Women in the Labor Market

Introduction

While the second decade of the transition to a market economy brought economic growth to Europe and Central Asia, the growth varied across countries. Until the recent global crisis, growth was robust, yielding better living standards and lower levels of poverty. Many of the reforms adopted since the fall of the Berlin Wall had begun to mature and yield results. Ten new member states of the European Union (EU) from the region showed strong indications of convergence with the high-income economies of the EU. However, despite all of the favorable economic and social changes, the labor market was an exception; it was less responsive to economic growth; and labor force expansion and employment growth were minimal during this period (World Bank 2005b).

Developments in labor markets have significant implications for living standards. Because differences in labor market outcomes among men and women are widespread and persist globally, it is useful to distinguish labor market analysis by gender. The Europe and Central Asia region is no exception. The countries with substantial economic growth were also the countries with relatively higher female labor force participation and lower wage gaps between men and women (see figure 2.1). Yet, despite this positive association among important indicators of welfare, the fact remains that women have lower labor market presence and earn lower wages than men.

However, men and women in the labor market are different not only with respect to their labor market status, but also with respect to the reasons why they hold certain positions in the labor market. This means there are major implications for social policy. Thus, the greater work burden of women within the household (for

22 The EU10 consists of Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic, and Slovenia; see annex A for a complete list of the countries in Europe and Central Asia considered in our analysis.
Example, childcare and household production) implies that parental leave policies and flexible work arrangements have a much stronger impact on female labor market participation than on male labor market participation. Discrimination and segregation have the potential to explain some of these outcomes in the labor market. Social policies that facilitate women’s greater labor force participation must therefore target the specific problem, and they must also necessarily be gender specific.

This chapter has two main objectives. First, it aims to provide an overview of how men and women have performed in labor markets in the region so as to identify the gender gaps that are larger and more persistent. Given the diversity of the region, gender differences vary significantly across countries and subregions. The second objective is to summarize the factors behind gender gaps by reviewing analytical work available on the region. As a byproduct, knowledge gaps will be identified.

The chapter is organized into two main sections. First, we present an aggregate description of labor markets in the region over the last decade. We provide a description of the current status of men and women and identify those countries in which gender gaps are more persistent. Second, we describe the factors that contribute to these gender gaps.

**Description of Labor Markets**

Labor markets in Europe and Central Asia have three main characteristics. First, the diversity of the region means there is large variation across

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23 See Altonji and Blank (1999) for a survey on discrimination and segregation. See Holzer and Neumark (2000) for a survey on affirmative action policies.

24 Labor force participation and the economically active population include all residents who are employed or unemployed. The employed are all persons above a specified age who, during a specified brief period, either one week or one day, were in the following categories: (a) paid employment, that is, (i) at work: persons who, during the reference period, performed some work for wage or salary, in cash or in kind; or (ii) with a job, but not at work: persons who, having already worked in their present jobs, were temporarily not at work during the reference period, but had a formal attachment to their jobs; (b) self-employment, that is, (i) at work: persons who, during the reference period, performed some work for profit or family gain, in cash or in kind; or (ii) with an enterprise, but not at work: persons with an enterprise, which may be a business enterprise, a farm, or a service undertaking, who were temporarily not at work during the reference period for any specific reason. The unemployed are all persons above a specific age who, during the reference period, were (a) without work, that is, were not in paid employment or self-employment; (b) currently available for work, that is, were available for paid employment or self-employment during the reference period; and (c) seeking work, that is, had taken specific steps in a specified reference period to seek paid employment or self-employment.
countries. Second, these countries exhibit one of the highest levels of occupational segregation, meaning that men and women pursue separate occupational streams. Third, with a few exceptions, most of the countries still show high female labor force participation rates that are comparable with the rates in developed countries; meanwhile, male participation rates are well below the world average. Hereafter, we present a more detailed description of labor force participation rates, employment and unemployment rates, occupational segregation, and labor market transitions.

**Participation Rates**

*Women make up only slightly less than half the labor force in the region.* The latest data for the region show that about 97 million women participated in the labor market in 2009. Though 60 percent of women aged 15 to 64 are in the labor force and have been since 1999, there was an increase of about 6.0 million women in the labor force between 1999 and 2008 because of population growth (figure 2.2). Women constitute 45 percent of the aggregate labor force in the region, and this proportion has also remained constant over the past decade. Men’s labor force participation stands at 117 million persons in the region, or 75 percent of the male population between 15 and 64 years of age in 2008.

*Over half of women labor force participants in the region (57 percent) live in the populous and middle-income countries of the Commonwealth of Independent States (CIS).* The subregion with the second largest number of women in the labor force is the EU10, with 21 percent of the total. The four countries with the largest share of the region’s women labor force participants are Poland, the Russian Federation, Turkey, and Ukraine. These four countries also have the largest share of the region’s male labor force; Turkey is second to Russia in terms of share (16 percent of the region’s male labor force). The low-income countries of the CIS—the Kyrgyz Republic and Tajikistan (in 2009)—and the western Balkans have a relatively small share of the region’s total female and male labor force participants, accounting for around 2 percent.

*The region’s female labor force participation rates are near the global average, but the male participation rates are well below the global average.* The female labor force participation rate among 15- to 64-year-olds in Europe and Central Asia, at 59 percent, is slightly above the global average of 57 percent and the average in Latin America and the Caribbean of 55 percent, but well below the rate in East Asia of

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**FIGURE 2.2 Labor Force Participation Rates**

![Graph showing labor force participation rates by gender and change from 1999 to 2009.](http://example.com/graph.png)


*Note:* EAP = East Asia and the Pacific. ECA = Europe and Central Asia. LAC = Latin America and the Caribbean. MENA = Middle East and North Africa. SAS = South Asia. SSA = Sub-Saharan Africa. Labor force participation rates are for the population 15 to 64 years of age.
The region’s male participation rate, 74 percent, is significantly lower than the corresponding rate in any other region, and it is also lower than the global average. Yet, compared with the high-income countries of the Organisation for Economic Co-operation and Development (OECD), both female and male participation rates in the region are significantly lower, by 6 percentage points. This also highlights that there is no standard labor force participation rate for men and women. Concern only arises if labor force participation rates do not adequately capture the population interested in working because people faced with a long-term inability to find jobs have dropped out of the search for work.

The country-level labor force participation rates of men and women vary greatly across the region. Women’s participation rates for ages 15 to 64 years ranged from a low of 26 percent in Turkey to a high of 73 percent among working-age women in Kazakhstan in 2009. If we take the (unweighted) average of all the female labor force participation rates by country, the average for the region is 61 percent. Male participation rates—though, on average, significantly higher than female participation rates—also vary greatly across the region, from a low of 57 percent in Moldova to a high of 83 percent in the Kyrgyz Republic. The gender gap in participation, which averages 14 percentage points (indicating that women’s participation rates are much lower than men’s), ranges from 48 percentage points in Turkey to 4 percentage points in Moldova. The size of the gender gap, on average, is in line with the female labor force participation rates as indicated by the strong negative correlation (0.82) between the female labor force participation rate and the gender employment gap.

Over the past decade, the region’s averages have remained largely stagnant, similar to global trends in male and female labor force participation. Global averages indicate that women’s participation rates remained stable, while male rates fell by 1 percentage point in 1999–2009. The variation in the changes across regions is high (figure 2.2, chart b). For example, in Latin America, a region with many middle-income countries, there was a surge in female labor force participation rates by 5 percentage points. High-income OECD countries experienced a small increase of 1 percentage point in women’s labor force participation, while East Asia and the Pacific—the region with the highest female participation rate—saw a decline from 67 to 64 percent. Male labor force participation rates decreased across the board: the global average decreased by 2 percentage points.

In some countries in Europe and Central Asia, the labor force participation rates of men and women have changed dramatically over the last decade. As noted above, the average female labor force participation rate remained unchanged in the region during 1999–2009. There were changes at the sub-regional level. Over the period, the female labor force participation rates increased by 6 percentage points in the low-income CIS countries, rising from 54 to 60 percent, while the rate fell by 6 percentage points in Turkey. The western Balkans and the middle-income CIS countries saw a slight increase, of 2 percentage points, while the EU10 saw no change over the decade. The average male participation rate increased by 1 percentage point during this period, while the changes by subregion were similar to the changes in the female participation rates, though of different magnitudes. The countries that were outliers in terms of the largest decreases in male and female labor force participation rates are Moldova and Romania, with declines ranging from 11 to 10 percentage points. At the other extreme, Tajikistan experienced an increase of 15 and 13 percentage points, respectively, in female and male labor force participation rates.

