are individual data from the *European Community Household Panel* (ECHP), except when differently specified. In order to avoid excessive reduction in sample size due to missing values for covariates, instead of using the 5th wave of the ECHP as in the descriptive analysis of Section 4.A, the 4th wave was used for Austria, Ireland, Italy, the Netherlands, Spain, and the United Kingdom and the 3rd wave for Belgium, Denmark, Finland, France, Germany, Greece and Portugal.

Gross hourly wages are obtained as gross monthly earnings in the main job divided by 52/12 and then by usual weekly hours of work for employees working for at least 15 hours a week and not in education. Over-time pay and hours are included. Three levels of educational attainment have been considered (less than upper secondary education, upper secondary education and tertiary education). Potential experience is defined as age minus age of first entry into the labour market after leaving full-time schooling. Since data on the age at which individuals left full-time schooling are not available, this information is proxied by 5 plus an estimate of the years of education necessary in each country to attain each specific educational level as in *OECD, Education at a Glance*, 1997. Tenure is obtained as the difference between the current year and the year of start of the present job. Fifteen occupational groups have been considered, the choice being constrained by data availability. They correspond to an intermediate level of aggregation between 1 and 2 digits of the ISCO-88 (COM) classification. The list of occupations is as follows (with classification codes in parentheses): legislators, senior officials and managers (1); physical, mathematical, engineering, life science and health professionals (21 + 22); teaching professionals (23); other professionals (24); physical, mathematical, engineering, life science and health associate professionals (31 + 32); teaching and other associate professionals (33 + 34); clerks (4); personal and protective services workers (51); models, salespersons and demonstrators (52); skilled agricultural and fishery workers (6); metal, machinery, precision, handicraft printing and related trades workers (72 + 73); extraction and building trades workers, other craft and related trades workers (71 + 74); plant and machine operators and assemblers (8); sales and services elementary occupations (91); agricultural, fishery and related labourers, labourers in mining, construction, manufacturing and transport (92 + 93).

The decompositions undertaken in Section 4 involve two steps. In the first step, market prices for observed characteristics are estimated using male wage regressions. In the second step, a decomposition of cross-country differences in the gender or family wage gap is implemented using these price estimates. Although market prices are estimated on full-time individuals excluding outliers (see below), the decompositions of the gender wage gap and the family wage gap are implemented on all wage and salary employees of the specified age class, except apprentices and students.

Male wage regressions are based on individual data for wage and salary male workers aged 20 to 64 years and working full-time (excluding apprentices and students). Both country-specific and pooled specifications are estimated (the latter to be used as a benchmark). The natural logarithm of gross hourly wages is used as the dependent variable. Independent variables are education, potential experience, potential experience squared, occupations, tenure, type of contract and public/private sector. Potential experience is included as a continuous variable. Tenure is aggregated into five categories (0-1 years, 2-5 years, 6-9 years, 10-14 years and 15 or more years), and correspondingly four dummy variables are included in the regression (one excluded for identification purposes). The use of dummy variables for tenure reduces the “noise” due to the derivation of tenure as a difference between calendar years (for example, a person surveyed in January and hired in December of the previous year turns out to have greater tenure than a person hired in January and surveyed in December of the same year). Furthermore, two dummy variables are used for education, one for public/private sector job, one for the type of contract and fourteen for the occupational group (one category for each group is excluded for identification purposes). The reference group in the estimated equations is composed of legislators, senior officials and managers (ISCO-88 major group 1) in the private sector with tertiary education, tenure less or equal to 1 year, and without a permanent contract. The pooled specification includes country dummies as well.

