Chapter 10
Not Just Education: The Gender Wage Gap in the Albanian Labor Markets Through Occupational Segregation, Work Experience, and Child Care

Juna Miluka

Introduction

The analysis of wage discrimination and for labor markets is a good reason and an enduring fashion in economics. Wage discrimination remains a persistent problem. In the context of a developing country such as Albania, labor market discrimination might have stronger and longer lasting impacts than elsewhere as it interacts with a number of other market imperfections. Understanding discrimination is especially important due to the impact that it may have on income inequality, the education of future generations (stemming from the expectations formed by parents), occupational distribution, women's position and opportunities, intergenerational inequality, and ultimately poverty. The lack of empirical studies focused on labor market issues in Albania makes this an even more topical issue to analyze.

Albania underwent major transformations as a result of the change from centralized planning to an open market economy. Those transformations were partly reflected in the labor market. Before 1990, the labor market was characterized by state controlled individual decision-making and a high degree of centralization. In the early 1990s, the labor market was liberalized. This new direction was associated with a period of high unemployment due to the closure of major industries and overcrowding in administrative jobs. Since the mid-1990s, there has been a considerable increase in private businesses mainly due to remittances from emigrants. However, the rate of long-term unemployment remains high, especially among women (Cuka et al. 2003).

The transitional period in Albania was characterized by wider changes, including the reintroduction of traditional law. Women were adversely affected by increased vulnerability in the labor market, and reduced economic status (Lawson and

J. Miluka (✉)
Department of Economics and Finance, University of New York, Tirana,
Rr: Komuna e Parisit, Tirana 1000, Albania
e-mail: junamiluka@unyt.edu.al

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Saltmarshe 2000). State enterprises, which employed the majority of women, collapsed ending the social protection associated with the jobs they provided. In addition, market reforms increased earning inequalities through wage and price liberalizations and changed the characteristics of employment (The World Bank 2002). The unavailability of social protection and economic rights reinforced women's homemaking roles (Tarifa 1994). Consequently, women faced more work within the family, but less mobility and fewer chances to find jobs. With the state stopping child-care provision and long paid maternity leaves, women faced long-term structural discrimination in the labor market (Kligman 1996). With their reduced status and the additional burdens placed on them, women who were in lower occupation and were being paid less became an easily targeted group for discrimination.

Statistics from the Albanian Ministry of Labour and Social Affairs (AMoLSA) (2005) show that in 2004, employment levels were 38.3% for women and 60.1% for men, whereas unemployment was 17.5% for women and 12.4% for men. In terms of participation in the labor force, in 2003, 70.5% of men in the working age participated in the labor force compared to 46.7% for women (AMoLSA 2005). In 2004, labor force participation was 68.6% for men and 46.4% for women. Women overwhelmingly remain in the social-state-service sector, where they comprise 80% of employees (AMoLSA 2005). Men are working particularly in lawmaking, as senior officials, and as leading executives, while women are mostly found as specialists and regular employees (AMoLSA 2005). As a result of occupational segregation, women's wages are also lower than those of men even at equivalent (or higher) levels of education. In urban areas females attend universities more than men in part as a way to deal with the lower employment opportunities that they face in the labor market (The World Bank 2002).

The training curriculum also promotes occupational segregation as there is a tendency for vocational training for women to be in the traditional fields (AMoLSA 2005). Statistics from the AMoLSA show that in 2004 the vast majority of vocational training programs for females were concentrated in English, Italian, computer, secretary, sewing, and cosmetics. Only three courses offered skill training in trades, which makes it easier to find a job in the labor market. Furthermore, the educational curricula retain reproductive and gender stereotypes in the selection of the fields of study (AMoLSA 2005). In this way gender roles and occupational segregation are promoted, and a lack of career orientation related to the skills required in the labor (AMoLSA 2005).

Given that Albania had achieved almost universal literacy, high levels of women's education, high participation in the labor force, and extensive child care and maternal health during communism, it has often been difficult for policy makers to acknowledge the true position of women and recognize the burdens of paid and unpaid work. Yet failure to recognize that women might be in a less favorable position than men reinforces gender imbalances. This chapter draws on the literature and methodology of wage decompositions. It estimates the gender wage gap in Albania and identifies the different sources that account for the disparity.

Brief Literature Review

During communism wages, in almost all of the transition economies, were set according to the industry-specific wage grids responding only to worker's education and experience (Munich et al. 1999). There was a policy of full employment, and women enjoyed high education and health-care access (Munich et al. 1999). The fall of communism ended wage regulations, leading to increased returns to education and greater wage dispersion (Svejnar 1999). Different countries have experienced different levels of gender wage dispersion neglecting the skill composition, labor market institutions, and the history and culture of specific countries. Overall, during the early transition, the gender wage gap diminished in Eastern Europe, but increased in Russia and Ukraine (Brainerd 2000). During mid-transition, Newell and Reilley (2000) report that the gender wage gap remained relatively stable for most countries in the transition economies.

Human capital, work experience, occupational segregation, social norms, and household characteristics are all possible sources of the gender wage gap. As far as human capital is concerned, returns to education had more than doubled in Romania by 2000 compared to the levels under central planning (Andren et al. 2004). Skill-related wage differences generally rose in the transition economies following the political change (Svejnar 1999). In the case of Bulgaria, Giddings (2002) shows that the high levels of human capital that women had acquired during communism helped them in the transitional period by increasing their earning and improving their economic conditions. Similarly, women's higher levels of human capital helped reduce the gender wage gap in Russia (Oglobin 2005). In the case of Albania, as in many other transitional economies, the policies of the communist regime provided free education for all, full labor force participation, and a fairly small gender pay gap (Silova and Magno 2004). As a result of the high education levels inherited by women educated in the communist period, we would expect that human capital played no role (or perhaps even favored women) as far as the wage gap is concerned.

Work history and experience is also expected to affect the gender wage gap. Women have more home time than men due to the responsibilities of child bearing and parenting (Kunze 2000). They also have more interrupted work histories due to the family responsibilities (Kunze 2000). Since work experience is also one of the main components influencing wages, lower or interrupted work experience will be rewarded less by the market, thus influencing the gender wage gap.

With the fall of communism social support for child care, in Albania, suffered greatly. Day care was no longer provided by the transferring responsability to individuals. Since women are the main care providers, child bearing and parenting places additional demands on them. Thus, we would expect the lack of publically funded child care to reinforce the impact of the interrupted work experience of women and increase the gender wage gap.