Over the last decade, the gender gap in labor force participation rates in the region has remained unchanged, though this has not always reflected higher women’s participation. The gender gap measures the difference in the male and female labor force participation rates. The average (unweighted) difference remained unchanged at 14 percentage points over 1999–2009. By subregion, the gender gap is the lowest among the middle-income CIS countries, at 10, and most of the rest of the region is in the range of 12 to 22, except Turkey, where the gender gap is 48. The gender gap in Western Europe fell, from 15 to 11; this has been driven by large declines in the gender gap in Cyprus, Luxembourg, the Netherlands, and Spain.
With the exception of Turkey, the labor force participation rates of men and women show a slight convergence in most subregions of Europe and Central Asia over time. Figure 2.3 reports the labor force participation rates among men and women in 2009 for each subregion and the change in the rates over the decade 1999–2009. An important difference with respect to Western Europe is apparent: in Western Europe, the gender gap in participation decreased over the decade, continuing a process of convergence that started in the 1960s. The convergence is driven by an increase in female participation rates and stable male participation rates. CIS countries have shown slight convergence: the gender gap decreased from 11.0 to 9.6 percent. However, the modest convergence in the CIS subregion is not driven by greater female participation, but by less male participation. Some subregions, such as the low-income CIS countries, showed a slight increase in the gender gap over the decade, but this was largely caused by changes occurring in the Kyrgyz Republic.

The gender gap in labor force participation is small compared with the gap in other regions, but the trend in the gap is troubling. A lower participation rate among women relative to men is common in almost all labor markets. Thus, the level of the gap in Europe and Central Asia is in line with the average in Western Europe and in high-income OECD countries. However, the trend in the gap between men and women over time is not converging, as observed in Western Europe. The gap was stable across all subregions in Europe and Central Asia from 1999 to 2009, while, in Western Europe, there was a convergence of about 4 percentage points. Since this occurred during a decade of high growth in Europe and Central Asia, the trend is troubling.

Young women in Europe and Central Asia participate in the labor market less than young women in developed countries. The gender gap in participation varies with age. Women are less likely to work than men during childbearing years. In the countries of Europe and Central Asia, women have children at a relatively young age compared with women in developed countries. The gender gap in participation is greater in Europe and Central Asia than in the developed countries of Europe and North America among women between 20 and 35 years of age (figure 2.4). Although the gender gap in participation in the region decreases as women become older, this is partly caused by a decrease in male participation rates rather than a significant increase in female participation.

**FIGURE 2.3** Labor Force Participation Rates by Subregion

<table>
<thead>
<tr>
<th>Subregion</th>
<th>Female (%)</th>
<th>Male (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU10</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Western Balkans</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>CIS LIC</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>CIS MIC</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Turkey</td>
<td>30</td>
<td>30</td>
</tr>
</tbody>
</table>


**Note:** CIS LIC = low-income CIS countries (Kyrgyz Republic and Tajikistan) in 2009. CIS MIC = middle-income CIS countries (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, the Russian Federation, Turkmenistan, Ukraine, and Uzbekistan) in 2009. The gender gap is the difference between the male and female labor force participation rates.
Although women 60 to 64 years of age are more likely to work now than such women were 20 years ago, the increase in the participation rate among this group has been low compared with the corresponding group in the OECD countries and compared with men of the same age. Women retire at a younger age relative to men in the region and women in the OECD countries. Figure 2.5 shows the labor force participation rates for men and women 60 years old and over. The growth in the women’s rate has been much greater in the OECD countries. However, women 70 or older are more likely to participate in the labor market in Europe and Central Asia than in the OECD countries. This may be an indication of the vulnerability of this population group.

### Employment

Women constitute slightly less than half the employed in the region. In 2009, an estimated 91 million women 15 years and older in the region participated in the labor force; the largest numbers were in Russia and Ukraine, where women accounted for 50 million among the employed. Women comprised 46 percent of the total number of persons employed. The average gender gap in employment was 14 percentage points; the largest gap was in Turkey (39 percentage points), and the narrowest in Belarus (0 percentage points). The gender gap in employment is similar to the gap observed in the labor force. The average employment rate among women was 45 percent of all working-age women, which, though comparable with employment rates in Western Europe, is well below the Lisbon objectives of 60 percent.25

Employment growth was relatively weak in the region even during the robust growth period of 1999–2008. The number of employed persons in 2008 was 198 million, or 51 percent of the working-age population aged 15 years or older. Employment grew, on average, by 1 percent per year in 1999–2008, a period when average economic growth was high. The region’s economy grew by 6 percent a year during the period, compared with the world average of 3 percent. However, in the region, employment creation was not particularly responsive to growth: for every 1 percent of growth in gross domestic product (GDP), employment increased by 0.10 percentage points in the region, compared with the world average of 0.52 percentage points. The situation in 2009 was significantly worse in Europe and Central Asia than in the rest of the world because of the global financial crisis.

25 In Lisbon in March 2000, the heads of EU governments subscribed to the goal of a general increase in the employment rate. For women, they agreed upon a specific target of 60 percent by 2010.
Women’s employment growth has been stronger than men’s, though by only a small amount. During 1999–2008, women’s total employment increased by 11 percent compared with 9 percent among men. The countries with the highest growth rates in female employment are also among the poorest: Tajikistan and Uzbekistan, by an average 4.8 and 3.4 percent a year, respectively. These countries have also seen the highest growth in male employment. Five countries experienced negative female employment growth rates: Georgia, Lithuania, Moldova, Romania, and Turkey. These same countries, less Turkey, but plus Croatia, also experienced negative growth rates in male employment. The diversity of the subregions to which these countries belong indicates that the drivers of employment contraction are likely to be factors unique to each country. Another important aspect of the changes in employment among men and women is that they are strongly negatively correlated (with the exception of Turkey): female employment has been declining, while male employment has been rising. Moreover, the gender gap has remained relatively stable over the decade, except in Moldova and Tajikistan.

The employment rate is lower among women with more children and women with children under 3 years of age. Women with children are less likely to work in the region relative to OECD countries, and this difference increases with the number of children (figure 2.6). While the employment rates among women with no children are 71 and 78 percent, on average, in Europe and Central Asia and in

Note: ECA = Europe and Central Asia.
the OECD, respectively (a 7 percentage point gap), the respective employment rates among women with 3 or more children are 42 and 57 percent, or a 15 percentage point gap between the regions. The group affected the most is women whose youngest children are under 3 years of age. In Europe and Central Asia, the employment rate is only 31 percent in this group, while, in OECD countries, it is 64 percent (a 33 percentage point gap).

The Unemployment Rate

Unemployment fell significantly in the region over the decade. The average unemployment rate in the region decreased from 13 to 11 percent during 1999–2009. However, this trend hides variations across subregions. For example, the unemployment rates in the middle-income CIS countries declined over the decade, reaching around 7.5 percent in 2009 from 13.0 percent in 1999. However, the unemployment rate remained constant at around 11 percentage over the decade. Meanwhile, Turkey’s unemployment rate rose from 7 to 14 percent. The western Balkans was a high unemployment subregion and includes outliers such as the former Yugoslav Republic of Macedonia, where unemployment affects almost one-third of the labor force. The EU10 saw a minimal decline in unemployment rates. Meanwhile, though there was a positive trend in unemployment rates in Europe and Central Asia, this indicator may underestimate the number of people who are without work, but who would like to work; this is because unemployment rates sometimes fail to capture discouraged workers who have given up looking for jobs after long and unsuccessful job searches.

The gender gap in unemployment rates in the region is small. In 2009, the average female and male unemployment rates were 12.7 and 13.0 percent, respectively. The average gender gap in the region was less than 1 percent. The subregion with the largest gender gap was the western Balkans, where the gap was especially severe in Kosovo, at

26 This average is based on 18 countries. There are no data for Central Asia or the low-income CIS countries.

27 This is based on the latest available data for 21 countries; it excludes Albania, Armenia, Belarus, Kazakhstan, Montenegro, Tajikistan, Turkmenistan, and Uzbekistan.
16 percentage points. The second largest gap was in Lithuania, at 7 percentage points. The relatively low unemployment gap in the region is comparable with the gap in Western Europe and unlike the gaps in many other developing regions, such as Latin America and the Middle East and North Africa.

The gender gap in unemployment in the EU10 increased, especially in 2009. Because of a lack of data, it is difficult to determine whether unemployment rates among men and women are converging. The only subregion with data over the entire decade is the EU10. The average unemployment rate in the EU10 consistently fell over the decade, and the gender gap narrowed until 2008. In 2009, the gap widened abruptly as male unemployment doubled. In the late 1990s, the female unemployment rate was lower than the male unemployment rate, but, after 2002, the female unemployment rate grew to about a half percentage point higher. Compared with the Western Europe average, this gender gap remains small in both absolute and relative terms.

Though youth unemployment is high in the region and the gender gap in the rates is almost 2 percent, youth unemployment remains relatively modest by international standards. In general, the unemployment rates among men and women 15–24 years old are higher than the overall unemployment rate in a country. Young labor force participants may have high expectations of finding the best jobs in terms of pay and occupation and, consequently, must undertake longer job searches until they find jobs or change their expectations about the nature of acceptable jobs. Europe and Central Asia is no different. The average youth unemployment rate in 2009 was 25 percent. Though time series data are unavailable for the decade, youth unemployment has fallen slightly over the last few years. The female and male youth unemployment rates in 2009 were 26 and 25 percent, respectively. Countries with relatively high unemployment rates also show high unemployment rates among young workers.

