

The Multifaceted Dimensions of the Wage Gap in Ecuador

NICOLA PONTAROLLO¹, JOSELIN SEGOVIA², MERCY ORELLANA³

¹Department of Economics and Management, UNIVERSITY OF BRESCIA, ITALY. E-mail: nicola.pontarollo@unibs.it

²Departamento de Economía, Empresa y Desarrollo Sostenible, Grupo de Investigación en Economía Regional (GIER), UNIVERSIDAD DE CUENCA, ECUADOR, E-mail: joselin.segovias@ucuenca.edu.ec.

³Departamento de Economía, Empresa y Desarrollo Sostenible, Grupo de Investigación en Economía Regional (GIER), UNIVERSIDAD DE CUENCA, ECUADOR, E-mail: mercy.orellana@ucuenca.edu.ec

ABSTRACT

This study examines the determinants of wage gap differences based on gender, ethnicity, and area of residence (urban vs. rural) in Ecuador for the years 2007 and 2017. By combining the Oaxaca-Blinder decomposition with unconditional quantile regression, we identify the extent to which the wage gap between two groups is due to characteristics (endowment) or unexplained factors at various points of the distribution, i.e. for low-, medium- and high-income workers. Results show that, on average, the gender and ethnic wage gap in 2017 increased slightly with respect to 2007, while the area wage gaps remained stable. However, progresses have mainly benefited those at the top of the income distribution, while disparities have widened for those at the bottom. As regards endowment effects, education mainly explains area and ethnicity wage gaps, while there is an important unexplained part that contributes more to gender wage differentials.

Keywords: Unconditional quantile regression; Oaxaca-Blinder decomposition; Ethnicity; Gender; Urban-rural; Ecuador.

JEL Classification: J31, J71

Received: October 06, 2022

Accepted: March 19, 2023

Las Múltiples Dimensiones de la Brecha Salarial en Ecuador

NICOLA PONTAROLLO¹, JOSELIN SEGOVIA², MERCY ORELLANA³

¹Department of Economics and Management, UNIVERSITY OF BRESCIA, ITALY. E-mail: nicola.pontarollo@unibs.it

²Departamento de Economía, Empresa y Desarrollo Sostenible, Grupo de Investigación en Economía Regional (GIER), UNIVERSIDAD DE CUENCA, ECUADOR, E-mail: joselin.segovias@ucuenca.edu.ec.

³Departamento de Economía, Empresa y Desarrollo Sostenible, Grupo de Investigación en Economía Regional (GIER), UNIVERSIDAD DE CUENCA, ECUADOR, E-mail: mercy.orellana@ucuenca.edu.ec

RESUMEN

Este estudio examina los determinantes de las diferencias en la brecha salarial en función del género, la etnia y la zona de residencia (urbana frente a rural) en Ecuador para los años 2007 y 2017. Combinando la descomposición de Oaxaca-Blinder con la regresión cuantil incondicional, identificamos en qué medida la brecha salarial entre dos grupos se debe a características (dotación) o factores no explicados en varios puntos de la distribución, es decir, para trabajadores de ingresos bajos, medios y altos. Los resultados muestran que, en promedio, la brecha salarial de género y étnica en 2017 aumentó ligeramente con respecto a 2007, mientras que las brechas salariales de área se mantuvieron estables. Sin embargo, los avances han beneficiado principalmente a quienes se encuentran en la parte superior de la distribución de la renta, mientras que las disparidades han aumentado para quienes se encuentran en la parte inferior. En cuanto a los efectos dotación, la educación explica principalmente las brechas salariales de área y etnia, mientras que hay una parte importante no explicada que contribuye más a las diferencias salariales de género.

Palabras clave: Regresión cuantil incondicional; Descomposición Oaxaca-Blinder; Etnia; Género; Urbano-rural; Ecuador.

Clasificación JEL: J31, J71

Recibido: 06 de Octubre de 2022

Aceptado: 19 de Marzo de 2023

1. Introduction

Wage gaps are a matter of great concern in Latin America, one of the most unequal regions of the world (Kolev and Suárez-Robles, 2015). According to Lustig et al. (2016), wage gaps have experienced a noticeable evolution from the beginning of 2000. This result can be attributed to several factors, the largest part of which is due to the narrowing of gender, race and territorial pay gaps.

This paper aims to analyze the earnings gaps in Ecuador by gender, ethnicity and type of area of residence (urban vs. rural) for years 2007 and 2017. The study, by means of an Oaxaca-Blinder decomposition combined with an unconditional quantile regression, has the objective of identifying the drivers of wage differences and whether these differences are due to observable or unobservable characteristics in the different parts of the wage distribution.

The case of Ecuador is notable because it is the fourth in Latin America for presence of indigenous people, which corresponds to around 7% of population (1 million in absolute terms). Furthermore, according to the World Bank (2015), Ecuador has also one of the highest rates of rural population in the region, equal to 36%. Despite the importance of these groups, they have been historically vulnerable, leading to the inclusion of several measures in the new Constitution of 2008 aimed at enforcing ethnic minorities' rights and integrating territories to achieve social and territorial equity.¹

Among previous studies on Latin American Countries (LACs) we can recall Canela and Salazar (2014), who analyze gender and ethnic wage gaps in Bolivia, Ecuador, and Guatemala. They find that around half of the ethnic wage gap is explained by differences in human capital endowments, while gender wage gap is significantly reduced by the differences in endowments. Similar results on ethnic wage gap are found by Bucheli and Porzecanski (2011) for Uruguay. Kolev and Suárez-Robles (2015) show that in Peru, over the period 2005-2011, ethnic wage gaps are larger than gender gaps and widen along the wage distribution, despite narrowing over time. Angel-Urdinol and Wodon (2006) observe a long-term trend towards an increase in the gender wage gap in Colombia. They relate this phenomenon to new labor regulations that rise the costs for hiring women as they provide them more protection. Didier (2021) proves that in Chile the increase in higher-education enrollment corresponded only to a minor decrease in gender gaps in the labor market, interpreting this evidence as the presence of credential market configuration, where degrees signal social status. For Mexico, Cuellar and Moreno (2022) demonstrate that the gender wage gap is mainly due to the "selection bias" and "residual" effects. Finally, Carrillo et al. (2014) find evidence of sticky floors, i.e. larger gender wage gap at the tenth percentile than at the median, and glass ceilings (larger gender wage gap at the ninetieth percentile than at the median) when analysing data for twelve LACs.

We demonstrate that, on average, the gender and ethnic gaps slight increase in 2017 with respect to 2007, while the urban-rural wage gap remained stable between the two time periods. Progresses have benefitted mainly people at top of the income distribution, while at the bottom disparities have widened. Urban-rural and ethnic wage gaps are explained mainly by endowment effect, particularly education. On the contrary, gender wage differentials are due more to discrimination.

The paper is organized as follows: in the second section wage data are presented, in the third the estimation technique is described, in the fourth the empirical analysis is carried out, in the fifth we discuss our findings and in the final section we conclude.

2. Data

We use cross-sectional data collected from the National Survey on Employment, Unemployment and Underemployment (ENEMDU) for years 2007 and 2017 provided by the National Institute of Statistics and Census in Ecuador (INEC). The datasets, that come from a quarterly survey on a set of

¹ The main innovations (Articles 57) have to do with the inclusion of new collective rights, such as the right not to be the object of racism or discrimination, to maintain their own legal systems and organizations, and to be consulted before the adoption of legislative measures that may affect these peoples or groups.

topics that range from employment to self-perception, include, among others, questions on wage, profession and education.² Furthermore, they are representative for the indigenous people and for rural and urban areas.

In Figure 1 we show the estimation of the distribution of the logarithm of the hourly wages for indigenous and non-indigenous in 2007 and 2017. For both years the distribution for non-indigenous is shifted to the right compared to the one for indigenous. This means that the hourly log-wages of non-indigenous are overall higher than those of indigenous people. Figure 2 shows that log-wage differences remain when looking by type area of residence. Furthermore, these differentials are wider at the bottom of the log-wage distribution, particularly in 2017.

In Figure 3 we report the gender wage differences. The gap for the lower part of the distribution is quite small, and for the median and top value the wages of male and female workers become similar. These preliminary findings support the necessity to go beyond the mean for estimating the factors that affect the wage differentials.