Occupation segregation by industry or job status also contributes to the gender wage gap. Women comprise the majority of workers in the service occupations, while men are largely found in manufacturing jobs and industries (Kunze 2000). Differences in occupation generate differences in wages for two reasons. First, different occupations require different skills, and since some occupations reward

skills more than others, occupational segregation may increase the wage gap (Oglobin 1999). If women are segregated in the lower paying occupations, they will receive lower wages. Second, from simple supply and demand analysis, we know that if demand stays constant, but supply increases, prices will fall. If women are concentrated in certain occupations, then increased supply for those occupations can give employers some degree of monopsony power (Joshi and Paci 1998), to reduce wages. Jurajda (2003) finds that in the Czech Republic and Slovakia occupational segregation explained over one third of the gender wage gap. Similarly, Oglobin (1999) finds that gender differences in education and work experience are not enough to explain the gender wage gap in Russia. Here too it is occupation segregation which is the main determinant of gender disparity, accounting for 75–80% of the gender wage gap (Oglobin 1999). As a result of the similarities of labor market practices across the region, occupational segregation is expected to play a major role in most of the transition economies (Oglobin 1999). For example, in Albania women are mostly concentrated in the service industry and public administration (AMoLSA 2005).

Social norms may also affect the gender wage gap by promoting occupational segregation, by dictating certain gender roles, and influencing employers' preferences. In the case of the Czech Republic and Slovakia employers strongly preferred men to women in many occupations. In addition to the usual preference for men in maintenance and repair, employers also preferred male to female employers in professional, administrative, and service occupations. Overall, 36 to 58% of employers preferred males employees, while under 10% preferred women (Svejnar 1999).

Household decision making regarding labor market choices may override individual choices. Family and housework responsibilities are found to explain a large part of the unadjusted gender wage gap (Andren and Andren 2007). Women often make a choice regarding their occupation dictated by their household characteristics. Having children increases women's preference for participation in the public sector because it provides more flexibility (Gang et al. 2006). This also relates to the lack of social support for women in terms of day care and to the role of women as the main child-care providers. In the following section we explore how gender discrimination plays out in Albania, drawing on survey evidence.

Econometric Model

The data for our research is obtained from the 2005 ALSMS (Albanian Living Standard Measurement Survey study) conducted by INSTAT (Albanian Institute of Statistics) under the technical supervision of the World Bank. The 2005 ALSMS is a standard household survey. In addition to the usual household roster, community characteristics, food consumption, and other features, it includes a module providing information on labor force participation, hours worked, wages and types of jobs. The sample is stratified into four regions: coastal, central, mountain, and Tirana. It contains 3,680 households in which 5,540 individuals are of the ages 15 and above included in the labor module. A total of 1,829 of these individuals report no wages,

thus leaving the final sample with 3,703 individuals reporting wages. There are 1,111 females and 718 males in the labor module that report no wages. The average education of those that do not report any wages is of 8.13 years.

In this chapter, we use both the Oaxaca–Blinder (1973) and Lemieux (2002) methodologies to analyze the gender wage gap and its decomposition in the Albanian labor market. The Lemieux (2002) technique yields results which are easily interpreted and have economic meaning. It also goes beyond the decomposition of means to decomposing wages and wage dispersion over the full distributional case, and models residuals as the pricing of unmeasured skills, rather than as the unexplained part of the regression (Lemieux 2002).

Oaxaca–Blinder Decomposition

Following Oaxaca–Blinder (1973), the wage differential between two groups, males vs. females in our specific case, may be decomposed into (1) the proportion of the differential attributed to the shift of the coefficients $b_0^{\mathrm{f}} - b_0^{\mathrm{m}}$, which is typically regarded as pure discrimination, or the rent of being of a specific sex; (2) the explained part attributed to the differences in the coefficients b_i^{f} and b_i^{m} and the differences in the average characteristics or endowments $\overline{X}^{\mathrm{F}}$ and $\overline{X}^{\mathrm{M}}$; and (3) the unexplained or interaction between the coefficients and the average characteristics. Thus, stemming from the[1] basic equation used in this analysis, the human capital earnings function from Mincer (1974),

$$\ln w = c + rS + b_1 E + b_2 E^2 + e, \tag{10.1}$$

where w is hourly wage, c is a constant, S is years of schooling, E is years of experience in the labor market, and e is the error term—we can write the raw wage differential as

$$R = b_0^{\mathrm{f}} + \sum\nolimits_i b_i^{\mathrm{f}} \overline{X}_i^{\mathrm{F}} - (b_0^{\mathrm{m}} + \sum\nolimits_i b_i^{\mathrm{m}} b_i^{\mathrm{m}} \overline{X}_i^{\mathrm{M}}) = E + C + U, \tag{10.2}$$

where E = portion of differential attributed to differences in endowments

$$E = \sum\nolimits_i b_i^{\mathrm{f}} (\overline{X}_i^{\mathrm{F}} - \overline{X}_i^{\mathrm{M}}), \tag{10.3}$$

C = portion of differential attributed to changes in coefficients

$$C = \sum\nolimits_i \overline{X}_i^{\mathrm{M}} (b_i^{\mathrm{f}} - b_i^{\mathrm{m}}), \tag{10.4}$$

[1] The notation used in this section derives mainly from Lemieux (2002).

U = the unexplained portion of the differential due to the shifts in the coefficients $b_0^{\mathrm{f}} - b_0^{\mathrm{m}}$, and D = portion of the differential attributed to discrimination = $C + U$.

Lemieux Decomposition

Following Lemieux (2002), and using standard OLS regressions augmented by a probit model, the gender wag gap is decomposed into (1) changes in the regression coefficients, (2) changes in the distribution of the covariates, and (3) changes in the residuals, which are modeled as a function of unmeasured skills and skill prices. More specifically, in this approach, we create counterfactual wages controlling for (1) changes in prices, b; (2) changes in endowments, x; and (3) changes in unobservable, u. The first step is to run separate OLS regressions for males and females. Keeping the same endowments and error terms from the female regression, we create female counterfactual wage regressions, using the b's from the male regression. This way we can see what the female wage equation would look like if females were paid according to male wages. After controlling for changes in the price of skills, we can control for changes in endowments by creating a female counterfactual wage that keeps the b's from the female wage equation, but that gives females the endowments, x, from the male wage equation. Thus, we can see how the average wages for females would change, if they were to be paid according to the female wage equation, but having the endowments of men. In order to assign to females the average endowments of males, we run a probit equation on the entire sample of being male (using as many controls as possible) and use the propensity score to weight the female wage equation. Below we formally present the above summary of the methodology used.