Unemployment rates according to educational attainment varies greatly across the region. The unemployment rate among secondary school graduates in the region is 57 percent compared with 28 and 17 percent for individuals with primary school and tertiary school degrees, respectively. These differences may reflect the fact that persons with a primary education are more likely to be poor and unable to afford long job searches, while tertiary graduates are likely to be in high demand. There are two striking differences among countries within the region. The middle-income CIS countries show a pattern that diverges from the pattern in the rest of the region: more well educated workers constitute a much larger proportion of the unemployed than less well educated workers (33 percent in 2007). Second, in the EU10, though persons with tertiary education constitute a small share of the unemployed, this share rose rapidly from 6 to 10 percent in 1999–2008.

The gender gap in unemployment rates by educational attainment is relatively small, except in Turkey. The gender gaps in primary, secondary, and tertiary unemployment rates were −5, −1, and −4 percentage points, respectively (figure 2.7). (The negative sign indicates that female unemployment rates exceed male unemployment rates.) There is a gender gap across subregions, but it is small. For example, the largest gender gap occurs in the EU10 countries among persons with only primary education (−6 percentage points). Meanwhile, Turkey’s gender gap is −15 percentage points among secondary and tertiary school graduates, compared with −27 among primary school graduates, indicating that, in Turkey, it is more difficult for women to find employment than it is for men.

Unemployment rates are slightly higher among young women than among young men, particularly in countries with high youth unemployment. Although there is no appreciable difference in the averages for the region in the unemployment rates among young men and women, this is the result of large variations in unemployment rates across countries and gender. In figure 2.8, panel a, we see that, with the clear exception of one country (Azerbaijan), the unemployment rates in most countries are higher among young women than among young men. Figure 2.8 also shows that the gender difference in unemployment rates among young men and women increases with the rate of youth unemployment (the points to the right are more likely to be farther away from the 45 degree line). For example, in Armenia, the unemployment rate among young women is 69 percent, while, among young men, it is 47 percent.
Long-term unemployment rates are relatively similar between men and women. There is almost no gender difference in the long-term unemployment rates in the region, as indicated in FIGURE 2.7 and FIGURE 2.8.


Note: Data are not available for all countries. CIS LIC = low-income CIS countries (Kyrgyz Republic and Tajikistan) in 2009. CIS MIC = middle-income CIS countries. The average for CIS MIC includes Azerbaijan, Belarus, Georgia, Russian Federation, and Ukraine. The gender gap is the difference between male and female unemployment rates.


Note: The young unemployed are all the persons aged 15–24 years who, during the reference period, were (a) without work, that is, were not in paid employment or self-employment; (b) currently available for work, that is, were available for paid employment or self-employment during the reference period; and (c) seeking work, that is, had taken specific steps in a specified reference period to seek paid employment or self-employment. The long-term unemployed are the persons who have been unemployed for 12 months or more. The long-term unemployment rate is the share of the long-term unemployed in the total unemployed population by gender.

Long-term unemployment refers to the number of people who have experienced periods of unemployment extending for a year or longer; it is expressed as a percentage of the total unemployed.
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Figure 2.8, panel b, where most of the points are on the 45 degree line (no gender differential). However, if women are more likely than men to leave the labor force if they are unemployed, the absence of gender gaps in long-term unemployment rates may not accurately reflect the differences in the success of job searches by men and women. This is supported by the evidence presented elsewhere below in the section on labor market transitions, where we show that women are more likely than men to leave the unemployment category by exiting the labor force.

Self-employment

Self-employment is a diverse category that changes over time. Self-employment is a useful concept because of its links to entrepreneurial ability and informal activity in the labor market. Self-employment involves a wide range of careers, including, for example, physicians, plumbers, electricians, and farmers. Additional data would be necessary to determine the extent of self-employment in high- and low-productivity jobs or in particular sectors. However, self-employment is frequently associated with underemployment and the informal sector, especially in low- and middle-income countries.

In Europe and Central Asia, self-employment is more widespread in countries with large rural populations. In countries in which agriculture is an important contributor to the economy, a larger share of the employed are self-employed (figure 2.9, panel a). The correlation was quite strong even in 2009, when it was 0.47. This relationship between the share of agriculture value added and self-employment rates increased over time until 2005, then decreased, among the 21 countries in the region on which data are available. Thus, it is possible that, over time, self-employment became more closely associated with agriculture rather than with the development of small entrepreneurship in higher-productivity sectors.

In the region, one in four employed persons is self-employed. Average self-employment rates are high in the middle-income CIS countries, but relatively low in the EU10. In 2009, the subregion with the high-

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**FIGURE 2.9** Self-Employment

<table>
<thead>
<tr>
<th>a. Economies with large rural populations</th>
<th>b. By gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>percent</td>
<td>percent of employed, by gender</td>
</tr>
<tr>
<td>70</td>
<td>EU10</td>
</tr>
<tr>
<td>60</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>Kyrgyz Republic</td>
</tr>
<tr>
<td>40</td>
<td>CIS MIC</td>
</tr>
<tr>
<td>30</td>
<td>Western Balkans</td>
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<tr>
<td>20</td>
<td>Turkey</td>
</tr>
<tr>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>


Note: Data are available for a subset of the countries in Europe and Central Asia. The countries excluded are Albania, Armenia, Belarus, Kazakhstan, Montenegro, Tajikistan, Turkmenistan, and Uzbekistan. MIC = middle-income countries.
est self-employment rate was the middle-income CIS countries, at 31 percent, whereas the EU10 showed the lowest rate, which, at 16 percent, is comparable with the rate in Western Europe. The western Balkans falls in the middle. The country with the highest rate of self-employment in recent years is Georgia, at 64 percent, followed by three countries, Armenia, Azerbaijan, and Turkey, at 39, 58, and 40 percent, respectively. Russia showed the lowest share of self-employed in total employed, at 7 percent.

More men than women are self-employed in Europe and Central Asia. On average in the region, an estimated 26 percent of employed women are self-employed, compared with 28 percent of men (figure 2.9, panel b). Thus, the average difference between male and female rates of self-employment is negligible. Though all subregions exhibit this pattern, the gap in self-employment rates among men and women is narrowest in the middle-income CIS countries, where the average difference is 2 percentage points. However, this difference hides extremes. For example, the two countries in which female self-employment rates significantly exceed male self-employment rates are Azerbaijan and Turkey, with differences of 11 to 12 percentage points, respectively. In the EU10 subregion on average, female self-employment rates are moderate, at 11 percent, which is almost half the average rates among men (of 17 percent), while, in Western Europe, female self-employment rates are low, at 9 percent, which is almost half the average rates among men.

In Europe and Central Asia, male and female self-employment rates have been stable over the last decade. On average, self-employment has remained constant among men and women over the past decade.31 However, there has been variation across subregions, as well as significant variation across countries. For example, the EU10 has seen a slight decline in self-employment rates among men and women that is similar to developments in Western Europe, though with a slightly bigger magnitude. Changes in aggregate self-employment rates over time do not appear to be strongly correlated to changes in GDP; thus, countries with higher growth rates have not seen a decrease in self-employment. However, the subregions with high proportions of self-employed have seen an increase over time.32 Turkey is an exception. It shows a high, but decreasing level of male and female self-employment. Among the countries on which data are available, Georgia and Ukraine showed the greatest change in self-employment over the last decade: an increase of about 7 and 10 percentage points, respectively.

Sectors of Employment

In Europe and Central Asia, the service sector employs more people than the agricultural sector and the industrial sector combined. The service sector employs, on average, 57 percent of all employed, while agriculture and industry employ 16 and 27 percent, respectively.33 At the aggregate level, other than in the low-income CIS subregion, service sector jobs dominate in employment in all subregions. Yet, there is significant variation across countries and subregions, especially in the employment rates in agriculture. For example, over 50 percent of the total employed are active in the agricultural sector in middle-income countries such as Albania and Georgia, while 10 percent of the employed in Russia are active in this sector.

The service sector employs the majority of women in most countries in the region. With the exception of four countries (Armenia, Georgia, Romania, and Turkey), over half of women workers are employed in the service sector. In the EU10 and the western Balkans, the average is about two-thirds of all employed women. This structure of female employment conforms to the pattern seen in OECD economies, that is, women tend to be concentrated in the service sector (figure 2.10). In the countries in which the highest proportion of female employment is not in services, women are

31 The average self-employment rate in the 17 countries for which longitudinal data are available was 16.5 percent in 1999 and 17.1 percent in 2007.
32 There is a complete time series for only Moldova, Russia, and Ukraine over the period. Note that, within the middle-income CIS subregion, the countries show relatively lower proportions of self-employment.
33 The averages are based on 25 countries in the region; because of a lack of recent data, they exclude Belarus, Bosnia and Herzegovina, Turkmenistan, and Uzbekistan.
disproportionately present in agriculture (rather than in industry). Though male employment is less concentrated in services relative to female employment, the share is still high, at 46 percent versus 35 percent in industry and 16 percent in agriculture in the most recent years.