Figure 1. Distribution of log of hourly wage of indigenous and non-indigenous workers
2007 2017

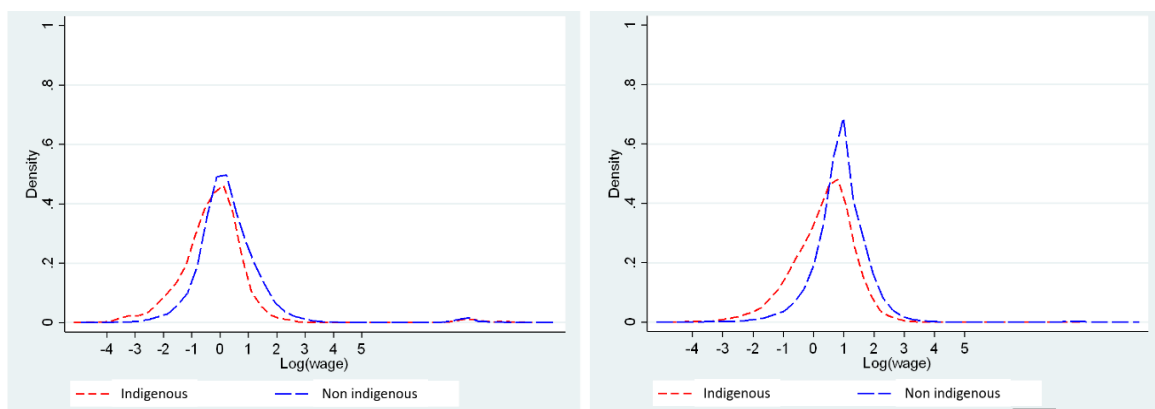
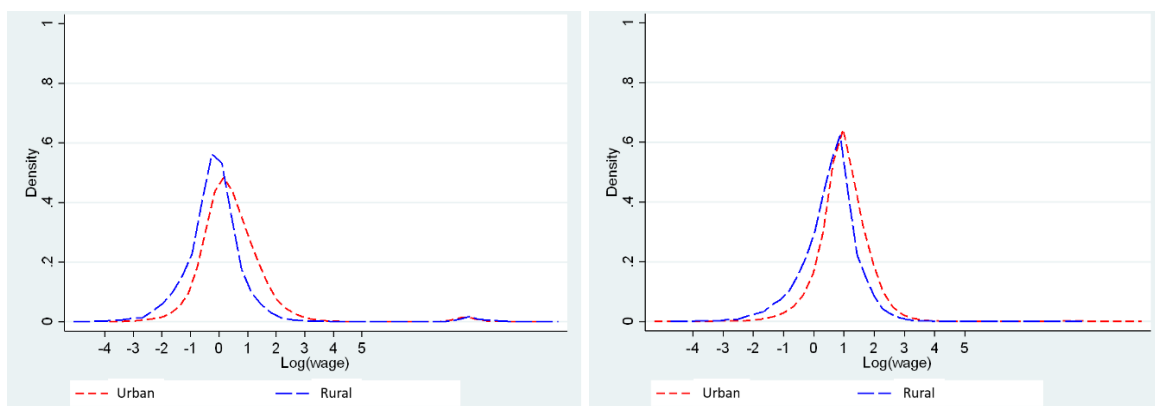
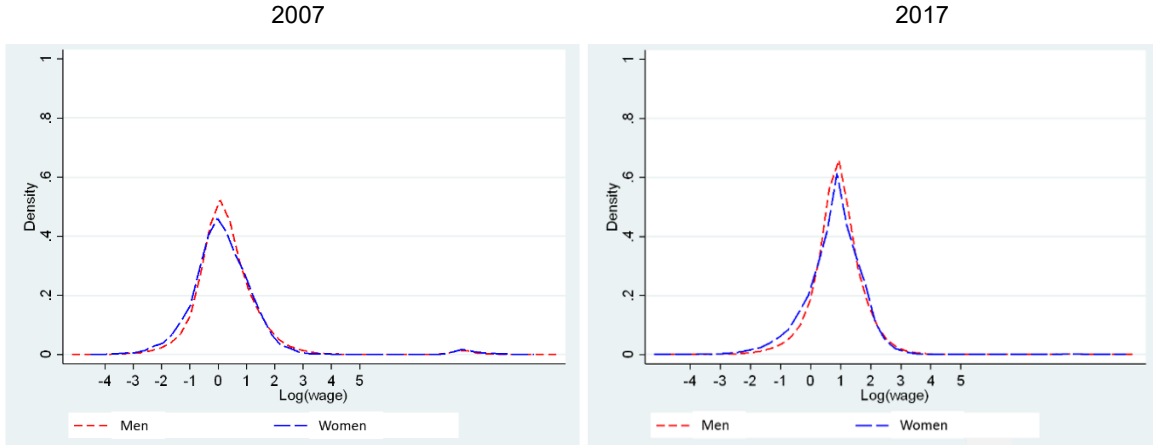


Figure 2. Distribution of log of hourly wage of rural and urban workers
2007 2017



² Wage is made comparable between 2007 and 2017 by deflating it. The deflator has 2007 as base year. Furthermore, we do not have selection problems because people who work do not necessarily have a wage, but people that have wage work. As a consequence, as we are interested in the hourly wage (the dependent variable), this ensures that all people in our sample have a job.

Figure 3. Distribution of log of hourly wage of male and female workers


3. Empirical strategy

The estimation technique refers to an extension of the Oaxaca–Blinder (1973) decomposition by Firpo et al. (2009), which relies on the recentered influence function (RIF) unconditional quantile estimates. The Oaxaca–Blinder decomposition is widely used to measure econometrically if the wage gap between two groups is due to characteristics, or endowment, or to unexplained factors. The intuition is that if there is a differential in terms of wage only due to characteristics, so this means that one group receives, on average, higher salaries because it has higher levels of education, experience, work in more rentable sectors, etc. On the other hand, if the wage differential is due to unexplained factors, then cultural, social and other unmeasurable aspect explain the differences between groups. The extension proposed by Firpo et al. (2009) makes possible to identify the endowment and unexplained effects at various point of the wage distribution, identifying the different underlying causes. Indeed, there is no a priori reason to assume that the factors affecting the wage gap between low-, medium- and high-income workers belonging to two distinct groups are the same.

The RIF for log-wage w_j for quantile Q_τ , where j is the indicator that identifies individuals belonging to a group, say A or to another group, say B, is given by

$$RIF(w_j; Q_\tau) = Q_\tau + \frac{\tau - I(w_j \leq Q_\tau)}{f_w(Q_\tau)} \quad (1)$$

where $f_w(Q_\tau)$ is the marginal density of w at point Q_τ , $I(w_j \leq Q_\tau)$ is the indicator as to whether the log-wage observation is at or below quantile Q_τ . To perform the decomposition proposed by Firpo et al. (2009), the unconditional quantile regressions may be performed by running an OLS regression of the new dependent variable on a set of covariates X_j whose descriptive statistics are reported in table A1 in Appendix A:

$$\widehat{RIF}(w_j; Q_\tau) = X_j \hat{\beta}_{j,\tau} \quad (2)$$

Thus, the unconditional quantile regression estimates can be used to perform a standard Oaxaca–Blinder decomposition at any quantile τ :

$$\widehat{w}_{A,\tau} - \widehat{w}_{B,\tau} = (\widehat{X}_A - \widehat{X}_B) \hat{\beta}_{A,\tau} + \widehat{X}_B (\hat{\beta}_{A,\tau} - \hat{\beta}_{B,\tau}) \quad (3)$$

Where the first part of the right-hand side (RHS) of the equation corresponds to the explained part, or “endowment effects”, and the second to the unexplained part, also referred to as “discrimination”. The endowment effects refer to the part of the log-wage difference explained by observable differences in the endowment of the two groups. In contrast, the unexplained part is due to the differences in returns.

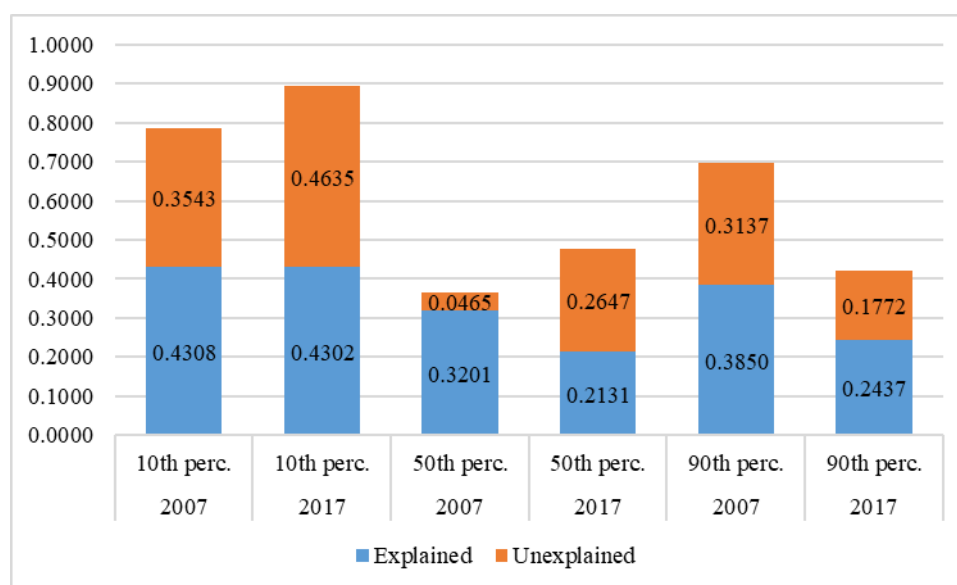
4. Results

The results of the unconditional quantile regression are reported in tables 1 to 6.³ The estimated log-wage gaps between indigenous and non-indigenous, rural and urban, male and female workers are statistically significant in 2007 and 2017. Furthermore, we find different results along the income distribution, as we explain in the following sections.

4.1. Ethnicity wage gap

As shown in figure 4, in 2007 the log-wage gap is concentrated in the first and ninth deciles, while in 2017 it is particularly strong in the first decile, followed by the fifth and then by the ninth. This picture is much more complex than what is reported in table B1 in Appendix B, where a standard Oaxaca-Blinder decomposition shows that, on average, ethnic wage gap increased in the last year examined with respect to the first one. The part of log-wage difference due to discrimination is mainly at the bottom of the distribution where it rises from 45% in 2007 to 51% in 2017. The difference in the median log-wage is driven by the unexplained part in 2017 (55%), while in 2007 it accounts only for 13%. For the ninth decile, we observe that around 45% of log-wage difference is due to discrimination in 2007 and around 42% in 2017. The gap is higher in 2017 compared to 2007 at the median and lower decile. Conversely, at the top of the distribution, it is lower in 2017, with a decrease of about 40% between the two periods.