Decomposition of Wages Through Changes in the Regression Coefficients

Referring to the previously mentioned wage equation from Mincer (1974),

$$\ln w = c + rS + b_1 E + b_2 E^2 + e, \tag{10.1}$$

where w is hourly wage, c is a constant, S is years of schooling, E is years of experience in the labor market, and e is the error term; let us consider a more general form of the above equation:

$$y_{i\mathrm{f}} = x_{i\mathrm{f}} \beta_{\mathrm{f}} + e_{i\mathrm{f}}, \tag{10.5}$$

where i is an indicator for each individual and f stands for female (a regression equation for females), $x_{i\mathrm{f}}$ is a $1 \times k$ vector of covariates (including a constant), β_{f} is a $k \times 1$ vector of parameters, and $e_{i\mathrm{f}}$ assumed to have $E(e_{i\mathrm{f}} | x_{i\mathrm{f}}) = 0$. In terms of our wage

equation, y_{if} is the log hourly wages for females; x_{if} is a vector of human capital and other control variables. The OLS estimated regression equation is

$$y_{if} = x_{if} b_{\mathrm{f}} + u_{if}, \tag{10.6}$$

where u_{if} is the regression residual, which by construction is uncorrelated with the covariates and has a mean of zero.

The sample average of y for females is

$$\overline{y}_{\mathrm{f}} = \overline{x}_{\mathrm{f}} b_{\mathrm{f}}, \tag{10.7}$$

where $y_{\mathrm{f}} = \sum_i \overline{y}_{if}$; $x_{\mathrm{f}} = \sum_i \overline{x}_{if}$. Consequently, we can apply the same equation to the earnings of males, in which case we would have a sample average of

$$\overline{y}_{\mathrm{m}} = \overline{x}_{\mathrm{m}} b_{\mathrm{m}}, \tag{10.8}$$

where *m* stand for male. Stemming from Oaxaca (1973) and Blinder (1973), we can decompose these changes in means as

$$\overline{y}_{\mathrm{f}} - \overline{y}_{\mathrm{m}} = \overline{x}_{\mathrm{f}} (b_{\mathrm{f}} - b_{\mathrm{m}}) + (\overline{x}_{\mathrm{f}} - \overline{x}_{\mathrm{m}}) b_{\mathrm{m}}, \tag{10.9}$$

where the first term on the right is the difference in the estimated parameters and the second term is the difference in the mean values of the covariates between females and males. Another way of interpretation is that $\overline{x}_{\mathrm{f}} b_{\mathrm{m}}$ represents a counterfactual value of *y* that would be obtained if the parameters for females were replaced by the parameters of males. Going back to the wage equation, it represents the average wage for females if the returns to human capital were the same as those of males.

This counterfactual can be written as

$$\overline{y}_{\mathrm{f}}^{a} = \overline{x}_{\mathrm{f}} b_{\mathrm{m}} \tag{10.10}$$

and it can be used to rewrite the decomposition of the difference between the average value of *y* for females and males, such as

$$\overline{y}_{\mathrm{f}} - \overline{y}_{\mathrm{m}} = (\overline{x}_{\mathrm{f}} b_{\mathrm{f}} - \overline{y}_{\mathrm{f}}^{a}) + (\overline{y}_{\mathrm{f}}^{a} - \overline{x}_{\mathrm{m}} b_{\mathrm{m}}) = (\overline{y}_{\mathrm{f}} - \overline{y}_{\mathrm{f}}^{a}) + (\overline{y}_{\mathrm{f}}^{a} - \overline{y}_{\mathrm{m}}) \tag{10.11}$$

The individual-specific counterfactual wage

$$y_{if}^{a} = x_{if} b_{\mathrm{m}} + u_{if} = y_{if} + x_{if} (b_{\mathrm{m}} - b_{\mathrm{f}}) \tag{10.12}$$

can be computed either by obtaining the sample average of x_{if} and applying $\overline{y}_{\mathrm{f}}^{a} = \overline{x}_{\mathrm{f}} b_{\mathrm{m}}$ or by computing directly the sample average of

$$\overline{y}_{if}^{a} = \sum \omega_{if} y_{if}^{a} \tag{10.13}$$

Decomposition of Wages Through the Distribution of Covariates

The decomposition of wages through the distribution of covariates may be achieved by constructing a counterfactual weight ψ_i, which yields the distribution statistic that would have existed if the distribution of x for the females had the same distribution as males. The main idea behind this type of decomposition rests in the estimation of a probit model in order to compute the reweighting factor ψ_i. The reweighting factor ψ_i is constructed by pooling together the male and female samples and estimating a probit model for the probability of being male. Conditional on x the estimated probit model estimates the predicted probability of being a male. We can denote the predicted probability as

$$P_{if} = \mathrm{Prob}(\mathrm{sex} = \mathrm{male} \mid x_{if}) \text{ and the re} - \text{weighting factor as} \tag{10.14}$$

$$\psi_i = [(1 - P_{if}) / P_{if}] \times [P_t / (1 - P_t)], \tag{10.15}$$

where P_t is the unconditional probability that an observation is male. This procedure has the advantage of not suffering from the dimensionality problem of a cell-by-cell procedure, and it can incorporate several controls by including various independent variables in the probit model. In this context the distribution of females with the distribution of covariates of males can be obtained by weighting y_{if} by ψ_i.

There is no agreement in the literature on the inclusion of control variables in the wage regression (Kunze 2000), leaving them to the discretion of the researcher and to the question that needs to be answered. In addition to the standard education and experience variables, we also include additional control variables. The number of children and the person's marital status are included because they may serve as a measure of the effect of women's double burden on their wages. The lack of social support and state-provided child care makes women the primary care givers of their children. Thus, the number of children reflects the cost of lost experience for women (Grimshaw and Rubery 2002). A married women with children might be viewed from the employer as less productive, since she might need more time off work. As a result, the employer might offer women lower wages. On the other hand, a married man might be regarded as more stable and dedicated to work since it is the wife that is expected to take care of the household. Married men may also just receive preferential treatment (Weichselbaumer and Winter-Ebmer 2005). The distance index and

social capital index are included to control for the costs or benefits of social support. Women who live in areas with adequate transportation and have social capital that facilitates child rearing might be more productive and mobile. We control for the percentage of females in each occupation as to control for occupational segregation. This variable has been widely used in the literature to capture female occupational segregation (Jurajda and Harmgart 2007; Andren and Andren 2007). Lastly, we control for regional differences, which can play a role in terms of market segmentation and supply side, as well as social, economic, and cultural aspects.

Results

The Oaxaca decomposition results over the entire group of workers show that the principal sources of the gender wage gap are education, work experience, occupational segregation, and number of children. In Table 10.1, the wage differential between males and females is decomposed into three parts accounting for (1) differences in endowments, (2) differences in coefficients, and (3) the interaction between endowments and coefficients. The total difference in endowments is insignificant.