**Though agriculture and industry are not the largest employers of women on average, women still constitute a significant share of the employees in these sectors.** In the 22 countries on which data are available, women employees make up half of all workers in the service sector. However, they also comprise about 17 percent of workers in agriculture and 17 percent of workers in industry. The variation across countries in the averages is relatively modest. However, Turkey remains an outlier, with about 38 and 15 percent of women in agriculture and industry, respectively.

Over time, the share of women working in the service sector is growing. If services represent a sector of traditional employment among women in all OECD economies, the trend over time is more specific to Europe and Central Asia. The service sector has been expanding over the decade, experiencing not only growth in employment, but also growth in the relative contribution to GDP. Women have moved into the service sector in slightly higher proportion than men in all the countries of Europe and Central Asia, a trend not found in Western Europe. If the trend continues, this sectoral allocation should be beneficial for the reduction of gender gaps in the labor markets of the region (see elsewhere below).

The customary gender segregation by industry is also found in the region. Table 2.1 shows the distribution of employed men and women across industries. In Europe and Central Asia, men and women are likely to work in distinct industries. While men are more likely to be employed in manufacturing, construction, and transport, women are more likely to be found in communal services, wholesale and retail, and restaurants. For example, while 34 percent of employed men work in manufacturing, only 22 percent of employed women do so; in contrast, 40 percent of employed women and only 20 percent of employed men work in communal services.

*The region is characterized by high occupational segregation in labor markets.* Table 2.1 presents the distribution of employed men and women across occupations. Occupational segregation in the labor market is significant in Europe and

**FIGURE 2.10  Sectoral Employment, by Gender**

<table>
<thead>
<tr>
<th></th>
<th>Agriculture</th>
<th>Industry</th>
<th>Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU10</td>
<td>Female</td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
<td>Female</td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>CIS MIC</td>
<td>Female</td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Female</td>
<td>Male</td>
<td></td>
</tr>
<tr>
<td>Western Balkans</td>
<td>Female</td>
<td>Male</td>
<td></td>
</tr>
</tbody>
</table>


Note: The gender gap is the difference between male employment in a particular sector as a share of total male employment and female employment in a particular sector as a share of total female employment. A negative gender gap means that more women than men are employed in the sector as a share of total employment among women. CIS MIC = middle-income CIS countries (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Moldova, the Russian Federation, Turkmenistan, and Ukraine) in 2008.
Central Asia relative to other regions. Women are concentrated in the category of professionals and technicians in services, while men are mainly concentrated among administrative personnel and machine operators. Almost 40 percent of women, but only 22 percent of men work as professionals or technicians, whereas 18 percent of men and 6 percent of women work as machine operators. (Box 2.1 offers the example of the teaching profession in primary and secondary education.)

Although there is some variation across the region in women's employment in management positions, the region is doing as well as, if not better than developed countries, on average. As in developed countries, there are fewer women in management positions in Europe and Central Asia. The country with the most equitable access to management positions in terms of gender is Serbia, where the gap between men and women in management is only 1 percentage point (figure 2.11). Yet, few men and women in Serbia hold management positions: only 4 percent of employed men, for example. At the opposite extreme, a larger gap is observed in Estonia and Turkey, where employed men hold 16 and 11 percent of management positions, respectively, while only 8 and 3 percent of employed women hold such positions, respectively.

Occupational segregation begins before entry in the labor market. Occupational segregation at the workplace is a consequence of the choice of the field of study when one is young. A recent study shows that, although the correlation between the field of study and occupation does not appear close if one uses broad occupational definitions given that most graduates work as professionals or technicians, the field of study is a strong determinant of occupation within the broad categories. For example, in the Czech Republic, while 50 percent of men who have studied science pursue occupations as professionals or technicians in physics, mathematics, or engineering, this is true of only 20 percent of women who have studied science (Flabbi 2011).

### TABLE 2.1 | The Sectoral Structure of Employment

<table>
<thead>
<tr>
<th>Occupation and sector</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionals and technicians</td>
<td>22</td>
<td>38</td>
</tr>
<tr>
<td>Directors and upper management</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Administrative personnel and intermediary level</td>
<td>31</td>
<td>20</td>
</tr>
<tr>
<td>Service workers</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Skilled agriculture</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Machine operator</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Armed forces</td>
<td>0.0</td>
<td>0</td>
</tr>
<tr>
<td>Elementary occupations</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Economic sector</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture, hunting, forestry, and fishing</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>34</td>
<td>21</td>
</tr>
<tr>
<td>Electricity, gas, and water supply</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>Construction</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Wholesale and retail, trade, and hotels and restaurants</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Transport and storage</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Finance and business services</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Communal services</td>
<td>20</td>
<td>41</td>
</tr>
<tr>
<td>Other services not well specified</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>


Note: Weighted average for the region, including Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, the Kyrgyz Republic, Latvia, Lithuania, Moldova, Montenegro, Poland, Romania, the Russian Federation, the Slovak Republic, Tajikistan, and Turkey... = negligible.

34 For more details, see Ņopo, Daza, and Ramos (2011), which is a background paper for World Development Report 2012: Gender Equality and Development (World Bank 2011a). The authors analyze the segregation in labor markets in Europe and Central Asia and other regions.

35 Professionals include occupations in which the main tasks require a high level of professional knowledge and experience in the physical and life sciences, the social sciences, or the humanities. Technicians include technicians and associate technicians, that is, occupations in which the main tasks require technical knowledge and experience in one or more areas of the physical and life sciences, the social sciences, or the humanities.
Segregation also exists by type of employer; women tend to work in the public sector. Although we do not have the average for the region, several country studies find that women are more likely to be employed in the public sector. For example, in Serbia, while 32 percent of employed women work in the public sector, only 24 percent of men work in this sector. In contrast to women, men...
are more likely to work in the private sector (58 percent of employed men versus 52 percent of employed women). Similar patterns of concentration are found in Bulgaria, Russia, and Serbia (see Dimova, Gang, and Landon-Lane 2006; Oglobin 2005; Reva and Sulla 2011).

Time use Analysis

Women are more likely than men to be part-time workers; however, part-time employment is less prevalent in Europe and Central Asia than in the OECD countries. On average in Europe and Central Asia, 12 percent of employed women and 7 percent of employed men work part time (figure 2.12). The availability of part-time work in general and, in particular, for women is considerably more limited in the region than in the OECD countries (excluding the United States). In the OECD countries, 36 percent of employed women and 11 percent of employed men work part time. The lack of access to part-time employment, especially among women and relative to OECD levels, may have implications for decisions on labor force participation and for fertility rates among women.

In the region, women spend less time than men in labor market activities. As in the developed countries, women in the region spend, on average, almost two hours less per day than men in activities related to the labor market (figure 2.13, panel a). The variation across the countries in the region on which data are available is small. The largest difference is in Turkey, where men spend 3.5 more hours than women in labor market activities, and the smallest difference is in Bulgaria, where men spend only 1 more hour than women per day performing labor market activities.

Women in the region spend much more time than men on household activities. In the region, relative to men, women spend three more hours per day on household work (figure 2.13, panel b). The average time women in the region and women in the OECD countries spend on household chores is similar. The gender differential is largest in Turkey, where women spend 4.5 hours more than men on household chores. It is smallest in Latvia, where women spend only two hours more than men on such chores.
FIGURE 2.12  Part-Time Workers, by Gender


FIGURE 2.13  The Difference in Time Use between Men and Women


Note: The countries used to compute the regional average are Armenia, Bulgaria, Estonia, Hungary, Kazakhstan, the Kyrgyz Republic, Latvia, Lithuania, FYR Macedonia, Poland, Romania, and Turkey. The OECD countries include Austria, Belgium, Canada, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States. ECA = Europe and Central Asia. HH = household.
As a result, women have less free time than men. Of the average three-hour difference in the amount of time women and men in the region spend on household chores per day, men spend two hours on labor market activities and one hour resting; we therefore see that women have less free time than men. This is quite consistent across the region. The most salient exception is Turkey, where men and women have almost the same amount of free time because, while women spend more time on household chores, men spend an almost equal amount of time working on other activities, for example labor market activities.36

The patterns in the gender division of work in the household in the region are traditional; thus, women spend more time than men on caring for other household members. Our calculations indicate that the traditional division of household chores between men and women persists in the region (figure 2.14). Women spend three-quarters of their time in cooking and the care of children and adults in the household. Indeed, while a quarter of the time women spend on domestic chores is taken up by care for other adults in the household, men do not spend any time on this task.37

Labor Market Transitions

Labor market transitions represent opportunities and costs among individuals.38 They can lead to jobs that are more well remunerated, but also to lower wages after periods of inactivity or to unem-

36 Noteworthy among the findings revealed through the time use data is the relatively small amount of time spent on labor market activities across all countries. Men report that they spend an average of five hours a day on labor market activities. This rather small number of hours can be partially explained by the fact that the unemployed and men and women who are out of the labor force are included in the sample. If we consider only the employed, the average among men rises to six hours a day. Although low, this number can be partially explained by part-time jobs.