Figure 4. Explained and unexplained components of log-wage gaps by ethnicity



Turning to the coefficient estimates, in Table 2, we observe that the covariates have similar significance for the different percentiles for 2007 and 2017. Nevertheless, the size of the coefficients is different.

Regarding the explained part, we observe that education and area are among the main drivers of the ethnic gap for all the deciles considered in both years, although their effects notably decrease for the fifth and ninth decile, and from 2007 to 2017. In 2007, apart from education and area, being an artisan contributes mostly to enlarge the wage-gap at the bottom of the distribution. Surprisingly, at the median and top of the distribution, being an artisan contributes to decrease the gap. This could be linked to the fact that highly specialized artisans, especially among indigenous people, are able to add value to their traditional and unique handcrafts, which are appreciated by the market. At the median, being a technician or working in the primary sector matters the most in 2007. At the top of the

³ For completeness, in Appendix B we reported the estimates through the standard Oaxaca-Blinder decomposition.

distribution being a professional or a technician are the main gap contributors. Among the sectors in which a person is working, only the primary is found to decrease the gap at the bottom of the distribution in 2007 but to increase it at the median and the top. Finally, at the median and the top decile education has the larger impact in widening the gaps.

Table 1. Estimation results for log-wage gaps by ethnicity, 2007

	10th percentile		50th percentile		90th percentile				
	Coeff.	Std.err.	Coeff.	Std.err.	Coeff.	Std.err.			
Estimated									
Log-wage gap	0.7851	(0.0602)	***	0.3666	(0.0300)	***	0.6987	(0.0422)	***
	Explained								
Age	-0.0216	(0.0159)		-0.0179	(0.0129)		-0.0092	(0.0074)	
Age ²	0.0530	(0.0190)	***	0.0310	(0.0108)	***	0.0020	(0.0061)	
Education	0.1515	(0.0153)	***	0.1722	(0.0096)	***	0.2670	(0.0206)	***
Sex: Male	-0.0062	(0.0035)	*	-0.0029	(0.0017)	*	-0.0036	(0.0022)	
Area: Rural	0.1150	(0.0131)	***	0.0238	(0.0068)	***	0.0003	(0.0122)	
Married	-0.0040	(0.0021)	*	-0.0045	(0.0014)	***	-0.0068	(0.0029)	**
Manager	0.0007	(0.0003)	***	0.0054	(0.0006)	***	0.0197	(0.0033)	***
Indep. contractor	0.0031	(0.0010)	***	0.0147	(0.0016)	***	0.0565	(0.0069)	***
Technician	0.0066	(0.0027)	**	0.0317	(0.0026)	***	0.0775	(0.0082)	***
Clerk	0.0099	(0.0018)	***	0.024	(0.0025)	***	0.0206	(0.0046)	***
Merchant	0.0078	(0.0021)	***	0.019	(0.0021)	***	0.0074	(0.0039)	*
Farmer	-0.0074	(0.0033)	**	0.0040	(0.0019)	**	0.0042	(0.0032)	
Artisan	0.1687	(0.0153)	***	-0.0422	(0.0063)	***	-0.0755	(0.0115)	***
Factory worker	-0.0008	(0.0008)		0.0008	(0.0008)		-0.0021	(0.0018)	
Others	0.0056	(0.0015)	***	0.0083	(0.0017)	***	-0.0016	(0.0019)	
Primary sector	-0.0505	(0.0118)	***	0.0536	(0.0070)	***	0.0306	(0.0124)	**
Secondary sector	-0.0009	(0.0009)		-0.0007	(0.0007)		-0.0018	(0.0019)	
Total	0.4308	(0.0191)	***	0.3201	(0.0109)	***	0.3850	(0.0225)	***
	Unexplained								
Age	-0.6958	(0.9871)		0.1547	(0.3570)		-0.1805	(0.5217)	
Age ²	0.5499	(0.5205)		0.0540	(0.1748)		0.2498	(0.2532)	
Education	-0.0004	(0.1037)		0.0778	(0.0533)		0.2572	(0.0915)	***
Sex: Male	0.0332	(0.0954)		0.0047	(0.0427)		0.1292	(0.0554)	**
Area: Rural	0.0907	(0.0450)	**	-0.0602	(0.0250)	**	-0.0758	(0.0343)	**
Married	-0.1276	(0.1060)		-0.0221	(0.0473)		-0.0372	(0.0629)	
Manager	0.0000	(0.0002)		-0.0001	(0.0001)		-0.0008	(0.0008)	
Indep. contractor	0.0023	(0.0014)		0.0011	(0.0010)		-0.0006	(0.0041)	
Technician	0.0047	(0.0038)		0.0004	(0.0026)		-0.0083	(0.0093)	
Clerk	0.0039	(0.0036)		-0.0012	(0.0028)		-0.0290	(0.0102)	***
Merchant	0.0034	(0.0033)		0.0033	(0.0034)		-0.0002	(0.0061)	
Farmer	-0.0003	(0.0284)		0.0297	(0.0161)	*	-0.0061	(0.0209)	
Artisan	0.0376	(0.0661)		0.0703	(0.0306)	**	0.0892	(0.0289)	***
Factory worker	0.0007	(0.0175)		0.0129	(0.0140)		-0.0506	(0.0196)	***
Others	0.0158	(0.0131)		0.0044	(0.0069)		-0.0124	(0.0111)	
Primary sector	0.1408	(0.1099)		0.0571	(0.0553)		-0.0222	(0.0660)	
Secondary sector	0.0060	(0.0387)		-0.0369	(0.0226)		0.0355	(0.0330)	
Constant	0.2895	(0.5594)		-0.3034	(0.2085)		-0.0235	(0.3391)	
Total	0.3543	(0.0608)	***	0.0465	(0.0292)		0.3137	(0.0407)	***
Observations	26569/2077								

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

In 2017, working in the primary sector remains significant only for the lowest part of the distribution but, contrary to 2007, it is associated to higher gaps. In 2017, together with education and area, working as a farmer is one of the main drivers of the gap due to endowment for all the deciles. It is important to note that agriculture contributes the most to the gap in all the deciles.

Interestingly, we observe that while being an artisan increases the size of the explained part of the log-wage gap at the lowest decile in 2007, the opposite occurs in 2017. Also, in 2017 managerial, professional, technic and office jobs increase the gaps at the 10th percentile, while decreasing it at the 50th and 90th percentile. When a high skilled worker is well paid, the ethnic group matters less and less. Finally, it draws attention that being a male decreases the gaps due to endowment in both years, but its coefficients and significance become higher in 2017.

Table 2. Estimation results for log-wage gaps by ethnicity, 2017

	10th percentile			50th percentile			90th percentile		
	Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.	
Estimated									
Log-wage gap	0.8937	(0.0518)	***	0.4778	(0.0260)	***	0.4209	(0.0318)	***
	Explained								
Age	-0.0892	(0.0182)	***	-0.0306	(0.0061)	***	-0.0387	(0.0082)	***
Age ²	0.1343	(0.0225)	***	0.0356	(0.0061)	***	0.0337	(0.0072)	***
Education	0.1078	(0.0143)	***	0.0922	(0.0058)	***	0.1659	(0.0103)	***
Sex: Male	-0.0152	(0.0041)	***	-0.0032	(0.0009)	***	-0.0041	(0.0013)	***
Area: Rural	0.1255	(0.0169)	***	0.0323	(0.0062)	***	0.0124	(0.0113)	
Married	0.0006	(0.0030)		-0.0053	(0.0012)	***	-0.0085	(0.0022)	***
Manager	0.0012	(0.0004)	***	-0.0010	(0.0003)	***	-0.0053	(0.0022)	**
Indep. contractor	0.0042	(0.0017)	**	-0.0068	(0.0009)	***	-0.0872	(0.0120)	***
Technician	0.0046	(0.0013)	***	-0.0079	(0.0009)	***	-0.0911	(0.0100)	***
Clerk	0.0059	(0.0015)	***	-0.0098	(0.0011)	***	-0.0980	(0.0090)	***
Merchant	-0.0304	(0.0046)	***	-0.0652	(0.0038)	***	-0.3029	(0.0275)	***
Farmer	0.1571	(0.0274)	***	0.2369	(0.0117)	***	1.0234	(0.0786)	***
Artisan	-0.0166	(0.0030)	***	-0.0342	(0.0033)	***	-0.1592	(0.0183)	***
Factory worker	-0.0083	(0.0025)	***	-0.0281	(0.0020)	***	-0.1571	(0.0144)	***
Others	-0.0008	(0.0008)		-0.0043	(0.0039)		-0.0193	(0.0175)	
Primary sector	0.0478	(0.0217)	**	0.0090	(0.0084)		-0.0210	(0.0141)	
Secondary sector	0.0016	(0.0021)		0.0034	(0.0011)	***	0.0009	(0.0020)	
Total	0.4302	(0.0216)	***	0.2131	(0.0074)	***	0.2437	(0.0132)	***
	Unexplained								
Age	0.8241	(0.8693)		0.4102	(0.3717)		0.3207	(0.4564)	
Age ²	-0.5367	(0.4487)		-0.0569	(0.1853)		-0.0782	(0.2362)	
Education	0.0427	(0.0987)		0.1442	(0.0565)	**	0.1862	(0.0672)	***
Sex: Male	0.1290	(0.0788)		-0.0229	(0.0383)		0.0613	(0.0451)	
Area: Rural	0.0500	(0.0281)	*	-0.0570	(0.0188)	***	-0.0288	(0.0226)	
Married	-0.1336	(0.1021)		0.0371	(0.0464)		0.0149	(0.0550)	
Manager	0.0006	(0.0005)		-0.0006	(0.0005)		0.0001	(0.0016)	
Indep. contractor	0.0130	(0.0131)		-0.0091	(0.0054)	*	-0.0367	(0.0145)	**
Technician	-0.0009	(0.0017)		-0.0025	(0.0016)		0.0112	(0.0075)	
Clerk	0.0001	(0.0009)		-0.0026	(0.0009)	***	0.0064	(0.0032)	**
Merchant	-0.0540	(0.0155)	***	-0.0123	(0.0118)		0.0955	(0.0340)	***
Farmer	-0.0295	(0.1269)		0.0213	(0.0767)		0.5450	(0.1272)	***
Artisan	-0.0395	(0.0135)	***	0.0000	(0.0146)		0.0886	(0.0251)	***
Factory worker	-0.0123	(0.0037)	***	-0.0035	(0.0060)		0.0203	(0.0103)	**
Others	-0.0505	(0.0210)	**	0.0192	(0.0171)		0.1675	(0.0383)	***
Primary sector	0.0859	(0.1085)		0.2182	(0.0726)	***	0.0146	(0.0658)	
Secondary sector	0.0144	(0.0132)		-0.0107	(0.0186)		0.0006	(0.0172)	
Constant	0.1607	(0.4629)		-0.4075	(0.2211)	*	-1.2119	(0.3391)	***
Total	0.4635	(0.0559)	***	0.2647	(0.0258)	***	0.1772	(0.0306)	***
Observations	38045/4649								