This result is in accordance with the fact that women have on average more education than men presently in the labor market. As found in other transitional economies with high levels of education for women, differences in endowments do not contribute to the gender wage gap. The total difference in the regression coefficients between females and males, which account for the largest part of the decomposition, favors males (–0.510). The difference in coefficients is interpreted as a form of discrimination applied by the market in offering different rewards for the same skills. It means that given women's endowments, the difference between what they are actually paid and what they would get paid if given the male wage structure is negative, indicating a superior wage structure for males. If women were paid men's wages for their endowments, they would get paid more. Lastly, the interaction between endowments and coefficients, which is referred to as the unknown part of the regression, favors women.

The positive values of education in the detailed decomposition for endowments, coefficients, and interaction indicate that the higher levels of education for women give them an advantage. However, education is not enough to make up for the other sources which negatively affect their wage structure. An important variable that accounts for a large part of the differential in wages is experience. Women have on average less experience than men, which is associated with the fact that women take time off for child bearing and rearing. This is negatively rewarded by the labor market putting women at a disadvantage in the economic ladder. The impact of having children is negative and is another major factor putting women at a disadvantage. If there is lack of social support and child-care possibilities, then having children is associated with a discontinuity of participation in employment, a decrease of the stock of human capital, and therefore lower rewards in the labor market. As elsewhere in the literature, occupation segregation for women is also

Table 10.1 Oaxaca decomposition

Variables	Endowments	Coefficients	Interaction
Education	0.036	0.450	0.031
	(0.007)***	(0.088)***	(0.008)***
Experience	−0.055	−0.328	0.048
	(0.021)***	(0.198)*	(0.030)
Experience 2	0.069	0.339	−0.083
	(0.019)***	(0.117)***	(0.030)***
Occupation	−0.051	0.085	0.016
	(0.007)***	(0.052)	(0.010)
Distance index	0.001	0.01	0.010
	(0.002)	(0.004)***	(0.004)**
Social capital	0.000	0.002	0.000
	(0.001)	(0.003)	(0.001)
Number of children	−0.002	−0.13	0.010
	(0.002)	(0.039)***	(0.004)**
Married	−0.005	−0.007	0.001
	(0.005)	(0.068)	(0.007)
Divorced	−0.002	0.000	0.001
	(0.004)	(0.001)	(0.004)
Living together	0.000	0.001	0.000
	0.000	(0.001)	(0.001)
Widow	−0.005	0.002	0.008
	(0.006)	(0.001)	(0.007)
Coastal	0.002	0.004	0.000
	(0.003)	(0.018)	(0.001)
Central	0.009	0.003	0.000
	(0.004)**	(0.017)	(0.003)
Mountain	−0.005	0.022	0.001
	(0.006)	(0.017)	(0.002)
Urban	0.016	0.078	0.016
	(0.005)***	(0.034)**	(0.007)**
Constant		−1.042	
		(0.148)***	
Total	0.008	−0.510	0.059
	(0.017)	(0.026)***	(0.020)***
Observations	3,703		

Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%
(+) indicates an advantage for females, (−) indicates an advantage for males

found to have a large impact in widening the gender wage gap in Albania, possibly through crowding of women in certain occupations and lower wages. Lastly, the shift in the constant term (−1.042), which is usually attributed to pure discrimination in the labor market (Blinder 1973) or else as pure premium of being a specific sex, largely favors males.

As would be expected, the decomposition for the highly skilled workers (holding university degrees and above) shows a smaller gender wage gap (−0.309), Table 10.2. Differences in the coefficients explain the gender wage gap mainly through the

Table 10.2 Oaxaca decomposition for higher education

Variables	Endowments	Coefficients	Interaction
Education	–0.011	–1.720	0.011
	(0.008)	(0.913)*	(0.009)
Experience	–0.239	–0.391	0.124
	(0.120)**	(0.445)	(0.142)
Experience 2	0.2	0.164	–0.075
	(0.102)**	(0.286)	(0.131)
Occupation	–0.03	0.028	0.006
	(0.015)**	(0.106)	(0.021)
Distance index	0.006	0.019	0.006
	(0.007)	(0.034)	(0.010)
Social capital	–0.008	–0.021	0.006
	(0.008)	(0.014)	(0.007)
Number of children	0.000	–0.094	0.005
	(0.003)	(0.074)	(0.007)
Married	0.059	0.295	–0.062
	(0.029)**	(0.145)**	(0.033)*
Divorced	0.000	0.000	0.000
	0.000	0.000	(0.002)
Living together	0.000	0.003	0.001
	(0.001)	(0.004)	(0.003)
Widow	–0.001	0.001	0.000
	(0.002)	(0.005)	(0.002)
Coastal	–0.007	0.026	0.003
	(0.011)	(0.023)	(0.005)
Central	–0.002	0.024	0.001
	(0.013)	(0.024)	(0.004)
Mountain	0.009	0.036	–0.003
	(0.016)	(0.026)	(0.006)
Urban	0.009	–0.029	–0.001
	(0.007)	(0.126)	(0.005)
Constant		1.343	
		(0.934)	
Total	–0.015	–0.315	0.020
	(0.040)	(0.054)***	(0.046)
Observations	589		

Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%
(+) indicates an advantage for females, (–) indicates an advantage for males

different rewards of education, while differences in endowments and interactions are insignificant. Work experience and occupational segregation remain important sources of the gender wage gap in the endowment differences, but they lose significance in the coefficient differences. Unlike the overall decomposition, the number of children is not significant, and being married has a positive effect. In the case of highly educated workers, it might be easier to overcome the lack of state support in child care. Highly educated women are less vulnerable to taking time off from the labor markets since they might have better means of support. In the case of

Table 10.3 Oaxaca decomposition for lower education

Variables	Endowments	Coefficients	Interaction
Education	0.007	0.407	0.010
	(0.003)**	(0.118)***	(0.005)**
Experience	–0.041	–0.19	0.018
	(0.016)**	(0.244)	(0.023)
Experience2	0.060	0.281	–0.05
	(0.017)***	(0.142)**	(0.027)*
Occupation	–0.056	0.088	0.014
	(0.008)***	(0.064)	(0.010)
Distance index	0.001	0.006	0.007
	(0.001)	(0.003)**	(0.004)*
Social capital	0.000	0.004	0.000
	0.000	(0.003)	(0.001)
Number of children	–0.002	–0.128	0.006
	(0.002)	(0.045)***	(0.004)*
Married	–0.005	–0.014	0.001
	(0.004)	(0.082)	(0.005)
Divorced	–0.002	0.000	0.001
	(0.005)	(0.001)	(0.005)
Living together	0.000	0.000	0.000
	(0.001)	(0.001)	0.000
Widow	–0.009	0.002	0.014
	(0.009)	(0.001)	(0.010)
Coastal	0.001	–0.013	0.000
	(0.002)	(0.023)	(0.001)
Central	0.006	–0.01	0.002
	(0.003)**	(0.021)	(0.004)
Mountain	–0.009	0.009	0.001
	(0.006)	(0.021)	(0.002)
Urban	0.012	0.073	0.014
	(0.005)***	(0.036)**	(0.008)*
Constant		–1.054	
		(0.186)***	
Total	–0.037	–0.540	0.038
	(0.018)**	(0.029)***	(0.022)*
Observations	3114		

Standard errors in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1%
(+) indicates an advantage for females, (–) indicates an advantage for males

highly skilled workers, markets seem to be less discriminatory as indicated by the loss in significance of the constant term.