37 This finding needs to be viewed with caution because it is based on only two countries: Armenia and Romania. In Romania, women report spending 2.5 hours a day taking care of other adults in the household. Women in Armenia report spending no time on this activity.

38 This section is mostly based on the work of Dimova, Gang, and Landon-Lane (2006) for Bulgaria and Blunch and Sulla (2011) for Serbia. A caveat should be noted: both studies analyze the situation during times of crisis and employment restructuring.
ployment. The likelihood of experiencing a labor market transition varies depending on the sector of employment, the occupation, and gender. Panel survey data are necessary for the analysis of labor market transitions, but such data are rare. However, two recent studies on Bulgaria and Serbia are useful. Though the magnitude of the data is different, the study findings are consistent with results on the United Kingdom and the United States, on which abundant panel data exist.

**Women are moderately less likely than men to find jobs if they are unemployed, and they are more likely to exit the labor force.** During the global financial crisis and its aftermath in Serbia, unemployed women were 4.2 percent less likely than men to find jobs (Blunch and Sulla 2011). There are several possible reasons for this outcome. First, women may spend less time than men searching for work. Second, men may have access to more efficient information networks on available jobs. Third, women may be searching for specific jobs (in selected sectors or occupations; see elsewhere above) and may therefore require more time in unemployment waiting for vacancies in these jobs to become available. Fourth, women may suffer from discrimination at various stages of the job search and hiring process. Despite these adverse scenarios, women end up taking jobs. Whether or not they have to lower their reservation wage to obtain jobs and, if they do, by how much have not been determined.

**Women are more likely to become discouraged workers.** Workers are discouraged if they decide to leave the labor force because they have been unable to find jobs under terms they consider acceptable. Blunch and Sulla (2011) estimate that unemployed women are 2.8 percent more likely than unemployed men to be discouraged and exit the labor force. This may be indicative of the higher cost of the job search and the lower probability of success in the job search among women compared with men. A better understanding of the constraints on women would contribute to the design of policies to promote employment among women and improve the functioning of the labor market.

**Employed women are as likely as unemployed men to become unemployed.** In Serbia during the last few years, employed women have been only 1 percent less likely than men to become unemployed. Although the difference in the probability of moving from employment to unemployment between men and women is significant, the size of the difference is negligible. There may be many reasons behind the difference. Thus, there is evidence that women are usually the first to be laid off during a crisis. Yet, women may also be protected from being laid off if, because of occupational segregation, they work in industries that are less affected by crisis.

Whether employed women are more or less likely than employed men to leave the labor force depends mostly on age and educational attainment. On average, employed women are only 0.3 percentage points more likely than employed men to leave the labor force. However, there are gender differences depending on age and educational attainment. For example, while workers of retirement age (65 and above) are less likely to drop out of the labor force than young workers (15–24 years of age), women of retirement age are 43 percentage points more likely than men in the age-group to retire.

**Selected evidence indicates that women are more likely to stay in public sector jobs, while men are more likely to stay in private sector jobs.** A study on labor market transitions in Bulgaria around 1996 finds that the probability of leaving jobs in the public sector is 67 percent among women and 62 percent among men (Dimova, Gang, and Landon-Lane 2006). The gender differences in these probabili-

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39 This assertion is based on analysis on Bulgaria and Serbia, but also on the United Kingdom and the United States.

40 A worker may be discouraged because of the extensive period in unemployment while waiting for work, because of the terms of the wage offer, or because of other reasons. See Sabarwal, Sinha, and Buvinic (2011) for a detailed description of the added worker effect and the discouraged worker effect at the various stages of the business cycle.

41 This was the situation during the 1997 crisis in Indonesia. See Hallward-Driemeier, Rijker, and Waxman (2011).
ties become more striking if we take into consideration the destination: men generally leave the public sector for jobs in the private sector, while women generally leave the public sector to exit the labor force. The probability that men employed in the public sector will find jobs in the private sector is 12 percent, while the corresponding share is only 6 percent among women. Men working in the public sector are also more likely than women in the public sector to move to unemployment (8 versus 4 percent, respectively).

Men working in the private sector are more likely than women working in the private sector to stay in the sector. The study in Bulgaria finds that 47 percent of men employed in the private sector versus 36 percent of women employed in the sector will be working in the sector during the subsequent year. This difference is partly explained by the greater probability among women employed in the private sector to become unemployed or leave the labor force. (Box 2.2 examines the case of women in the informal sector.)

_Educated women in wealthier households are more likely to be employed in the private sector._ Women with higher educational attainment and living in households with higher incomes are more likely to be employed in the private sector and are less likely to leave the private sector for work in the public sector, or because of unemployment or simply because they are exiting the labor force. Likewise, women with higher educational attainment and higher household incomes are less likely to remain out of the labor force. In Bulgaria, marital status and the presence of children in the household are additional explanatory factors in determining whether a woman is working or not and whether she is working in the private or public sector.

**Understanding Changes in the Labor Market**

Shifts in employment among men and women may be driven by changes in labor demand or in labor supply, which may also differ across skilled and unskilled workers in the labor force. An analysis of a labor market would help determine if a decline in labor force participation is the result of a change in the demand for labor or a change in the supply of labor. Usually, this type of analysis is carried out by differentiating between skilled and unskilled labor. Shifts in wages and employment may be indicative of whether a change in demand or a change in supply is dominant and help clarify the direction of the change. We may infer

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42 The authors of the study do not find evidence of a gender effect in the exit of individuals from the public sector into unemployment or out of the labor force.

43 A rise in employment and wages indicates an increase in demand (a positive shift). A rise in employment, accompanied by a fall in wages indicates an increase in labor supply (a positive shift in supply). A fall in employment and a rise in wages indicate a decrease in the supply of labor (a negative shift of supply). Finally, a fall in employment and in wages indicates a decrease in labor demand (a negative shift in demand). Obviously, there may be a combination of shifts in the two curves, and the final result depends on the shift that is dominant.

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**Box 2.2: The Informal Labor Market in Europe and Central Asia**

Do women have less access than men to formal sector jobs? Are they more likely to be trapped in the informal sector?

Informal employment may be defined in many ways. It usually refers to employment among workers who are not (a) carried on the accounting books of an employer, (b) formally registered, (c) included in the social security system, and/or (d) receiving the basic benefits and protections provided in labor laws.

A recent study in Albania, Georgia, Hungary, Poland, Russia, and Ukraine finds that women are as likely as men to work in the informal sector. However, men typically earn more than women in the formal sector and in the informal sector. In the formal sector, women tend to have better skills, but obtain lower returns to education relative to women in the informal sector. The gender wage gap is generally driven by the difference between the wages of men and women in the formal sector, although, in Albania, most of the gender wage gap is explained by the gap in the informal sector. Women in the informal sector are also more likely to remain employed in the informal sector relative to women in the formal sector and relative to men.

Women in the informal sector are also more likely than women in the formal sector to move back and forth between informal employment and inactivity. This may be an indication of women’s self-selection into the informal labor market. However, even after we control for selection, we find that these results are confirmed.

from aggregate indicators that the labor markets in Europe and Central Asia are diverse. In the last decade, average real wages and employment increased in Bulgaria, Estonia, Hungary, and Latvia. During the same period, an increase in labor force participation and a fall in average real wages were observed in Armenia, Belarus, and Slovenia. Meanwhile, an increase in average real wages and a decrease in labor force participation occurred in Georgia, Lithuania, and Moldova. In all these cases, the changes in average real wages and employment moved in the same direction for both men and women.

The change in demand and the change in the demand for skilled labor relative to unskilled labor may partly be a consequence of shifts in the structure of economies because of the trade liberalization that occurred in many of these countries. If exporting sectors are intensive in unskilled labor and employ women, while importing sectors are intensive in unskilled labor and employ men, trade openness will alter the relative prices of the two labor inputs and may therefore affect the relative wages of men and women.

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The decrease in labor supply in some countries may be partly explained by an increase in education and in (out-)migration. If men and women decide to acquire more human capital by pursuing tertiary education, but also postgraduate education, they would delay their entrance into the labor market and, as a consequence, reduce the supply of labor. Additionally, the decline in labor supply may be caused by the large waves of migration observed in a few of these countries (box 2.3). Armenia, the Kyrgyz Republic, Moldova, Tajikistan, and Uzbekistan show higher levels of out-migration, while Kazakhstan, Russia, and Ukraine receive immigrants.

The process of women and men following more traditional gender roles in the labor market (retradi- tionalization) that started with the transition and that has resulted in a large decrease in female labor force participation is continuing in certain countries. This process has been clearly documented in the region by Paci (2002), Paci and Reilly (2004), and a few other researchers. For example, in Bosnia and Herzegovina, female labor force participation declined during the 1990s, and the decline persisted during the next decade. In Serbia, female labor force participation fell from about 70 percent during socialist times to 58 percent in recent years (Babović 2008, cited in Blunch 2010).