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

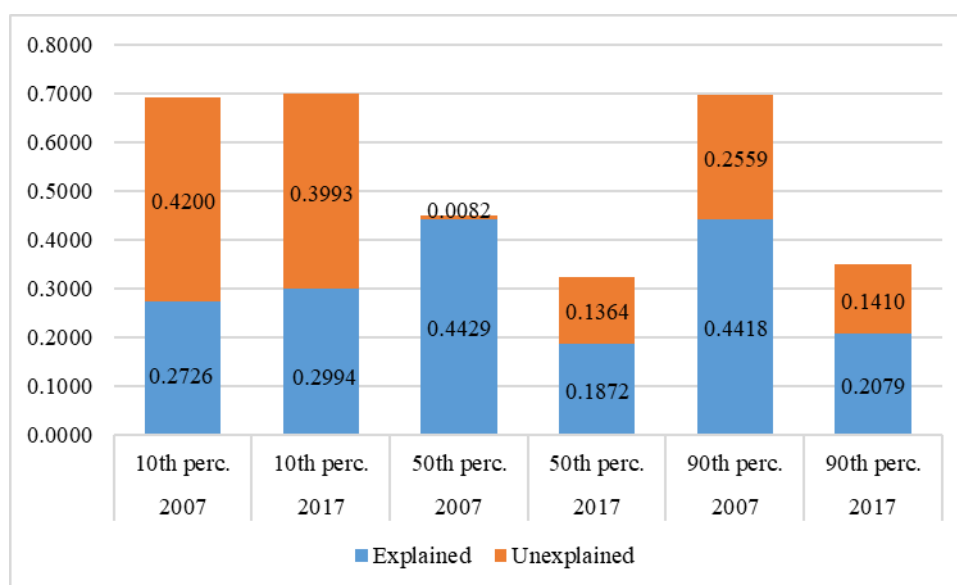
Regarding the unexplained part, we observe that being an artisan increases the gap of the median and top decile in 2007, but it has no effect at the bottom decile, where area has an increasing impact.

At the median and top decile, the variable area decreases the gap, highlighting that when the wage increases, the returns are higher for those living in urban rather than in rural areas. It is also interesting to point out that sex is associated to a higher discrimination at the higher percentile in 2007 while it becomes insignificant in 2017. Differences in returns to education are present at the 9th decile in 2007, but also at the 5th in 2017. However, in both years it is not significant at the first decile. Finally, in 2017, working in the primary sector and in agriculture also contribute to increase the size of the unexplained part at the 5th and 9th deciles, respectively.

4.2. Rural – Urban wage gap.

As the standard Oaxaca-Blinder decomposition demonstrates in table B2 in Appendix B, on average, the log-wage gap in favor of urban workers in 2017 is equal to the gap in 2007. Figure 5, however, shows the log-wage differences for urban versus rural areas are higher at the bottom of the distribution. In this case, the size is similar in both periods of analysis; however, the proportion attributed to the unexplained part decreases from approximately 61% in 2007 to 57% in 2017. In 2007, the area log-wage gap is concentrated in the first and ninth deciles. The difference is that in the former it is led by the unexplained part, while in the latter by endowment. The area log-wage gap decreases between 2007 and 2017 for the 50th and 90th deciles. In the last case, the gap is halved.

Figure 5. Explained and unexplained components of log-wage gaps by area.



Concerning the coefficient estimates in Table 3, it is found similar significance for the different percentiles for 2007 and 2017 but the size and the sign of the coefficients often differ.

In the explained part of the gap, we observe that the main determinants of the log-wage differentials at the median and top of the distribution differ from those at the bottom. Among the main variables contributing to the gaps, education is found to significantly affect all the considered deciles in both years. In 2007, being a farmer is the main driver of the gap at the lowest decile, while education plays this role at the median and top decile. Although farming also increases the disparities in the other deciles, the size of the coefficients is notably lower. After being a farmer, education and professional jobs widen the gaps at the 1st decile. At the median and top of the distribution, being a technician and working in the primary sector are the other main drivers of the gap. Interestingly, the latter has no effect in the gaps at the 1st decile. Regarding the other professions, we observe that being an artisan decreases the gap in the three deciles in 2007, while being an office worker or a manager increases it slightly. In addition, age and being a male worker is found to decrease the gaps across the distribution in both years. The impact of the latter remains almost the same from year to

year at the bottom of the distribution, but it halves at the 5th and 9th deciles in 2017. We observe that although education is decisive in widening the explained gaps across the distribution in both years, its impact is substantially reduced at the 5th and 9th deciles in 2017, as opposed to the effect at the 1st decile, where it increases. In 2017, the results point that the role of being a farmer is still important for the explained part of the gap, but in a different way. First, from being the main contributor to the gaps in the lowest part of the distribution in 2007, it becomes a factor that contributes to close the gap in 2017, with the main driver becoming education followed by being an artisan. Second, we also see that although farming had a small effect in the gaps at the median and top of the distribution in 2007, it becomes the main driver of the gap in the last year considered, followed by education. Other changes in 2017 regard some professions that turn from increasing the gap to decreasing it, although only for the median and highest decile. These include managerial, professional, office and technic jobs.

Table 3. Estimation results log-wage gaps by area, 2007

	10th percentile			50th percentile			90th percentile		
	Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.	
Estimated									
Log-wage gap	0.6925	(0.0288)	***	0.4512	(0.0135)	***	0.6977	(0.0303)	***
	Explained								
Age	-0.1163	(0.0159)	***	-0.0659	(0.0095)	***	-0.0173	(0.0112)	
Age ²	0.1725	(0.0205)	***	0.0780	(0.0106)	***	-0.0155	(0.0173)	
Sex: Male	-0.0279	(0.0030)	***	-0.0137	(0.0023)	***	-0.0218	(0.0050)	***
Indigenous	0.0212	(0.0132)		-0.0082	(0.0060)		0.0026	(0.0078)	
Education	0.1137	(0.0153)	***	0.2315	(0.0129)	***	0.2892	(0.0254)	***
Married	-0.0033	(0.0020)	*	-0.0018	(0.0007)	**	-0.0027	(0.0015)	*
Manager	0.0007	(0.0002)	***	0.0087	(0.0009)	***	0.0202	(0.0038)	***
Indep. contractor	0.0068	(0.0024)	***	0.0250	(0.0018)	***	0.0641	(0.0068)	***
Technician	0.0052	(0.0018)	***	0.0548	(0.0037)	***	0.0899	(0.0100)	***
Clerk	0.0061	(0.0015)	***	0.0399	(0.0029)	***	0.0242	(0.006)	***
Merchant	-0.0493	(0.0057)	***	0.0314	(0.0030)	***	0.0104	(0.0051)	**
Farmer	0.1969	(0.0336)	***	0.0142	(0.0045)	***	0.0121	(0.0067)	*
Artisan	-0.0189	(0.0029)	***	-0.0689	(0.0181)	***	-0.0965	(0.0316)	***
Factory worker	-0.0068	(0.0019)	***	0.0083	(0.0022)	***	-0.0146	(0.0034)	***
Others	-0.0076	(0.0019)	***	0.0119	(0.0018)	***	-0.002	(0.0025)	
Primary sector	-0.0266	(0.0255)		0.0957	(0.0224)	***	0.0826	(0.0393)	**
Secondary sector	0.0061	(0.0023)	***	0.0021	(0.0019)		0.0168	(0.0045)	***
Total	0.2726	(0.0295)	***	0.4429	(0.0198)	***	0.4418	(0.0370)	***
	Unexplained								
Age	0.0852	(0.5226)		0.7489	(0.1817)	***	-1.0641	(0.3828)	***
Age ²	-0.0062	(0.2824)		-0.2629	(0.0970)	***	0.604	(0.2098)	***
Sex: Male	-0.2564	(0.0497)	***	-0.0670	(0.0208)	***	0.0756	(0.0488)	
Indigenous	0.0940	(0.0213)	***	0.0278	(0.0084)	***	0.0366	(0.0124)	***
Education	0.0538	(0.0695)		0.1920	(0.0264)	***	0.1215	(0.0628)	*
Married	0.0849	(0.0451)	*	-0.0130	(0.0186)		0.0233	(0.0422)	
Manager	-0.0018	(0.0006)	***	0.0004	(0.0001)	***	-0.0012	(0.0011)	
Indep. contractor	-0.0137	(0.0025)	***	0.0020	(0.0005)	***	-0.0063	(0.0030)	**
Technician	-0.0042	(0.0013)	***	0.0035	(0.0011)	***	-0.0245	(0.0052)	***
Clerk	-0.0051	(0.0013)	***	0.0054	(0.0014)	***	-0.0092	(0.0049)	*
Merchant	-0.0753	(0.0110)	***	0.0046	(0.0012)	***	-0.0019	(0.0032)	
Farmer	-0.2346	(0.0661)	***	0.0048	(0.0040)		0.0033	(0.0090)	
Artisan	-0.0606	(0.0110)	***	0.0831	(0.0214)	***	-0.0448	(0.0389)	
Factory worker	-0.0210	(0.0044)	***	0.0175	(0.0051)	***	-0.0277	(0.0111)	**
Others	-0.0737	(0.0135)	***	0.0067	(0.0028)	**	-0.0156	(0.0075)	**
Primary sector	0.2237	(0.0580)	***	-0.0086	(0.0330)		0.2096	(0.0681)	***