Less educated workers display the largest gender wage gap (–0.539). Table 10.3 shows the largest constant term shift (–1.054), and unlike the previous results, differences in endowments favor men. The males in the lower education workers continue to obtain a superior wage structure. The negative impact of occupational segregation and number of children is the largest for this group. This means that women with less education suffer larger discrimination in the labor market. They are more likely to

Table 10.4 Log wage distribution of females and males in Albania

	Mean	Variance	
		Total	Predicted *xb*	Residual
	(1)	(2)	(3)	(4)
1. Female	9.525	0.559	0.244	0.315
2. Female with male *b*'s	9.977	0.432	0.117	0.315
3. Female with male *b*'s and *X*'s	9.893	2.132	0.095	2.037
4. Male	9.969	0.591	0.120	0.471
5. Female–male difference	–0.444	–0.032	0.124	–0.156
Effect of				
6. *b* (row 1–row 2)	–0.452	0.127	0.127	0.000
7. *x* (row 2–row 3)	0.084	–1.700	0.022	–1.722
8. Residual (row 3–row 4)	–0.076	1.541	–0.025	1.566

suffer occupational segregation and more vulnerable to staying out of the labor market for longer periods due to child-care responsibilities. The increased magnitude with which occupational segregation and child care affect women with education reduces their wages and further increases the gender wage gap. For the low education group as for the overall sample, the distance index matters for the difference in the coefficients, suggesting the importance of mobility.

Turning to Lemieux (2002) decomposition, from Table 10.4, column 1, the mean log wage difference between males and females in Albania is –0.444, which means that females earn approximately 36%[2] less than males. From column 2, we see that females have lower wage variance due to lower residual wage variance. The predicted variance is higher for females, suggesting higher between-group inequalities. However, the residual variance of wages is higher for males, suggesting larger within group inequalities. Unlike other cases where women have both lower returns to their skills and lower human capital, in Albania, women receive lower prices for their human capital, but they are relatively more educated than men. This produces a more compact distribution of covariates than men. Women in Albania are thus in the low wage/low dispersion, while males are the high wage/high dispersion.

The results from the counterfactual analysis are given in rows 6, 7, and 8 of Table 10.4. As in the Oaxaca–Blinder (1973) decomposition, most of the –0.444 wage gap between the groups is explained by the changes in the regression coefficients (row 6). The variance in row 7 column 2 has a negative sign, driven by the larger negative difference in the residual variance of covariates. This is consistent with human capital theory, which states that residual wage dispersion should increase when the price to human capital increases. Therefore, if males receive higher returns to their measured human capital, the dispersion of their unmeasured human capital is also expected to be higher.

Tables 10.5 and 10.6 show the Lemieux (2002) decomposition for high- and low-educated workers, respectively. As we saw in the Oaxaca (1973) decomposition, the

[2] This number is calculated by taking the exponential of the mean log wage difference between females and males, subtracting 1, and multiplying by 100 to get the percentage value.

Table 10.5 Log wage distribution for the highly educated

	Mean		Variance	
		Total	Predicted *xb*	Residual
	(1)	(2)	(3)	(4)
1. Female	10.114	0.225	0.044	0.181
2. Female with male *b*'s	10.408	0.282	0.101	0.181
3. Female with male *b*'s and *X*'s	10.411	0.317	0.096	0.221
4. Male	10.423	0.435	0.098	0.337
5. Female–male difference	–0.309	–0.210	–0.054	–0.156
Effect of				
6. *b* (row 1–row 2)	–0.294	–0.057	–0.057	0.000
7. *x* (row 2–row 3)	–0.003	–0.035	0.005	–0.040
8. Residual (row 3–row 4)	–0.012	–0.118	–0.002	–0.116

Table 10.6 Log wage distribution for the low educated

	Mean		Variance	
		Total	Predicted *xb*	Residual
	(1)	(2)	(3)	(4)
1. Female	9.361	0.529	0.186	0.343
2. Female with male *b*'s	9.863	0.446	0.103	0.343
3. Female with Male *b*'s and *X*'s	9.747	2.035	0.095	1.940
4. Male	9.900	0.579	0.102	0.477
5. Female–male difference	–0.539	–0.050	0.084	–0.134
6. *b* (row 1–row 2)	–0.502	0.083	0.083	0.000
7. *x* (row 2–row 3)	0.116	–1.589	0.008	–1.597
8. Residual (row 3–row 4)	–0.153	1.456	–0.007	1.463

differences in the coefficients account for the majority of the gender wage gap. With the reduction of the gender wage gap, the wage dispersion also decreases. Women in the highly educated group have lower wage variance than in the case of all workers. Unlike the results in Table 10.4, the predicted and residual variance for highly educated females is lower than that of highly educated males, suggesting lower between-and within-group inequalities. For the lower educated group, as in the case of the Oaxaca (1973) decomposition, the majority of the gap is explained by differences in the coefficients. In addition, the differences in endowments also explain some of the gender wage gap. The increase in the gender wage gap for this group is associated with a larger wage dispersion. The total and predicted wage variance for females is larger in the low education group than in the high education group. The same is true for males. As in the overall case, women have higher predicted variance indicating higher between group inequality and lower within group inequality.