To control for measurement error and avoid the estimates for market prices for observed characteristics being driven by specific outliers and influential observations, a two-step estimation procedure is implemented. First, country-specific equations are estimated with OLS. Then, DFITS and covariance ratio statistics are computed for each observation and all the specifications (including the pooled specification) are re-estimated after excluding those observations for which both statistics trespass their respective standard cut-off values (see Chatterjee and Hadi, 1988). Last-step regression results are presented in Table 2.B.1. Estimated coefficients for occupational groups are not presented, but the standard deviation of these coefficients is reported as a summary measure of the dispersion of occupational premia.

As discussed in Section 4, the J-M-P decomposition can be written as follows:

$$\Delta \log \bar{W}_i - \Delta \log \bar{W}_k = (\Delta \bar{X}_i - \Delta \bar{X}_k) \beta_k + \Delta \bar{X}_i (\beta_i - \beta_k) + (\Delta \bar{\eta}_{ik} - \Delta \bar{\varepsilon}_k) + (\Delta \bar{\varepsilon}_i - \Delta \bar{\eta}_{ik}), \quad [\text{B1}]$$

where i and k index countries (with k denoting the benchmark country), $\bar{\cdot}$ and Δ refer to country averages and differences between men and women, respectively, W stands for gross hourly wages, X for the matrix of observable endowments and characteristics, β for the vector of estimated coefficients from the male regressions, ε for the residuals from these regressions and η for the theoretical residuals that would be obtained in country i if it had the same residual wage structure as country k . The latter are obtained by calculating for each individual of country i the residual that an individual with the same ranking position with respect to the distribution of male full-time wage and salary employees would have in the benchmark country k . When the J-M-P decomposition is applied to the family gap, Δ refers to differences between childless women and mothers. Still, estimated coefficients from the male wage regressions are used as estimates for market prices and, consistently, the distribution of male full-time wage and salary employees is used as base for the computation of the theoretical residuals.

The effect of country fixed effects has been netted out from the wage gap in the benchmark country before implementing the decomposition described in equation [B1]. This way, the cross-country average of each term of the equation is approximately equal to zero. The first term on the right-hand side represents the contribution of cross-country differences in gaps in observed characteristics to the gender (or family) wage gap, netting out the effect of cross-country differences in market prices for these characteristics that is reflected in the second term. The sum of the third and the fourth term represents cross-country differences in the residual and is split into the effects of cross-country differences in unobserved characteristics (third term) and cross-country differences in their market prices (fourth term). Hence, the sum of the second and fourth terms represents the total effect of cross-country differences in the wage structure, for given gender gaps in characteristics. Conversely, the sum of the first and third terms represents cross-country differences in the gender (or family) wage gap adjusted for the whole wage structure. Consistent with this terminology, Tables 2.B.2 and 2.B.3 present full outcomes from the decomposition of the gender wage gap and the family wage gap respectively. Moreover, Table 2.B.4 presents the decomposition for the benchmark country for reference.

Table B.1. Results of estimations of wage regressions

Dependent variable: log of gross hourly wages of full-time male wage and salary workers aged 20-64 years (excluding apprentices)^a