Secondary sector	0.0546	(0.0119)	***	-0.0183	(0.0070)	***	0.0724	(0.0196)	***
Constant	0.5764	(0.2991)	*	-0.7187	(0.0983)	***	0.3049	(0.2087)	
Total	0.4200	(0.0412)	***	0.0082	(0.0225)		0.2559	(0.0408)	***
Observations	16638/12008								

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

Table 4. Estimation results log-wage gaps by area, 2017

	10th percentile			50th percentile			90th percentile		
	Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.	
Estimated									
Log-wage gap	0.6986	(0.0248)	***	0.0082	(0.0224)	***	0.3489	(0.0220)	***
	Explained								
Age	-0.0736	(0.0135)	***	-0.0629	(0.0070)	***	-0.0592	(0.0084)	***
Age ²	0.1229	(0.0189)	***	0.0746	(0.0080)	***	0.0559	(0.0096)	***
Sex: Male	-0.0200	(0.0034)	***	-0.0069	(0.0011)	***	-0.0105	(0.0020)	***
Indigenous	0.0093	(0.0097)		-0.0079	(0.0062)		-0.0046	(0.0094)	
Education	0.2056	(0.0186)	***	0.1125	(0.0075)	***	0.1619	(0.0111)	***
Married	-0.0022	(0.0010)	**	-0.0047	(0.0010)	***	-0.0057	(0.0015)	***
Manager	0.0016	(0.0004)	***	-0.0008	(0.0002)	***	-0.0045	(0.0018)	**
Indep. contractor	0.0038	(0.0016)	**	-0.0134	(0.0016)	***	-0.1499	(0.0179)	***
Technician	0.0090	(0.0041)	**	-0.0127	(0.0014)	***	-0.1286	(0.0130)	***
Clerk	0.0142	(0.0026)	***	-0.015	(0.0015)	***	-0.1131	(0.0102)	***
Merchant	0.0115	(0.0030)	***	-0.1023	(0.0041)	***	-0.4229	(0.0353)	***
Farmer	-0.0151	(0.0072)	**	0.3409	(0.0203)	***	1.3223	(0.1051)	***
Artisan	0.1986	(0.0302)	***	-0.0401	(0.0030)	***	-0.1587	(0.0158)	***
Factory worker	0.0016	(0.0027)		-0.0260	(0.0020)	***	-0.1219	(0.0120)	***
Others	0.0088	(0.0018)	***	-0.0300	(0.0030)	***	-0.1147	(0.0141)	***
Primary sector	-0.1839	(0.0302)	***	-0.0202	(0.0166)		-0.0384	(0.0283)	
Secondary sector	0.0074	(0.0021)	***	0.0019	(0.0013)		0.0004	(0.0021)	
Total	0.2994	(0.0320)	***	0.1872	(0.0134)	***	0.2079	(0.0200)	***
	Unexplained								
Age	0.5288	(0.3914)		0.3383	(0.1894)	*	0.0807	(0.2913)	
Age ²	-0.2071	(0.2177)		-0.1254	(0.0960)		-0.1307	(0.1497)	
Sex: Male	-0.2188	(0.0448)	***	-0.0992	(0.0186)	***	0.0674	(0.0316)	**
Indigenous	0.0501	(0.0159)	***	0.0583	(0.0085)	***	0.0275	(0.0127)	**
Education	0.1550	(0.0512)	***	0.0951	(0.0320)	***	0.0039	(0.0540)	
Married	-0.0335	(0.0368)		0.0303	(0.0193)		0.0351	(0.0311)	
Manager	0.0001	(0.0001)		-0.0008	(0.0010)		0.0051	(0.0038)	
Indep. contractor	0.0004	(0.0009)		-0.0078	(0.0017)	***	-0.0054	(0.0126)	
Technician	0.0012	(0.0021)		-0.0035	(0.0010)	***	0.0045	(0.0063)	
Clerk	0.0006	(0.0018)		-0.0058	(0.0009)	***	0.0079	(0.0054)	
Merchant	0.0046	(0.0024)	*	-0.0198	(0.0054)	***	0.1540	(0.0385)	***
Farmer	0.0037	(0.0081)		-0.0823	(0.0369)	**	0.6203	(0.1617)	***
Artisan	-0.0241	(0.0381)		-0.0351	(0.0069)	***	0.1354	(0.0347)	***
Factory worker	0.0236	(0.0087)	***	-0.013	(0.0031)	***	0.0580	(0.0170)	***
Others	0.0119	(0.0042)	***	-0.0325	(0.0074)	***	0.1865	(0.0447)	***
Primary sector	0.2308	(0.0560)	***	0.1306	(0.0345)	***	0.0853	(0.0534)	
Secondary sector	0.0233	(0.0124)	*	0.0080	(0.0079)		0.0015	(0.0136)	
Constant	-0.1515	(0.2039)		-0.0988	(0.1173)		-1.1960	(0.3692)	***
Total	0.3993	(0.0411)	***	0.1364	(0.0179)	***	0.1410	(0.0267)	***
Observations	26782/15912								

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

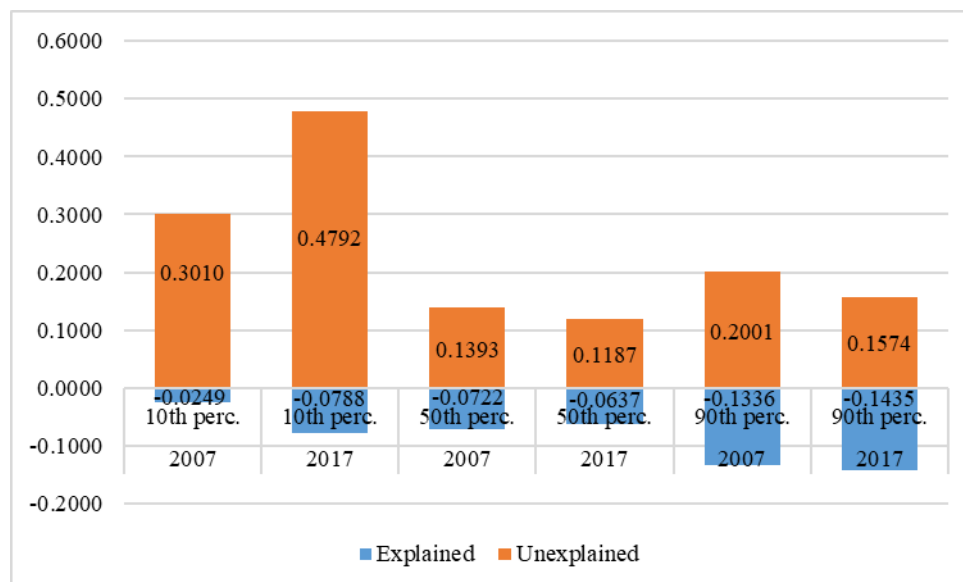
Concerning the unexplained part of the area gaps, we have that being an indigenous exerts a significant widening effect in all the deciles both in 2007 and in 2017. Furthermore, except for the top decile in 2017, it is among the three main drivers of the area gap due to discrimination. Besides being an indigenous, work in the primary and secondary economic sectors are the other main factor contributing of the unexplained part of the gap in the bottom and top decile in 2007. Secondary economic sector has the largest effect in both deciles. On the other hand, at the median decile education has the largest increasing effect, followed by being an artisan. Regarding professions, it is found that in 2007 the majority of them contribute to decrease the gaps at the 1st and 9th deciles, and contribute to increase it at the 5th. Conversely, in 2017 most of the professions contribute to decrease the gap at the 5th decile and increase it at the other two. Education is observed to increase the gap at the median in both years, at the top of the distribution in 2007, and at the bottom in 2017. Finally, being a male decreases the gap in both years for all the deciles, except for the 10th in 2007.