Evidence from analysis of the probability of transition in labor force status suggests that women self-select into or out of certain occupations. The selection of women in the labor force is positive, which means that women with higher potential to produce value added tend to work, while less well educated women tend to choose to remain out of the labor force. Moreover, among employed women, women who are more well educated tend to work in the private sector. This indicates that family responsibilities and the lack of support in the decision by women to combine jobs and household chores represent important constraints and that only women with higher earnings (and with husbands who also have higher earnings) can overcome these constraints.
The Gender Wage Gap

An examination of the gender wage gap can lead to a better understanding of the constraints that men and women face in the labor market, whether these constraints arise from past or present choices (such as the choice of occupation or the choice of the level of educational attainment), market frictions, or discrimination. First, we describe the raw gender wage gap in the region. Second, we describe the factors contributing to the wage gap using decomposition methods that allow us to assess the effects of individual characteristics on the gender wage gap. Third, we analyze changes in the wage gap over time.

The Raw Gender Wage Gap

Is there a gender wage gap despite the relatively significant equality in employment in the labor market in the region? Wage gaps among workers arise for many reasons, including location, type of work, level of education, and experience. Wage gaps may also arise because there are too many or too few women in the labor market or because the economy is expanding too quickly or too slowly. Wage gaps may be partially a result of discrimination, whereby employers perceive workers of a particular gender or ethnicity as less capable and, hence, not worthy of equitable wages. To determine whether a wage gap exists simply because of the gender of workers, we analyze country-specific data using regression analysis.44

There is a significant gender wage gap in the region.45 The data indicate that women’s hourly wages are 22 percent less than the hourly wages of men, on average, in the region.46 Moreover, because women work fewer hours, the monthly wage gap is larger, indicating that women earn 29 percent less than men per month. The available data show that women earn systematically less than men even if one controls for differences in human capital. The only exception is Bosnia and Herzegovina, where the raw gap is negative; however, this gap disappears once we control for human capital characteristics.47

The extent of the gender wage gap varies greatly within the region. The differences across countries are large (figure 2.15). Some countries (the EU10, Moldova, Turkey, the western Balkans, with the exception of Albania) have a gender wage gap of about 20 percent, putting them in a similar or better position than the United States. Other countries have gaps that are among the highest in the world (Tajikistan, with a gap of about 65 percent), while still others (Albania and Russia) have gaps in an intermediate range, about 35 percent. These magnitudes and rankings do not change dramatically if the gap is computed conditioned on human capital characteristics. The averages by subregions are informative only in the case of the EU10, the western Balkans, and Turkey because there are too few data points on the other subregions. The averages indicate a moderate regional gap, with values ranging from 17 percent for the EU10 in the raw differential to 23 percent in the western Balkans for the Mincerian-based differential.

The gender wage gap is not a result of differences in human capital. If we compare men and women with the same level of human capital, women are paid even less relative to men than in the general case. However, the information we have on human capital is partial: it only captures the level of educational attainment, but not the type or quality of education. Thus, two persons may both be university graduates, though one may have a degree in history, and

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44 There is a caveat: the data are limited. Our analysis relies on data on 12 of the 30 countries in the region. These 12 countries are located across subregions. The EU10 are represented by 4 of the 10 countries in the estimation sample; the western Balkans and Turkey are fully represented; and the low- and middle-income CIS countries are represented by only Moldova, Russia, and Tajikistan.

45 This is based on 24 countries in the region.

46 This refers to the unweighted average of the gender wage gap in the countries of the region. The gender pay gap in hourly wage rates refers to the gender gap in average hourly earnings. This indicator aims to capture the difference between men’s and women’s overall positions in the labor market. It measures the difference between men’s and women’s wage rates independent of the number of hours worked or the type of activity or occupation.

47 For example, see Nopo, Daza, and Ramos (2011).
the other a degree in information technology, which are remunerated differentially by the market. Thus, it may be that the type of human capital rather than simply the quantity of human capital may play a role in explaining the gap.48

At the regional level, the participation rates of women do not impact the gender wage gap. Participation rate differences may potentially have a significant and large impact on the gender wage gap for two reasons. First, if few women are active in the labor market, then discrimination and prejudice are more likely to survive, thereby generating a gender gap.49 Second, if female participation is low, then women participating in the labor market may be a select sample of the population. If the selection is positive (that is, participating women are relatively more productive than nonparticipating women), the observed gap will underestimate the gender wage differential; if the selection is negative, the gap will be overestimated.49 Because of these different sources, the impact of participation on the gender wage gap is ambiguous and should be empirically verified. In Europe and Central Asia, there is a significant positive correlation between female participation and the gender wage gap only within the EU10.

The decomposition of the Gender Wage Gap
This subsection is based on a series of academic studies carried out on the region or worldwide, but with abundant representation of the region. Most of the studies decompose the gender wage gap using different techniques, making comparisons across countries a challenge. Fortunately, in

48 The two major theories of discrimination (statistical discrimination and taste discrimination) have this implication. In the statistical discrimination model (Phelps 1972), the presence of fewer women in the labor market may lead to more discrimination because employers have more difficulty in assessing the productivity of women. In the taste discrimination case (Becker 1971), fewer women, plus some labor market frictions, imply that prejudiced employers can survive and continue to operate in the market.

49 Paci and Reilly (2004) provide evidence of sample selection in a handful of countries in the region. They find limited sample selection in the countries under consideration (see their table 5.3).
one of these studies, Paci and Reilly (2004), we find a description of the implications in terms of comparability across different decomposition methods. In this subsection, we review the main conclusions that arise from the examination of gender wage gap decompositions, and, in the next subsection, we discuss the changes in the gender wage gap during the two decades since the onset of the transition.

The disparity across countries in the region makes any generalization difficult. Europe and Central Asia is a region of wide contrasts. It is therefore difficult to draw conclusions from the decomposition. For this reason, we discuss here the contributions of characteristics and returns to the gender wage gap. The contribution of each component depends on the data used, the selection of the sample, the definition of the variables, and the decomposition method.

The gender wage gap explained: differences in characteristics

If we control for educational attainment, we find that the gender wage gap in the region increases. The gender wage gap increases if we control for the characteristics of men and women. As we see in chapter 1, the differences between men and women in terms of education are small in the region, but, in any case, they favor women, who are more likely to complete tertiary education. The raw gender gap is 18 percent; after we control for education, the gap rises to 27 percent. This means that, at the same educational level, women earn an average of US$27 less per US$100 earned by men. Moreover, only US$9 of the US$100 earned by men can be explained by educational attainment.

The gender wage gap is partly explained by self-selection among women into lower paying jobs and occupations. The gender wage gap remains constant if we control for occupation, industry, and job characteristics, such as number of hours worked, whether the job is in the formal or informal sector, and whether the worker is an employee, an employer, or self-employed. In particular, Europe and Central Asia is the region with the highest level of segregation, and this contributes to explain the gender wage gap.


In the case of Europe and Central Asia, the choice of decomposition method does not seem to alter the conclusions. Paci and Reilly (2004) have conducted a meta-analysis of decompositions of the gender wage gap performed on countries in the region during the 1990s. They find that estimates are generally not sensitive to the decomposition method used. However, the fit of Mincer equations to the countries is not as good as the estimations performed in developed countries. As a result, the estimates tend to overvalue the unexplained part of the gender wage gap. This means that data collection must be improved to foster more accurate policy recommendations.

Most of the comparability problems associated with data quality arise from the measurement of two variables: earnings and experience. The estimated results found in various studies are sensitive to the choice of these two key variables. Studies that use hourly rate of pay—as opposed to monthly wages—in the decomposition tend to obtain lower gender wage gaps because, in the region, men tend to work more hours per week than women. Second, using age as a proxy for experience instead of actual or potential experience also decreases the estimated gender wage gap.

Nópo, Daza, and Ramos (2011) use a semiparametric decomposition technique adopted from the program evaluation literature.

Full-time work and part-time work are defined by a set of dummy variables, including working less than 20 hours a week, working between 20 and 40 hours a week, and working more than 40 hours a week. The type of employment is defined as a set of dummy variables for employee, employer, or self-employed. A rise in the number of hours of work per week considerably increases the gender wage gap. This is an indication of the existence of a wage penalty for women and part-time workers. In contrast, work in the formal sector and certain types of employment decrease the gender wage gap.
der wage gap. At the same time, these variables explain only about 9 percent of the gender wage gap. This means that only a third of the gender wage gap is explained by worker and job characteristics, including occupation.

The field of study is a minor determinant of the gender wage gap. The field of study is significant, but does not play a major role in explaining the gender wage gap. Job characteristics, including occupation, play a more important role. While job characteristics explain almost 10 percent of the gender wage gap, field of study explains only 1 percent of the gap. The association between field of study and occupation is strong, however.