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	United Kingdom	Benchmark ^b
Upper secondary education	-0.19**	-0.17**	-0.08**	-0.13**	-0.17**	-0.16**	-0.13**	-0.21**	-0.24**	-0.20**	-0.42**	-0.13**	-0.10**	-0.14**
Less than upper secondary education	-0.31**	-0.25**	-0.12**	-0.19**	-0.26**	-0.13**	-0.24**	-0.31**	-0.33**	-0.26**	-0.62**	-0.27**	-0.20**	-0.25**
Potential experience	0.02**	0.01**	0.02**	0.02**	0.02**	0.01	0.02**	0.03**	0.02**	0.03**	0.03**	0.02**	0.03**	0.02**
Potential exp. squared	-0.00**	-0.00	-0.00**	-0.00**	-0.00**	-0.00*	-0.00**	-0.00**	-0.00**	-0.00**	-0.00**	-0.00**	-0.00**	-0.00**
Tenure 2-5 years	0.06*	-0.00	0.02	0.06*	0.14**	0.05**	0.08**	0.08**	0.02	0.00	0.02	0.03	0.06**	0.05**
Tenure 6-9 years	0.05	0.12**	0.04	0.10**	0.19**	0.16**	0.11**	0.09**	0.07**	0.06**	0.03	0.14**	0.07**	0.10**
Tenure 10-14 years	0.11**	0.14**	0.08**	0.15**	0.19**	0.27**	0.18**	0.10*	0.08**	0.08**	0.05	0.14**	0.06	0.13**
Tenure 15+ years	0.15**	0.19**	0.07**	0.13**	0.29**	0.30**	0.25**	0.20**	0.12**	0.08**	0.15**	0.29**	0.08*	0.19**
Public sector	-0.08**	-0.01	-0.04**	0.02	0.10**	-0.05**	0.11**	0.13**	0.06**	0.01	0.16**	0.11**	0.09**	0.05**
Permanent contract	0.09**	0.05	0.08**	0.10**	0.04	0.07*	0.12**	0.10**	0.10**	0.16**	0.08**	0.13**	0.15**	0.12**
Standard deviation of the estimated coefficients of occupations ^c	0.20**	0.19**	0.15**	0.18**	0.23**	0.21**	0.13**	0.22**	0.16**	0.15**	0.34**	0.26**	0.24**	0.20**
Adjusted R-squared	0.434	0.482	0.495	0.476	0.551	0.369	0.472	0.570	0.516	0.497	0.605	0.596	0.416	0.457
Number of observations	1 509	1 074	1 235	1 564	1 881	2 499	1 364	1 134	2 309	2 219	2 049	2 457	1 887	23 181
Number of excluded outliers ^d	35	32	44	35	65	62	30	34	67	37	64	67	36	608

a) Each equation is estimated with OLS, including a constant and controls for 15 occupational groups, and excluding influential outliers. The reference group is composed of individuals in the private sector with tertiary education, tenure less or equal to 1 year, and without a permanent contract. *, ** denote significance at the 5% and 1% level, respectively.

b) Pooled regression that includes also country dummies. The adjusted R-squared refers to the within-country variance explained by the model. The excluded observations are those excluded in country-specific regressions.

c) The significance levels reported refer to the F-test on the joint significance of the coefficients of occupations.

d) Influential outliers excluded on the basis of the DFITS statistics and the Covariance Ratio statistics.

Source: Annex 2.A.

Table 2.B.2. **Decomposition of cross-country differences in the gender wage gap**
 Percentage-point difference from the gender wage gap in the benchmark country explained by each component^{a, b}