From Fig. 10.1, we can also see that the two wage distributions have quite different shapes. Visually, the gap between the two densities is the gender wage gap, which is much larger on the left-hand side and middle of the distribution. The gender wage gap starts to shrink on the right-hand side of the distribution, and it vanishes for the

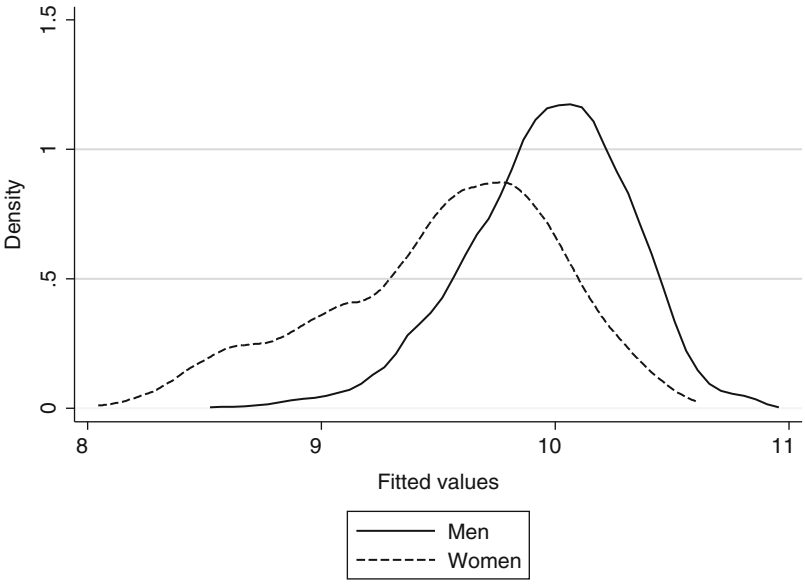

Fig. 10.1 Kernel density estimates of predicted Ln monthly wage by gender

top-skilled individuals, suggesting that wages for the highest-skilled women are similar to wages for highest-skilled men.

As Fig. 10.2 shows, when females are given the regression coefficients of the males, the two distributions look almost identical, and the gender wage gap gets significantly reduced. Thus, it suggests that the *b*'s account for most of the gender wage gap.

When females are given the covariates of the males as in Fig. 10.3, their wage distribution becomes trimodal. This suggests that, if women were given the covariates of males and were paid according to their wage structure, they would score even lower. In this case females would have lower *b*'s and lower covariates. When we look at Fig. 10.4, where females get both the *b*'s and the covariates of the males, the figure looks closer to Fig. 10.2, where only the *b*'s are of the males. This finding suggests that the differences in the distribution of the covariates have a small impact on the wage distribution. This is in line with the earlier findings from the Oaxaca–Blinder (1973) decomposition, which showed that women's covariates are not enough to make up for the differences in the wage distribution.

From Figs. 10.5, 10.6, and 10.7, we see that in the highest education groups, the gender wage gap decreases. This is indicated by the lower gap in the two distributions. In the case of the highly educated workers, since they share very similar levels of education, the two distributions look very alike in the case when females are given the *b*'s of males and in the case when females are given both the returns and covariates of males.

Lastly, in Figs. 10.8, 10.9, and 10.10, for the low education group, we see that the *b*'s account for most of the differences in distribution. When females are given