4.3. Male – Female wage gap

As visually shown in figure 6 the log-wage differences between men and women are overall lower than differences by area and by ethnicity. Furthermore, in this case endowment contributes to diminish the gender wage gap. However, the part associated to the unexplained part is larger and thus the overall gap benefits men. The gender wage gap is found to be lower at the median and larger at the bottom of the distribution, i.e. larger for the poorest people in the sample. Between 2007 and 2017, the gap has reduced at the 50th and 90th centiles, but it has considerably increased for the 10th. As a result, the wage gap of lower income people has widened with respect to those with higher income. While in 2007 this gap was 50% higher, by 2017 it triples. Thus, as shown from the results of the standard Oaxaca-Blinder decomposition in table B3 in Appendix B, on average, the gender log-wage gap doubled in 2017 compared to 2007.

Figure 6 further allows to see that the part of the wage gap explained by the endowment is higher at the top of the distribution in both periods. It has increased for all deciles and especially at the bottom of the distribution.

Figure 6. Explained and unexplained components of log-wage gaps by gender



Regarding the explained part, as shown in Table 5 and 6, only a few factors increase significantly the gender log-wage gap. In 2007, one of the main drivers of the gap is age for all the deciles; however, in 2017 it is not significant. Apart from this, in 2007 working in the primary economic sector is among the factors widening the gap at the 1st decile along with being married. The effect of marriage holds

for both the years we considered as well as for the other deciles. It is worth noting that apart from the 1st decile, working in the primary sector has the opposite effect. Furthermore, in 2017, at the 5th decile, non-qualified and factory workers were found to increase the gap, while at the 9th decile working as a manager or as an artisan have the same effect. Although its effect is relatively small, we find that education decreases the gender wage gap due to endowment across the income distribution for both years of study. Area has a similar effect, except for the 9th decile Being an indigenous was not significant at explaining gender wage disparities due to endowment in 2007, but it has a significant negative effect in 2017. This might be the result of some of the affirmative action policies implemented after the new Constitution of 2008, which were aimed at favoring the indigenous among other groups. Working in the secondary sector increases the gaps only at the bottom of the distribution and at the median in both years. In 2017, the main factors widening the disparities at the bottom of the distribution are being married, being a merchant and working in the secondary sector, while at the median and top of the distribution, professionals, merchants and non-qualified workers widen the gaps. Importantly, we observe that being a professional is significant in explaining the increase of gap due to endowment in all the deciles in 2017 despite its effect was null in 2007. The opposite is found in the effect of being a manager, which increases the gap only in 2007. For other professions we find that the effect is reversed for all the deciles from one year to the other. Particularly, it is found that being a technician, a clerk or a merchant significantly decreases the log-wage gap due to endowment in 2007, but it increases it in 2017. Also in 2017, lower skill jobs such as being a farmer, an artisan or a factory worker decrease the log-wage gap.

In the unexplained part, again, we observe that being married has an effect only at the 1st decile, increasing the disparity in both years. In 2007, other factors increasing the discrimination at the 1st decile are working in a factory or in the primary sector. The former exerts the same effect in all the deciles in 2007, but in 2017 it decreases discrimination only at the bottom of the distribution. Education has a significant negative effect, except for the top decile in 2007. Area used to decrease the discrimination in 2007 except at the top of the distribution. This effect is not significant in 2017. It is also found that being a merchant decreases discrimination at the median in 2007, while it increases it in 2017 for the median and top deciles. In 2017, being a clerk decreases discrimination while being an artisan increases it at the centiles 10 and 50.

Table 5. Estimation results of log-wage gaps by gender, 2007

	10th percentile			50th percentile			90th percentile		
	Coeff.	Std.err.		Coeff.	Std.err.		Coeff.	Std.err.	
Estimated									
Log-wage gap	0.2761	(0.0261)	***	0.0671	(0.0163)	***	0.0665	(0.0339)	***
	Explained								
Age	0.0345	(0.0088)	***	0.0278	(0.0065)	***	0.0149	(0.0061)	**
Age ²	-0.0596	(0.0110)	***	-0.0336	(0.0059)	***	-0.0029	(0.0077)	
Education	-0.0218	(0.0039)	***	-0.0400	(0.0036)	***	-0.0717	(0.0080)	***
Area: Rural	-0.0196	(0.0035)	***	-0.0035	(0.0021)	*	-0.0015	(0.0038)	
Indigenous	-0.0018	(0.0012)		-0.0003	(0.0003)		-0.0005	(0.0005)	
Married	0.0212	(0.0051)	***	0.0097	(0.0033)	***	0.0073	(0.0078)	
Manager	0.0022	(0.0005)	***	0.0083	(0.0007)	***	0.0308	(0.0047)	***
Indep. contractor	-0.0003	(0.0003)		-0.0011	(0.0013)		-0.0049	(0.0058)	
Technician	-0.0054	(0.0018)	***	-0.0176	(0.0022)	***	-0.0599	(0.0086)	***
Clerk	-0.0067	(0.0015)	***	-0.0175	(0.0022)	***	-0.0245	(0.0056)	***
Merchant	-0.0086	(0.0027)	***	-0.0176	(0.0029)	***	-0.0048	(0.0066)	
Farmer	0.0111	(0.0089)		-0.0059	(0.0059)		-0.0019	(0.0119)	
Artisan	-0.0270	(0.0033)	***	0.0061	(0.0012)	***	0.0094	(0.0021)	***
Factory worker	-0.0005	(0.0043)		0.0130	(0.0033)	***	-0.0120	(0.0057)	**
Others	0.0164	(0.0039)	***	0.0254	(0.0034)	***	-0.0032	(0.0065)	
Primary sector	0.0241	(0.0072)	***	-0.0375	(0.0048)	***	-0.0184	(0.0093)	**

The Multifaceted Dimensions of the Wage Gap in Ecuador

Secondary sector	0.0171	(0.0041)	***	0.0121	(0.0034)	***	0.0102	(0.0084)	
Total	-0.0249	(0.0125)	**	-0.0722	(0.0097)	***	-0.1336	(0.0222)	***
Unexplained									
Age	-0.1519	(0.4433)		-0.0932	(0.2054)		0.0189	(0.3744)	
Age ²	0.1166	(0.2287)		0.0361	(0.1010)		-0.0228	(0.1901)	
Education	-0.2709	(0.0877)	***	-0.1154	(0.0494)	**	0.1281	(0.1018)	
Rural	-0.1763	(0.0593)	***	-0.0877	(0.0287)	***	-0.0135	(0.0459)	
Indigenous	-0.0049	(0.0079)		-0.0076	(0.0035)	**	-0.0038	(0.0049)	
Married	0.1212	(0.0285)	***	-0.0024	(0.0170)		-0.0455	(0.0365)	
Manager	0.0001	(0.0001)		0.0000	(0.0000)		-0.0009	(0.0005)	*
Indep. contractor	0.0016	(0.0025)		-0.0036	(0.0021)	*	0.0113	(0.0105)	
Technician	0.0164	(0.0093)	*	-0.0090	(0.0063)		0.0679	(0.0219)	***
Clerk	0.0064	(0.0063)		-0.0060	(0.0055)		0.0419	(0.0161)	***
Merchant	0.0157	(0.0081)	*	-0.0133	(0.0068)	**	-0.0086	(0.0151)	
Farmer	0.0334	(0.0253)		0.0000	(0.0155)		-0.0217	(0.0261)	
Artisan	0.0050	(0.0139)		0.0000	(0.0052)		-0.0153	(0.0085)	*
Factory worker	0.0313	(0.0092)	***	0.0182	(0.0059)	***	0.0402	(0.0119)	***
Others	0.0001	(0.0019)		-0.0030	(0.0017)	*	0.0025	(0.0036)	
Primary sector	0.0425	(0.0184)	**	-0.0121	(0.0082)		-0.0137	(0.0136)	
Secondary sector	0.0075	(0.0079)		0.0141	(0.0071)	**	-0.0615	(0.0209)	***
Constant	0.5074	(0.2395)	**	0.4242	(0.1147)	***	0.0966	(0.2162)	
Total	0.3010	(0.0282)	***	0.1393	(0.0173)	***	0.2001	(0.0402)	***
Observations	18622/10024								