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	United Kingdom
Gaps in observed characteristics	4.9	-2.0	-1.7	-2.6	2.8	1.5	0.7	1.7	-2.7	7.4	-0.9	-1.4	2.8
Education	1.7	-1.3	0.5	-0.4	0.4	1.9	-2.1	-0.4	-0.2	1.8	-0.6	-2.0	2.7
Potential experience	0.0	0.8	-1.0	-1.6	-0.5	-0.4	2.6	0.4	0.4	1.3	0.6	1.6	-1.7
Tenure	0.9	-0.1	-1.6	-1.7	0.3	0.3	0.7	1.4	-0.5	1.2	-0.4	0.2	-0.8
Occupations	2.1	-2.1	1.6	1.3	2.2	-0.2	-1.1	-1.1	-2.2	2.7	-0.7	-1.4	2.7
Public sector	0.3	0.3	-0.8	-0.5	0.1	-0.2	0.6	0.5	0.1	0.0	0.2	0.1	-0.2
Permanent contracts	-0.2	0.3	-0.5	0.2	0.2	0.1	0.1	0.9	-0.2	0.4	0.0	0.2	0.1
Market prices for observed characteristics	0.7	1.8	3.9	3.6	2.0	-0.8	2.9	1.1	0.7	-1.9	-7.7	-0.5	2.1
Education	0.0	-0.1	0.4	0.1	-0.1	-0.5	0.2	-0.2	0.1	-0.2	-2.7	-0.4	-0.3
Potential experience	0.7	0.4	0.0	-0.1	-0.1	-0.7	0.1	1.3	-0.1	1.2	-0.2	0.5	0.0
Tenure	-0.5	0.0	0.3	0.0	0.6	0.9	0.5	0.1	-0.2	-1.2	-0.1	0.9	-0.3
Occupations	-0.4	1.4	0.4	3.0	2.6	-2.0	2.2	0.5	1.1	-2.4	-3.7	-0.9	3.4
Public sector	0.9	0.5	2.7	0.7	-0.5	1.7	-0.1	-0.3	-0.1	0.6	-1.0	-0.6	-0.7
Permanent contracts	0.0	-0.3	0.1	-0.1	-0.3	-0.2	0.0	-0.2	0.0	0.2	-0.1	0.0	0.1
Residual	1.4	-3.9	-4.6	1.7	-0.9	3.5	-4.9	-0.8	-6.5	-1.6	4.8	-2.2	1.6
Gaps in unobservable characteristics ^c	3.6	-1.6	0.9	4.4	0.6	2.0	-4.4	-1.6	-3.0	1.9	3.6	-3.3	-0.5
Market prices for unobserved characteristics ^c	-2.2	-2.3	-5.5	-2.7	-1.4	1.5	-0.5	0.8	-3.5	-3.5	1.2	1.1	2.1
Hourly wage gap	7.0	-4.1	-2.3	2.8	3.9	4.3	-1.3	2.0	-8.5	3.9	-3.8	-4.1	6.5
Hourly wage gap adjusted for the wage structure ^d	8.5	-3.6	-0.8	1.8	3.4	3.6	-3.7	0.1	-5.7	9.3	2.7	-4.7	2.3
Wage structure ^e	-1.5	-0.4	-1.6	0.9	0.5	0.7	2.4	1.9	-2.8	-5.4	-6.5	0.6	4.2

a) The gender wage gap is defined as the difference between male and female average wages expressed as a percentage of average male wages. A positive figure indicates a positive contribution to the difference between the gender wage gap in the country under consideration and in the benchmark country.

b) Decomposition performed for all wage and salary employees aged 20 to 64 years.

c) Computed under the hypothesis that all the residual gap can be ascribed to gender differences in unobserved characteristics and/or in their remuneration.

d) Sum of the contributions due to cross-country differences in gender gaps in observed and unobserved characteristics.

e) Sum of the contributions due to cross-country differences in market prices for observed and unobserved characteristics.

Source: Annex 2.A.

Table 2.B.3. **Decomposition of cross-country differences in the family wage gap**
 Percentage-point difference from the family wage gap in the benchmark country explained by each component^{a, b}