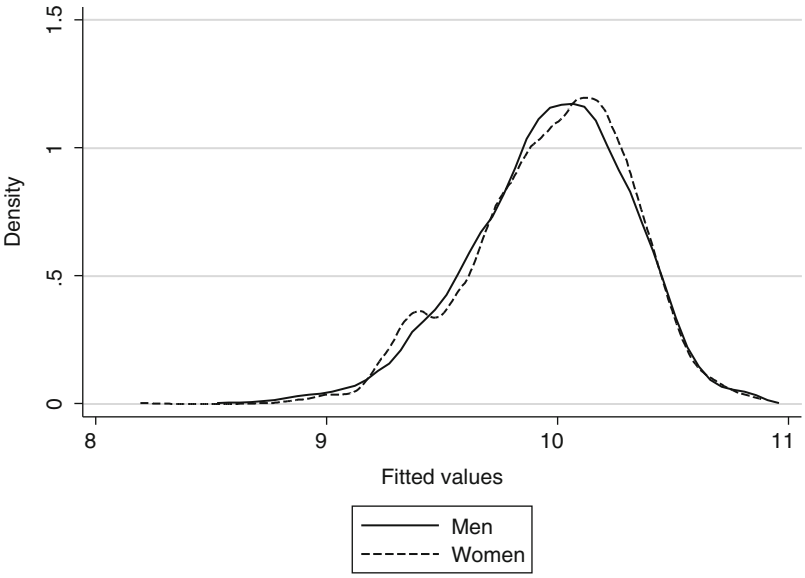

Fig. 10.2 Females with males' regression coefficients

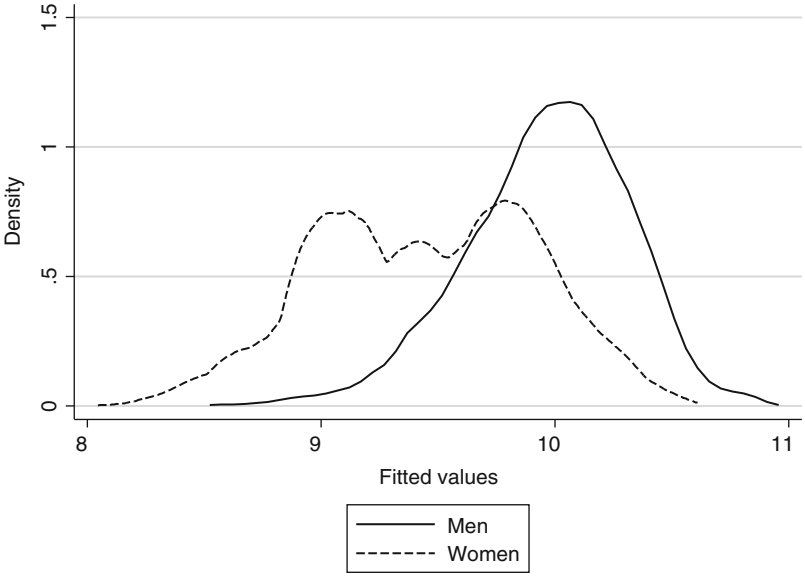

Fig. 10.3 Females with males' covariates

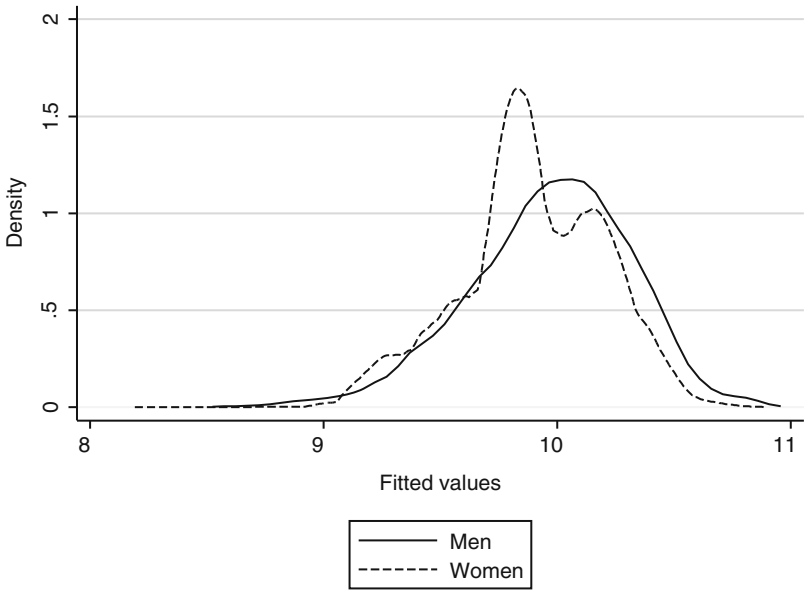

Fig. 10.4 Females with males' *b*'s and covariate distribution

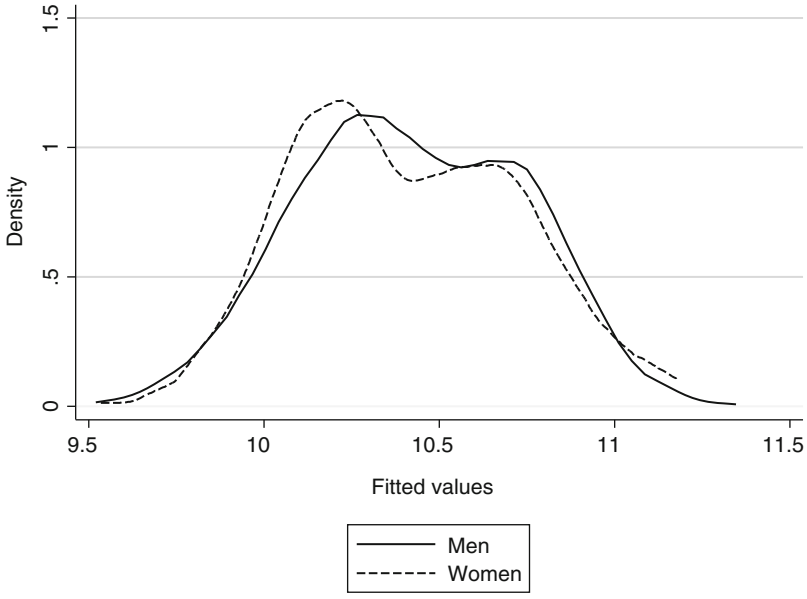

Fig. 10.5 High education females with males' regression coefficients

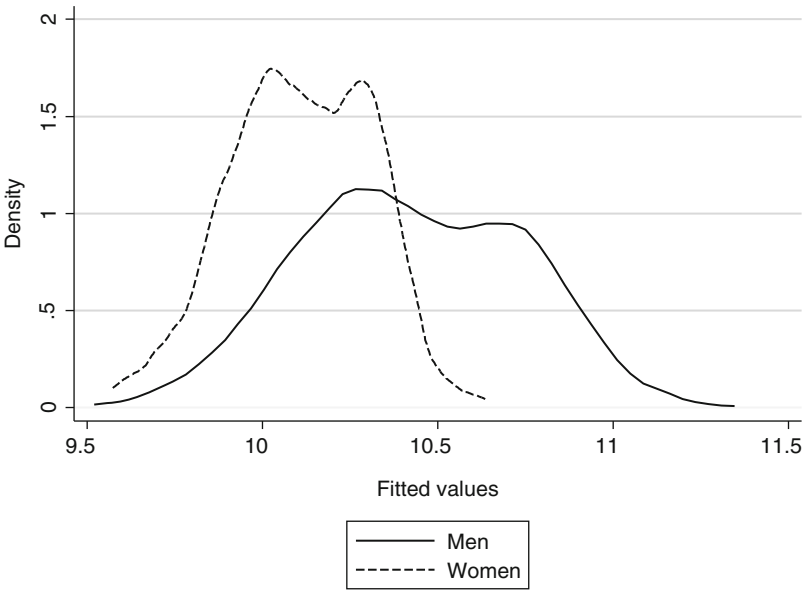

Fig. 10.6 High education females with males' covariates

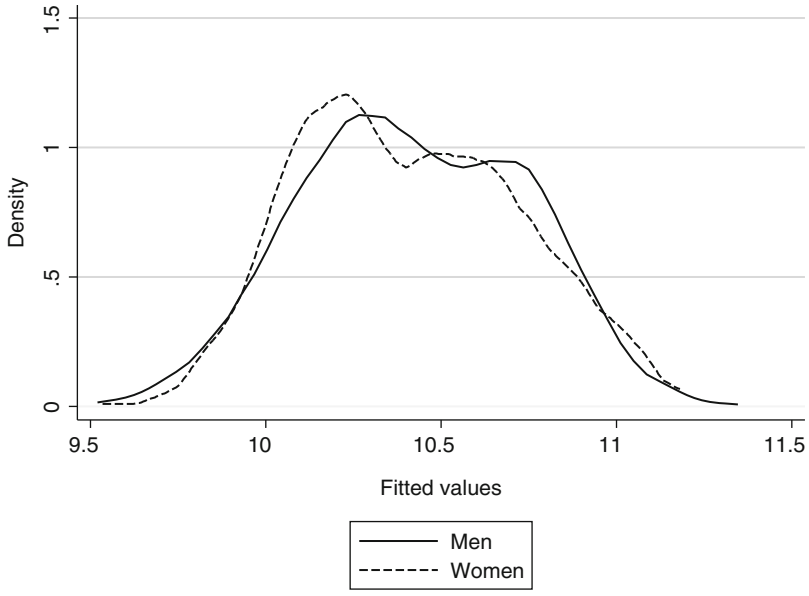

Fig. 10.7 High education females with males' *b*'s and covariate distribution

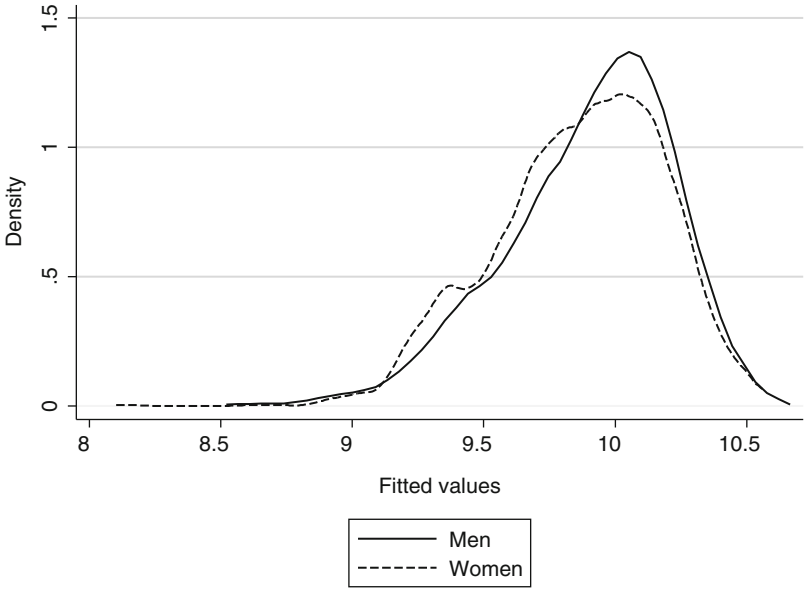

Fig. 10.8 Low education females with males' regression coefficients

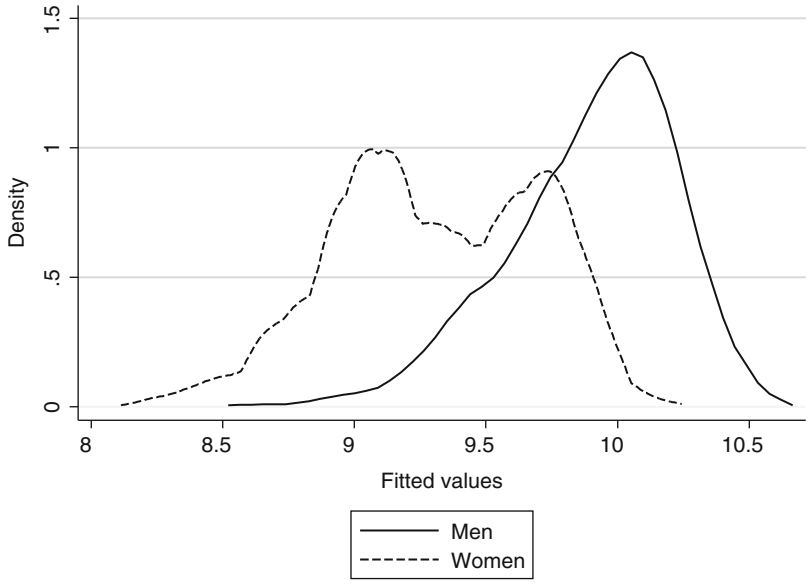

Fig. 10.9 Low education females with males' covariates

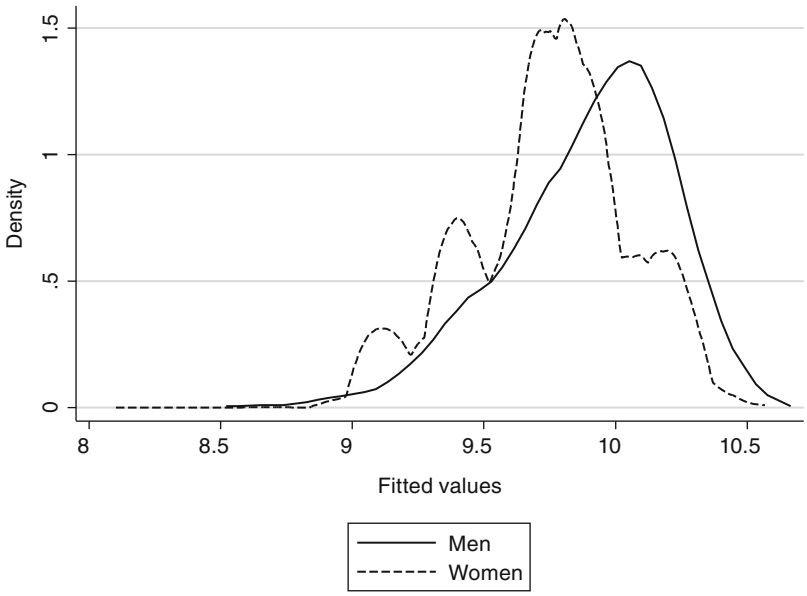

Fig. 10.10 Low education females with males' *b*'s and covariate distribution

the *b*'s of males, the wage distributions are very similar, whereas when females have only the covariates of males, their wage distribution becomes bimodal. In this case they would get even lower mean wages. Giving less-educated females both the *b*'s and covariates of males reduces their mean wages. Lower endowments put them at a further disadvantage, for which the increased *b*'s are not enough to make up for the difference.

Conclusions

This chapter provides a detailed account of the decomposition of the wage gap between men and women in the Albanian labor market using two different estimation methodologies. Using 2005 Albanian Living Standard Measurement Survey (2005 ALSMS) data, both the Oaxaca–Blinder (1973) and Lemieux (2002) wage decomposition techniques show the existence of pure labor market discrimination through a pure rent of being male. The majority of the gender wage gap is accounted for by the different rewards provided by the labor market. Overall, the different rewards provided by the labor market, the pure rent of being male, experience loss, occupational segregation, and child care, all reduce women's wages and put them at a disadvantageous position.

The results of wage decomposition in Albania share similarities with other countries in the region. As in the case of Russia and Ukraine, the gender wage gap in