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

Table 6. Estimation results for of log-wage gaps by gender, 2017

	10th percentile		50th percentile		90th percentile				
	Coeff.	Std.err.	Coeff.	Std.err.	Coeff.	Std.err.			
Estimated									
Log-wage gap	0.4004	(0.0266)	***	0.0550	(0.0118)	***	0.0195	(0.0195)	***
Explained									
Age	0.0005	(0.0082)		0.0002	(0.0037)		0.0003	(0.0045)	
Age ²	-0.0253	(0.0099)	**	-0.0088	(0.0035)	**	-0.0082	(0.0034)	**
Education	-0.0116	(0.0037)	***	-0.0227	(0.0022)	***	-0.0483	(0.0042)	***
Area: Rural	-0.0126	(0.0022)	***	-0.0043	(0.0011)	***	-0.0041	(0.0018)	**
Indigenous	-0.0059	(0.0020)	***	-0.0011	(0.0004)	***	-0.0011	(0.0004)	**
Married	0.0115	(0.0051)	**	0.0105	(0.0026)	***	0.0179	(0.0047)	***
Manager	0.0000	(0.0001)		-0.0001	(0.0002)		-0.0003	(0.0009)	
Indep. contractor	0.0057	(0.0023)	**	0.0164	(0.0016)	***	0.1363	(0.0173)	***
Technician	0.0016	(0.0006)	***	0.0044	(0.0008)	***	0.0409	(0.0071)	***
Clerk	0.0021	(0.0010)	**	0.0077	(0.0011)	***	0.0623	(0.0081)	***
Merchant	0.0534	(0.0079)	***	0.1161	(0.0052)	***	0.6107	(0.0450)	***
Farmer	-0.0632	(0.0075)	***	-0.0809	(0.0046)	***	-0.3228	(0.0248)	***
Artisan	-0.0322	(0.0046)	***	-0.0688	(0.0035)	***	-0.3322	(0.0244)	***
Factory worker	-0.0307	(0.0051)	***	-0.0705	(0.0032)	***	-0.3936	(0.0260)	***
Others	0.0089	(0.0018)	***	0.0193	(0.0032)	***	0.0794	(0.0140)	***
Primary sector	-0.0012	(0.0071)		0.0039	(0.0035)		0.0148	(0.0057)	***
Secondary sector	0.0203	(0.0045)	***	0.0150	(0.0028)	***	0.0045	(0.0052)	
Total	-0.0788	(0.0120)	***	-0.0637	(0.0067)	***	-0.1435	(0.0140)	***
Unexplained									
Age	-0.4015	(0.5124)		0.4986	(0.1765)	***	0.5954	(0.2455)	**
Age ²	0.2319	(0.2678)		-0.2343	(0.0861)	***	-0.2697	(0.1192)	**
Education	-0.4170	(0.0930)	***	-0.0990	(0.0400)	**	0.1916	(0.0608)	***

Area: Rural	-0.0648	(0.0550)		-0.0274	(0.0215)		0.0364	(0.0346)	
Indigenous	-0.0198	(0.0088)	**	-0.0053	(0.0025)	**	-0.0108	(0.0035)	***
Married	0.0607	(0.0296)	**	0.0189	(0.0130)		0.0336	(0.0217)	
Manager	-0.0009	(0.0008)		-0.0003	(0.0006)		0.0097	(0.0041)	**
Indep. contractor	0.0052	(0.0087)		-0.0047	(0.0042)		0.1182	(0.0321)	***
Technician	-0.0058	(0.0041)		-0.0029	(0.0027)		0.0361	(0.0155)	**
Clerk	-0.0096	(0.0035)	***	-0.0060	(0.0029)	**	0.0168	(0.0124)	
Merchant	0.0043	(0.0266)		0.0739	(0.0124)	***	0.1866	(0.0775)	**
Farmer	-0.0380	(0.0280)		-0.0027	(0.0098)		0.0421	(0.0302)	
Artisan	0.0223	(0.0117)	*	0.0190	(0.0055)	***	0.0275	(0.0200)	
Factory worker	-0.0051	(0.0013)	***	0.0002	(0.0010)		0.0003	(0.0030)	
Others	-0.0659	(0.0172)	***	-0.0221	(0.0082)	***	0.0511	(0.0410)	
Primary sector	0.0881	(0.0267)	***	0.0163	(0.0097)	*	0.0141	(0.0128)	
Secondary sector	0.0282	(0.0097)	***	0.0144	(0.0058)	**	0.0063	(0.0099)	
Constant	1.0669	(0.2674)	***	-0.118	(0.0998)		-0.9280	(0.2721)	***
Total	0.4792	(0.0276)	***	0.1187	(0.0126)	***	0.1574	(0.0242)	***
Observations	26111/ 16583								

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

5. Discussion

Overall, the analysis suggests that, in general, some progresses have been achieved a decade after the adoption of the new constitution. These progresses, however, have been done mostly in benefit of the population at the top of the income distribution. Indeed, in all cases the wage gap decreased at the top of the distribution, but it increased at the bottom. However, gender and ethnic gaps are, on average, much wider than the latter in 2017.

The fact that an unequal progress has taken place emphasizes the importance of a constant policy monitoring to ensure that benefits are greater for those who need it the most.

Indigenous and rural workers historically did not benefit the progresses lived by other parts of the society and, moreover, they were often left behind by policy makers. As shown, the gaps that they faced in 2017 exceed by far the gender gap, confirming what found by other Latin American countries (see Canela and Salazar (2014) for Bolivia, Ecuador, and Guatemala and by Bucheli and Porzecanski (2011) for Uruguay). Our results demonstrate that, despite some progress has been made in closing the gaps among these groups, there is still a lot to do. This implies that wage differentials between areas and between ethnic groups need to be accounted for in the national debate with the relevance that they deserve so they are addressed with the same emphasis that the gender wage gap is addressed.

Public policies should enforce territorial cohesion as well as greater equality of opportunities for all ethnicities and identities of Ecuador. Furthermore, focalized interventions should be implemented to take care of those at the bottom of the income distribution, for whom this work finds an increase in wage gaps.

The Oaxaca-Blinder decomposition we carried out shows that endowment accounts for the greatest part of the ethnic and area wage gaps. However, this is not the case for the gender wage gap, where the unexplained part is the only component disfavoring women, confirming what found by Canela and Salazar (2014). This is in line with the idea that the gender wage gap is mostly the result of non-observable characteristics where employer's discrimination, as well as behavioral differences between male and female workers, may play a role (Blau and Kahn, 2017, Cuellar and Moreno, 2022). From a policy perspective, this arises the necessity to continue building public policies with gender perspective aiming to tackle the strength of social norms and stereotypes that cause gender discrimination which, according to Canelas and Salazar (2014), might be particularly strong in Ecuador. Looking at the gap due to endowment, we note the importance of being married as a driver of the wage differences by

gender both in 2007 and in 2017. This is in line with evidence of a positive association between male earnings and marriage (Blau and Kahn, 2017). Therefore, apart from fostering policies with gender perspective, it is key to educate for a more equal distribution of domestic activities (Canelas and Salazar, 2014), which ultimately determines the time allocated to work, the employers' perception of the workers' productivity and wages (Blau and Kahn, 2017).

In the case of ethnic and area disparities due to endowment, a large proportion is explained by education, and by performing low skill jobs such as being a farmer or an artisan, as well as by participating in the primary sector. This evidence is common to other Andean countries like Perú (Kolev and Suárez Robles, 2015). According to the national bureau of statistics, the majority of indigenous and rural people have the highest illiteracy rates, and they are involved in agriculture and in the primary sector (INEC, 2010). It is not surprising, thus, that education increases the wage gap in these cases, also considering that, while a decrease in the returns to education has been found to lower income inequality in Latin American countries, Ecuador is an exception as it experienced an rise in the education premium (Orellana et al., 2016). This increase in the education premium may be explained with the fact that degrees may be perceived as a signal of the social status (Didier, 2021). As a consequence, a key policy objective should be to expand the access to education for indigenous and rural people in such a way that not only few pertaining to higher social classes can take benefit.

6. Conclusions

In this study, we applied an Oaxaca-Blinder unconditional quantile regression analysis to identify the factors affecting earnings gaps by ethnicity, area of residence, and gender. The analysis covers two years, 2007 and 2017, with the latter period seeing the enforcement of a new constitution that aimed to increase the rights and opportunities of traditionally vulnerable groups, among other aspects.

Our results show statistically significant wage gaps that disfavor indigenous, rural, and female workers, with ethnic wage gaps being the largest across the three categories examined, while gender gaps are the lowest. Additionally, the wage gap increased at the bottom of the distribution and decreased at the top. Educational endowment mainly explains area and ethnic wage gaps, while discrimination contributes more to gender wage differentials.

The persistent failure to close these wage gaps is particularly worrying given the levels and rising trend of inequality in Ecuador, which has led to protests involving mainly indigenous people. The Covid-19 pandemic has further complicated the picture, and recent protests and a general strike in June 2022 call for an intervention by national authorities to enforce territorial cohesion, particularly by enhancing the rural and indigenous population's endowment. Education may be a key tool, but assaults on schools in the coastal area in 2022 are a worrying signal for developing a more inclusive society in the future. From a gender perspective, education could make it easier to reconsider common social norms and stereotypes that have an impact on labor market outcomes.

Overall, our analysis highlights the multidimensional nature of wage gaps that policymakers must consider to prevent exacerbating already challenging social situations.