The determinants of the gender wage gap vary in some countries in the region. A study by Blunch (2010) that relies on different data and a different decomposition method finds alternative results for Kazakhstan, FYR Macedonia, Serbia, and Ukraine. Whether occupational segregation is a constraint or a product of self-selection should be the subject of more research, but the evidence on labor market transitions discussed above indicates that women tend to stay in the public sector, partly because of nonpecuniary benefits such as maternity leave, flexible hours, or job attachment (Dimova, Gang, and Landon-Lane 2006; Jurajda 2003).

The unexplained gender wage gap
The conclusion we may draw from all the studies is that most of the gender wage gap in the region remains unexplained. This result contrasts with the usual finding on Western Europe or the United States, where education, experience, occupation, and industry explain about 90 percent of the gap.54 The significant unexplained portion of the gender wage gap points to discrimination: women simply do not have access to equal pay.

Our two main explanations for the gender wage gap are discrimination in the labor market and the need to give a cost signal to employers if women show greater variability in productivity. The archetypal interpretation of the increment in the estimated gender wage gap if we control for educational attainment is that there is discrimination in the labor market. This may be pure discrimination or statistical discrimination. Additionally, analyses have found that, in a situation of great variability in wages across a group, workers with greater ability signal their greater productivity by acquiring more education.55 This may be the prevalent situation in Europe and Central Asia.

Change in the Gender Wage Gap over Time
The unexplained gender wage gap decreased in the region during the 1990s. An interesting result of the analysis of Paci and Reilly (2004) arises after the incorporation of a trend in the meta-analysis of the decompositions of the gender wage gap during the 1990s.56 This trend was found to be negative, indicating that the unexplained gender wage gap decreased by about 1 percentage point per year during that decade.

However, in many countries in the region, the unexplained gender wage gap increased during the 1990s. Assessing the change in the unexplained gender wage gap in each country (or in each study), we see that, in 11 of the 26 countries examined in Paci and Reilly (2004), there was an increase in the gender wage gap.57 Moreover, in many cases, the magnitude of the increase was significant. For example, in less than 10 years, the gap increased from 26 to 45 percent in Armenia, from 29 to 47 percent in Azerbaijan, and from 22 to 57 percent in Tajikistan.

More analysis and more data are needed to assess whether the trends in the evolution of the gender wage gap observed in the 1990s continued during the last decade. Whether these patterns persisted in the 2000s is difficult to assess given that there is

55 Lang and Manove (2006) propose a model that combines statistical discrimination and educational sorting that explains why blacks obtain more education relative to whites at similar cognitive ability.
56 Technically, a trend is a variable the value of which increases by 1 each year to reflect a linear evolution of the independent variable over time.
57 See table 3.2 in Paci and Reilly (2004) for more details.
no study, to our knowledge, that compares findings based on the use of the same data, but variable definitions of the gender wage gap. Analysis of the evolution of the gender wage gap over time can contribute to understanding how the labor market reacts to changes in the composition of the labor force as the characteristics of entrant cohorts change. It can also help in understanding the consequences of changes in institutions and wage structures.

The Implications for Policy Design

In this section, we discuss how maternity leave, childcare policies, and pension benefits relate to gender wage gaps in employment and pay.

Maternity and Parental Leave

Maternity leave is quite generous in Europe and Central Asia. Maternity leave was reformed in most countries through the revision of labor codes during the transition to a market economy. Most of these laws are more generous than the old laws or the laws prevalent in developed countries. Table 2.2 shows the maternity leave benefits available in Europe and Central Asia. Most countries offer, on average, six months of paid maternity leave.58 This is quite a generous policy compared with policies in countries such as the United States, where maternity leave is only 12 weeks, but stingy compared with policies in countries with low fertility rates such as Sweden, where the maternity leave is 15 months.

There is some variation across countries in the region in maternity leave benefits. Maternity leave benefits vary considerably across the region. In Bosnia and Herzegovina and in FYR Macedonia, the benefits are generous and comparable with those in the Nordic countries; they are 365 and 270 days, respectively. In Romania and Ukraine, the maternity leave is 112 days, similar to the benefit in the United States. Most of the countries in the region offer 130 days of paid or partially paid maternity leave.

The generous maternity leave benefits in certain countries in Europe and Central Asia seem to represent a response to low total fertility rates. All the countries with generous maternity leave benefits have total fertility rates below the replacement level. Bosnia and Herzegovina has the lowest total fertility rate and the most generous maternity leave policy. However, two other countries—Albania and Montenegro—with generous maternity leave laws have considerably higher total fertility rates than Bosnia and Herzegovina (1.6 and 1.9, respectively, versus 1.2 children per woman in Bosnia and Herzegovina; all three provide 365 days of paid maternity leave).

Parental leave benefits are unusual in the region. Parental leave benefits are almost nonexistent in Europe and Central Asia. Only two countries offer parental leave benefits: Azerbaijan, which offers 14 unpaid days of parental leave, and Latvia, which offers 10 paid days of parental leave.59 This indicates that the region is still conservative regarding the scope of parental leave benefits, and, despite the low fertility rates observed in many countries, none of them have adopted more modern systems, such as the systems of Norway and Sweden.

Increasing parental leave benefits is a way to incentivize higher fertility rates. The question whether parental leave benefits, especially maternity leave, are sufficient to incentivize higher fertility rates is unresolved. However, the available evidence seems to indicate that there is a positive association between the two.60 In Sweden, the change in family

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58 In some countries, the basis of the paid leave varies with the length of the maternity leave and ranges from the full wage of the last working year to 85 percent of the last annual wage.

59 Bulgaria offers a year of paid leave, as well as shorter partially paid leave, for single male parents.

60 This assertion is based on the estimates of Ruhm (1998), who examines data on selected Western European countries (Denmark, Finland, France, Germany, Greece, Ireland, Italy, Norway, and Sweden). More extended entitlements (nine months) raise the predicted ratios of female employment to population by approximately 4 percent, but with a decrease in hourly wages of around 3 percent.
policies that began in the 1980s contributed to an increase in the total fertility rate (Hoem 1990). In the United States, it has been found that women with high rates of desired fertility do not sort themselves into jobs with more maternity benefits. However, women already working in jobs with higher maternity benefits are more likely to have more children (Averett and Whittington 2001). The question remains unanswered whether these benefits offset the high costs of generous maternity benefit systems.

Increasing maternity leave benefits may reduce female labor force participation. The other relevant question we must ask in analyzing maternity leave benefits is whether the benefits will discourage female labor force participation. As in the case of fertility rates, there is no unanimous answer to this long-standing question. However, in the case of the United States (where the work culture is considerably different relative to other parts of the world), it has been shown that, among women who had jobs before giving birth, those with maternity leave...
benefits return sooner to their jobs (immediately after the 12 weeks of leave) than those without the benefits. In general, maternity leave coverage is not related to female labor force participation, at least not in the United States, but to the length of the leave benefit.\textsuperscript{61}

**Interruptions in labor force participation because of childbearing reduce wages.** The interruptions in labor force participation related to childbirth and child-rearing have a definite negative impact on women’s wages. It has been estimated that, in the United States, a 12-month interruption in full-time jobs because of childbearing reduces the lifetime incomes of women by about 10 percent.\textsuperscript{62} There are multiple mechanisms through which this occurs. First, women do not accumulate any work experience while they are out of the labor force, placing them in an unfavorable position if they have to compete with men for jobs. Second, during the time women are out of the labor force, their labor market skills can depreciate. Moreover, it is more difficult to find a job if one begins the search while out of the labor force rather than while unemployed (Omori 1997; Fallick, Haltiwanger, and McEntarfer 2010; Fernández-Kranz and Rodríguez-Planas 2011).

Women perceive interruptions in labor force participation because of childbearing as detrimental to their careers. In seven countries of the region, 25 percent of women who had each had at least one child since 1987 stated that their job interruptions because of childbearing had negative consequences on their careers.\textsuperscript{63} Only 14 percent of the women in these countries who had had at least one child before 1987 had the same view, implying that the experience about which they were concerned occurred after the end of the socialist period. In Poland and Ukraine, respectively, 50 and 40 percent more women reported negative consequences compared with the average across the seven countries.\textsuperscript{64}

**Childcare and Elderly Care**

*Population aging will disproportionately impact women as the supply of health services declines and the need for the care of the elderly increases.* Expenditures on long-term care are expected to double in almost all Eastern European and former Soviet countries and will eventually account for between 0.5 and 1.0 percent of GDP. The projections of a World Bank study show that, if institutionalized care is extended to cover 20 percent of the elderly with disabilities, expenditures on long-term care alone will consume between 2 and 4 percent of GDP (Alam, Anós Casero, and Khan 2008). Countries in the region must carefully deliberate on the policy choices in the provision of such services. Informal care will be an increasingly important part of such policies. Women as informal providers of care will be greatly affected.