Albania favors men, and occupational segregation plays an important role in increasing the gender wage gap. Education is not enough to give women in Albania an overall wage advantage as it did in Bulgaria. However, high levels of women's education help reduce the gender wage gap. The main implication of the decomposition results is that factors other than education, such as occupational segregation, less work experience—as a result of discontinued experiences in the labor market—and child care account for the bulk of the gender wage gap. Women who are currently in labor markets, the majority of whom have been educated during the communist period, have on average more education that men. If women kept their current endowments, and were paid according to the wage structure of men, their average wages would score higher than that of males reflecting their education advantage. Conversely, if their education levels decreased and were the same as those of males, they would earn even less than they do now.

Consequently, there are three main messages that come out of this chapter. First, education is key and should be given special consideration by the policy makers. However, other important factors such as occupational segregation, work experience, and child care also play a crucial role. Second, although education is not enough to make up for the gender wage gap, were education levels among females to decrease, the gender wage gap would be increased even further. Third, the problem is greatest for the low-educated group who seem to experience higher levels of labor market discrimination.

Policy makers should concentrate on designing policies that fight gender segregation and offer equal pay for equal work. In order to prevent occupational segregation, it is important that policies are designed not only for the labor market but also for the educational system. Curriculum reform should aim at broadening occupational choices for women occupation. In addition, equal pay for equal work policies should be designed in conjunction with policies for affirmative action to promote the hiring of women in fields which are predominantly male. As is the case with many transition economies, there is often a mismatch between skills and occupations. Policies should be designed such that they match women's skills and education with the appropriate occupation. Lastly, to alleviate the loss of experience and discontinuity in the labor market as a result of child bearing and parenting, policies should be designed to share either child-care responsibilities between both males and females, or to deliver better provision for child care.

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