	Austria	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Netherlands	Portugal	Spain	United Kingdom
Gaps in observed characteristics	6.9	5.5	2.5	2.1	3.7	-0.2	-9.0	-2.7	-4.4	-2.0	3.5	-9.1	5.6
Education	0.7	0.9	-1.7	-1.0	0.0	-1.0	-0.8	2.3	-0.3	-0.7	1.4	0.2	1.6
Potential experience	1.7	2.0	2.7	2.5	1.7	0.0	-1.1	-3.7	-0.8	0.4	-0.3	-3.1	-1.0
Tenure	2.1	0.7	1.9	1.1	1.8	0.6	-2.3	-1.4	-1.3	-0.2	0.1	-2.1	1.1
Occupations	1.4	1.3	-0.7	-0.4	-0.1	-0.4	-3.4	0.1	-1.6	-1.6	1.9	-2.1	3.3
Public sector	0.4	0.4	0.2	0.2	0.4	0.0	-0.6	0.1	-0.3	-0.1	0.3	-0.6	0.1
Permanent contracts	0.6	0.1	0.2	-0.3	0.1	0.6	-0.8	-0.1	-0.1	0.2	0.0	-1.4	0.5
Market prices for observed characteristics	1.1	1.6	0.9	1.1	0.1	2.6	-0.1	-3.4	2.1	1.2	0.2	-3.1	-2.2
Education	-0.1	0.0	1.4	0.5	0.0	0.4	0.1	0.4	-0.3	-0.1	0.0	0.0	-0.1
Potential experience	1.9	1.9	-0.2	1.1	0.2	1.0	0.1	-3.1	0.7	-0.4	-1.1	0.4	-1.7
Tenure	-0.3	-0.1	-1.1	-0.7	-0.1	0.0	-0.8	0.3	0.7	0.3	0.5	-1.3	-0.4
Occupations	-0.2	-0.3	0.3	0.0	-0.2	0.5	1.4	-0.6	1.1	1.2	0.7	-1.2	0.2
Public sector	0.0	-0.1	0.4	0.1	0.0	0.8	-1.0	-0.4	-0.1	0.3	0.0	-1.0	-0.2
Permanent contracts	-0.1	0.1	0.0	0.1	0.1	-0.1	0.0	0.1	0.1	0.0	0.1	-0.1	0.1
Residual	5.9	-1.6	-0.3	0.4	-1.0	1.8	-6.1	-0.6	-1.3	-3.5	0.0	-6.0	5.4
Gaps in unobservable characteristics ^c	4.5	-1.7	1.1	0.5	-1.0	1.8	-5.9	-0.2	-2.2	-3.5	1.5	-5.0	5.6
Market prices for unobserved characteristics ^c	1.3	0.1	-1.4	-0.1	0.1	0.1	-0.2	-0.4	0.9	0.0	-1.5	-1.0	-0.2
Hourly wage gap	13.8	5.5	3.1	3.5	2.9	4.2	-15.1	-6.7	-3.7	-4.3	3.7	-18.2	8.8
Hourly wage gap adjusted for the wage structure ^d	11.4	3.8	3.6	2.5	2.7	1.6	-14.9	-2.9	-6.6	-5.5	5.0	-14.1	11.2
Wage structure ^e	2.4	1.7	-0.5	1.0	0.2	2.7	-0.2	-3.8	2.9	1.3	-1.3	-4.1	-2.4

a) The family wage gap is defined as the difference between average wages of childless women and mothers expressed as a percentage of average wages of childless women. A positive figure indicates a positive contribution to the difference between the family wage gap in the country under consideration and in the benchmark country.

b) Decomposition performed for all female wage and salary employees aged 20 to 54 years.

c) Computed under the hypothesis that all the residual gap can be ascribed to differences in unobserved characteristics and/or in their remuneration.

d) Sum of the contributions due to cross-country differences in gaps in observed and unobserved characteristics.

e) Sum of the contributions due to cross-country differences in market prices for observed and unobserved characteristics.

Source: Annex 2.A.

Table 2.B.4. **Decomposition of the wage gaps for the benchmark country**

Part of the gaps explained by each component

	Gender wage gap ^a	Family wage gap ^b
Gaps in observed characteristics	0.0	-5.5
Education	-1.4	-1.2
Potential experience	1.2	-2.2
Tenure	1.1	-0.5
Occupations	-0.5	-1.0
Public sector	-0.7	-0.4
Permanent contracts	0.3	-0.2
Residual	16.1	-0.6
Hourly wage gap	16.1	-6.1

a) The gender wage gap is defined as the difference between male and female average wages expressed as a percentage of average male wages. The decomposition is performed for all wage and salary employees aged 20 to 64 years.

b) The family wage gap is defined as the difference between average wages of childless women and mothers expressed as a percentage of average wages of childless women. The decomposition is performed for all female wage and salary employees aged 20 to 54 years.

Source: Annex 2.A.

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