*The opportunity costs of any increases in care responsibilities will be particularly high, especially among younger women.* A recent World Bank report warns of the dangers of increasing the burden on the declining number of informal caregivers, that is, women currently not in employment. The capacity and willingness of informal caregivers to

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61. For more details, see Berger, Hill, and Waldfogel (2005).
62. For more details, see Francesconi (2002), who builds a structural model of fertility and work decisions and provides illustrative simulations of the benefits of each decision. He compares a profile of no full-time job interruptions to each of two alternative choices: a year-long interruption after childbirth versus a year of part-time work after childbirth. His simulations show that there is no statistically significant difference between part-time work and interruption choices. Working part time is slightly better than being out of the labor force, but the difference is negligible. The other interesting result of the exercise is the finding on the cost of the interruption of full-time work, which is about 25 percent of income utility relative to a full-time working career in the short run, followed by a rebound effect once a woman returns to full-time employment. However, the total loss in income over the life-cycle is about 10 percent. This is for the most conservative simulation involving the birth of only one child and only one year-long interruption. The losses are obviously higher with more interruptions (that is, more children).
63. The seven countries are the Czech Republic, Estonia, Hungary, Poland, Slovenia, the Slovak Republic, and Ukraine.
64. For more details on women’s perceptions of the consequences of career interruption because of childcare, see Zhelyazkova and Valentova (2009).
continue providing care is also a major concern: “There is a real danger of unpaid informal caregivers becoming overloaded and feeling compelled to move their elderly family members to an institution” (Chawla, Betcherman, and Banerji 2007, 34) Such caregivers will need to be provided with support.

Looking after other persons, raising children, and performing housework are the main reasons women give for staying out of the labor force or working part time. A recent Eurostat survey finds that women are “held back from working full-time by the work that they carry out raising children, looking after other persons, or housework; this was the single largest reason (36.0 percent) for women working less than 30 hours per week in 2007, in contrast to the proportion (5.0 percent) of men for whom this was the reason that they worked less than 30 hours per week” (European Commission 2010, 27) (figure 2.16).

Innovation in policy design is needed to avoid unwanted substitution effects between raising fertility rates and discouraging female labor force participation. In Romania, the child allowance benefit is a monthly cash transfer for a parent who stays at home to take care of a child. It is equivalent to 85 percent of the average income earned by the parent over the past 12 months and is available until the child is 2 years old (box 2.4). This type of policy does not specify which parent should stay at home to receive the benefit, though it is more likely that mothers will. This raises the question of whether this policy will have the same impact as a maternal leave policy. Answering this question would require significant national dialogue, but also thorough consideration of the entire range of family policies, such as the maternity leave, so as to be consistent, gain efficiency, and foster accurate targeting.

The enrollment rate in childcare facilities among under-3-year-olds is lower, on average, in Europe and Central Asia than the observed average rate in se-

![Box 2.4: Family Policies in Romania](image.png)

The state child allowance is a monthly cash transfer to all children age 0 to 18 (or more if the child is still in school), with differentiated benefit levels for all children 0 to 2 years old (RON 200), children 2 to 18 years old (RON 42), or children with disabilities who are 0 to 3 years old (RON 200) or 3 to 18 years old (RON 84). The value of the benefit has been raised five times since it was implemented.

The child-raising benefit is a monthly cash transfer for a parent who stays home to care for a child. It is equivalent to 85 percent of the average income earned by the parent over the previous 12 months. The value ranges from a minimum of RON 600 to a maximum of RON 4,000. It is granted until the child turns 2 years old or 3 if the child is disabled. On January 1, 2011, the parameters of the program were modified. A parent who opts to participate in the program for two years receives a monthly allowance equivalent to 75 percent of the average income earned by the parent over the past 12 months. The value of the benefit ranges from a minimum of RON 600 to a maximum of RON 1,200. A parent who opts to participate in the program for one year receives a monthly allowance equivalent to 75 percent of the average income earned by the parent over the past 12 months. The value of the benefit ranges from a minimum of RON 600 to a maximum of RON 3,400. Parents who opt for the one-year program and return to work before the end of the program are eligible for a back-to-work bonus of RON 500 per month for the second year upon their return to work.

These programs have resulted in a modest increase in fertility rates at the expense of a reduction in labor force participation among parents of childbearing age. These programs may be revised in light of further analysis to achieve the same goals in a more efficient and simpler way. The overlap in the programs increases costs, allows room for error and fraud, and could be eliminated or reduced through simplification and coordination with other family and social programs.

lected Western European countries. On average in Europe and Central Asia, only 13 percent of children under the age of 3 are sent to childcare. In Western Europe, the rate is 34 percent (figures 2.17 and 2.18). While childcare enrollment in Europe and Central Asia fell considerably during the 1990s and has not increased in the last decade, the trend is quite the opposite in Western European countries.

The low enrollment rate in childcare is a consequence of the lack of childcare services. The enrollment rate in childcare among under-3-year-olds varies greatly across the region. This large variation may be caused by a lack of labor market opportunities among women that would encourage women to send their young children to childcare and participate in the labor market or by social norms or preferences, but also by a lack of childcare services. This last seems to be a strong determinant. For the small sample of countries in the region on which we have information on childcare availability, childcare enrollment rates increase in tandem with the places available in childcare facilities. Providing more (subsidized) childcare could serve not only to promote female labor force participation, but also to increase fertility rates.

In the region, mature women who retire early could become caregivers for children and the elderly. Countries in the region could take advantage of the fact that women are retiring relatively young and in good health and exhibit high life expectancy. These women could provide both childcare and elderly care. In many countries in the world, grandmothers are providing childcare. For example, since the introduction of the grandparent childcare benefit, the Australian government has been paying grandparents who take care of their grandchildren for up to 50 hours per week. The United Kingdom is considering a similar policy; the city council of Nottinghamshire conducted an experiment in 2004 involving payment to grandparents on a weekly basis to take care of their grandchildren. Although this kind of policy is not consistent over time because, as women become more attached to the labor market, their opportunity cost in providing care increases, it may represent a fruitful resource for the near future given the characteristics of the 55–65 age cohort among women.65

Awareness should be raised to demystify care as a female activity and to involve men more regularly. As we see elsewhere above, most of the constraints—many times, self-imposed—in the labor market are related to the fact that women have to carry out work on the labor market, as well as household chores. The elimination of some of these constraints arises through the development of new technologies that reduce the time required to perform household chores. To improve the opportunities for women to gain access to the same jobs as men, husbands should become more involved in household chores, particularly in childcare and elderly care.

Pensions

The aging of the population has raised concerns about the sustainability of pension systems in view of the growing number of beneficiaries and the declining number of younger contributors. However, EU and World Bank projections show that appro-

65 For more details, see Posadas and Vidal-Fernández (2011).
Appropriate and timely policy reforms can significantly reduce the impact of aging populations on pension systems.

In most countries in Europe and Central Asia today, women are able to retire at a younger age relative to men. The average age of retirement in the region is 55 for women and 57 for men. This is considerably lower than the observed average in OECD countries, where the age for both women and men is 60. In Turkey, the minimum retirement age varies depending on whether the person was registered with the system in 1999 or not. For new entrants since 1999, the retirement age for women has been set at 58 and for men at 60 (except in one of the three current schemes). The minimum retirement age for people who were already in the system in 1999 has been increased to 52 for women and 56 for men (Chawla, Betcherman, and Banerji 2007).

To avoid a severe fiscal crisis related to the lack of sustainability in a pension system, labor force participation should increase, particularly among women. To raise labor force participation, an untapped area of reform is the equalization of the retirement age among women and men. Raising the age of retirement for women will have a doubly positive effect. On the one hand, it will increase the revenues of the pension system deriving from working women; on the other hand, it will reduce the period over which these benefits need to be spread, which is particularly important given that women have longer life expectancy. In addition to enhancing the sustainability of pension systems, longer tenures will boost women's pension benefits, as well as the opportunities of women to reach senior decision-making positions.

To avoid unintended secondary effects on fertility rates, while encouraging female labor force participation, some countries in the region have considered linking the retirement age to fertility rates. Pronatalist policies in many countries in Europe and Central Asia require women to work fewer years than men. In the Slovak Republic, for example, the retirement age for women depends on the number of children the women have raised: the greater the number of children, the lower the retirement age. However, because the fertility decision is based on a complex mix of factors, including the cost of bringing up children, the opportunities for women’s participation in higher education and employment, household economic status, marital status (including divorce and cohabitation), and the degree of compatibility of work with childcare, the balance of

**FIGURE 2.18** Share of 0- to 3-Year-Olds Enrolled in Childcare, 2008


*Note*: ECA = Europe and Central Asia.
evidence suggests that the effect of transfer-based pronatalist policies is negligible (Chawla, Betcherman, and Banerji 2007).

*Because growth in labor productivity has been the main engine of growth in the region, it is essential that countries implement policies to continue benefiting from this trend.* The cornerstone of the reform strategy going forward is increased productivity. Measures to improve labor productivity may potentially offset the effects of reductions in the size of the labor force. For example, growth decomposition exercises show that, in most of the countries in the region, the growth in labor productivity in recent years has been the single greatest contributor to increases in per capita incomes (Chawla, Betcherman, and Banerji 2007).