Acknowledgements

Funding for this research was granted by the II Convocatoria de Proyectos de Investigación – Vinculación (VIUC-DVS) at the University of Cuenca, Cuenca, Ecuador

References

1. Angel-Urdinol, D. F., & Wodon, Q. (2006). The Gender Wage Gap and Poverty in Colombia. *Labour*, 20(4), 721-739. <https://doi.org/10.1111/j.1467-9914.2006.00358.x>
2. Blau, F., & Kahn, L. (2017). The Gender Wage Gap: Extent, Trends, and Explanations. *Journal of Economic Literature*, 55(3), 789-865. <https://doi.org/10.1257/jel.20160995>

3. Blinder, A. S. (1973) Wage Discrimination: Reduced Form and Structural Estimates. *The Journal of Human Resources*, 8, 436-455. <https://doi.org/10.2307/144855>
4. Bucheli, M., & Porzecanski, R. (2011). Racial Inequality in the Uruguayan Labor Market: An Analysis of Wage Differentials Between Afro-descendants and Whites. *Latin American Politics and Society*, 53(2), 1-184. <https://doi.org/10.1111/j.1548-2456.2011.00119.x>
5. Canelas, C., & Salazar, S. (2014). Gender and ethnic inequalities in LAC Countries. *IZA Journal of Labor & Development*, 3, 1-18. <https://doi.org/10.1186/2193-9020-3-18>
6. Carrillo, P., Gandelman, N., Robano, V. (2014). Sticky floors and glass ceilings in Latin America. *Journal of Economic Inequality*, 12, 339-361. <https://doi.org/10.1007/s10888-013-9258-3>
7. Cuellar, C. Y., & Moreno, J. O. (2022). Employment, wages, and the gender gap in Mexico: Evidence of three decades of the urban labor market. *Latin American Journal of Central Banking*, 3(2), 100055. <https://doi.org/10.1016/j.latcb.2022.100055>
8. Clavijo, I., Mejía-Mantilla, C., Olivieri, S., Lara-Ibarra, G., & Romero, J. (2021). *Mind the Gap: How COVID-19 is Increasing Inequality in Latin America and the Caribbean*. World Bank, Washington, DC.
9. Dider N. (2021). Does credentialism affect the gender wage gap? Evidence from Chile. *Latin American Policy*, 12(1), 69-96. <https://doi.org/10.1111/lamp.12209>
10. Firpo, S., Fortin, N. M., Lemieux, T. (2009). Unconditional quantile regressions. *Econometrica*, 77: 953-973. <https://doi.org/10.3982/ECTA6822>
11. INEC. (2010). Censo de Población y Vivienda 2010. Capítulo Educación.
12. Kolev, A., & Suárez, P. (2015). Ethnic wage gaps in Peru: What drives the particular disadvantage of indigenous women? *International Labour Review*, 154, 417-448. <https://doi.org/10.1111/j.1564-913X.2014.00016.x>
13. Lustig, N. Lopez-Calva, L., Ortiz-Juarez, E., & Monga, C. (2016). Deconstructing the Decline in Inequality in Latin America. In: Basu, K, Stiglitz, J. E. (eds) *Inequality and Growth: Patterns and Policy*. International Economics Association. Palgrave Macmillan, London.
14. Mella, C., (2022, November, 15). La violencia en Guayaquil pone en jaque a la educación. *El País*. <https://elpais.com/internacional/2022-11-15/la-violencia-en-guayaquil-pone-en-jaque-a-la-educacion.html> (Last accessed 06/02/2023).
15. Oaxaca, R. (1973). Male–female wage differentials in urban labor markets. *International Economic Review*, 14, 693-709. <https://doi.org/10.2307/2525981>
16. Orellana Bravo, M. R., Raileanu Szeles, M., & Argudo Barrera, D. M. (2016). A Multilevel analysis of the returns to education in Ecuador. The multifaceted impact of human capital. *Scientific Annals of Economics and Business*, 63, 1–19. <https://doi.org/10.1515/saeb-2016-0133>
17. Ponce, K., Vasquez, A., Vivanco, P., Munck, R. (2019). Indigenous and Citizens' Uprising in Ecuador. *Latin American Perspectives*, 234 (47), 9-19. <http://dx.doi.org/10.1177/0094582X20931113>
18. SENPLADES, SETEP (2014). *Estrategia Nacional para la Igualdad y la Erradicación de la Pobreza*. Secretaría Nacional de Planificación y Desarrollo and Secretaría Técnica para la Erradicación de la Pobreza, Quito.
19. World Bank (2015). Ecuador: social indicators. Retrieved from <https://datos.bancomundial.org/> (Last accessed 17 September 2020).

Appendix A: Descriptive statistics

Table A1. Descriptive statistics

2007						2017					
Variable	Obs	Mean	Std. Dev.	Min	Max	Variable	Obs	Mean	Std. Dev.	Min	Max
Whole sample						Whole sample					
Log-wage	28,656	0.2053	1.3916	-4.9698	11.7361	Log-wage	42,746	0.8127	0.9599	-5.0752	10.6375
Age	28,656	40.0551	15.5769	7.0000	96.0000	Age	42,746	41.6466	14.6635	9.0000	98.0000
Education	28,656	9.2658	5.0402	0.0000	21.0000	Education	42,746	10.7345	4.8467	0.0000	23.0000
Indigenous	28,656	0.0725	0.2593	0.0000	1.0000	Indigenous	42,746	0.1089	0.3116	0.0000	1.0000
Sex: Male	28,656	0.6501	0.4769	0.0000	1.0000	Sex	42,746	0.6118	0.4873	0.0000	1.0000
Area: Rural	28,656	0.5809	0.4934	0.0000	1.0000	Area: Rural	42,746	0.6270	0.4836	0.0000	1.0000
Married	28,656	0.6163	0.4863	0.0000	1.0000	Married	42,746	0.6389	0.4803	0.0000	1.0000
Manager	28,646	0.0045	0.0670	0.0000	1.0000	Manager	42,694	0.0132	0.1143	0.0000	1.0000
Indep. contractor	28,646	0.0199	0.1398	0.0000	1.0000	Indep. contractor	42,694	0.0983	0.2977	0.0000	1.0000
Technician	28,646	0.0656	0.2476	0.0000	1.0000	Technician	42,694	0.0489	0.2157	0.0000	1.0000
Clerk	28,646	0.0469	0.2115	0.0000	1.0000	Clerk	42,694	0.0353	0.1844	0.0000	1.0000
Merchant	28,646	0.0442	0.2055	0.0000	1.0000	Merchant	42,694	0.2096	0.4070	0.0000	1.0000
Farmer	28,646	0.1607	0.3673	0.0000	1.0000	Farmer	42,694	0.2342	0.4235	0.0000	1.0000
Artisan	28,646	0.1596	0.3662	0.0000	1.0000	Artisan	42,694	0.1277	0.3337	0.0000	1.0000
Factory worker	28,646	0.1215	0.3267	0.0000	1.0000	Factory worker	42,694	0.0769	0.2665	0.0000	1.0000
Others	28,646	0.0667	0.2495	0.0000	1.0000	Others	42,694	0.1521	0.3592	0.0000	1.0000
Primary sector	28,656	0.3269	0.4691	0.0000	1.0000	Primary sector	42,746	0.2763	0.4472	0.0000	1.0000

Secondary sector	28,656	0.1821	0.3859	0.0000	1.0000	Secondary sector	42,746	0.1711	0.3766	0.0000	1.0000
Sex: female						Sex: female					
Log-wage	10,027	0.1633	1.5422	-4.3820	11.0429	Log-wage	16,594	0.7390	0.9947	-5.0752	10.3498
Indigenous	10,027	0.0704	0.2558	0.0000	1.0000	Indigenous	16,594	0.1024	0.3032	0.0000	1.0000
Age	10,027	39.5784	14.5256	8.0000	94.0000	Age	16,594	41.3660	13.8566	9.0000	94.0000
Education	10,027	9.9871	5.3055	0.0000	21.0000	Education	16,594	11.2258	5.1378	0.0000	22.0000
Area: Rural	10,027	0.6574	0.4746	0.0000	1.0000	Area: Rural	16,594	0.6679	0.4710	0.0000	1.0000
Married	10,027	0.5156	0.4998	0.0000	1.0000	Married	16,594	0.5366	0.4987	0.0000	1.0000
Manager	10,024	0.0002	0.0141	0.0000	1.0000	Manager	16,583	0.0124	0.1105	0.0000	1.0000
Indep. contractor	10,024	0.0189	0.1360	0.0000	1.0000	Indep. contractor	16,583	0.1404	0.3475	0.0000	1.0000
Technician	10,024	0.0956	0.2940	0.0000	1.0000	Technician	16,583	0.0565	0.2309	0.0000	1.0000
Clerk	10,024	0.0646	0.2459	0.0000	1.0000	Clerk	16,583	0.0503	0.2186	0.0000	1.0000
Merchant	10,024	0.0741	0.2620	0.0000	1.0000	Merchant	16,583	0.3199	0.4665	0.0000	1.0000
Farmer	10,024	0.2655	0.4416	0.0000	1.0000	Farmer	16,583	0.1795	0.3837	0.0000	1.0000
Artisan	10,024	0.1318	0.3383	0.0000	1.0000	Artisan	16,583	0.0671	0.2502	0.0000	1.0000
Factory worker	10,024	0.0702	0.2555	0.0000	1.0000	Factory worker	16,583	0.0120	0.1089	0.0000	1.0000
Others	10,024	0.0112	0.1051	0.0000	1.0000	Others	16,583	0.1619	0.3683	0.0000	1.0000
Primary sector	10,027	0.2064	0.4048	0.0000	1.0000	Primary sector	16,594	0.2009	0.4007	0.0000	1.0000
Secondary sector	10,027	0.1059	0.3077	0.0000	1.0000	Secondary sector	16,594	0.0944	0.2924	0.0000	1.0000
Sex: male						Sex: male					
Log-wage	18,629	0.2279	1.3028	-4.9698	11.7361	Log-wage	26,152	0.8595	0.9343	-4.6052	10.6375
Indigenous	18,629	0.0736	0.2611	0.0000	1.0000	Indigenous	26,152	0.1131	0.3167	0.0000	1.0000

Age	18,629	40.3116	16.1089	7.0000	96.0000	Age	26,152	41.8247	15.1507	9.0000	98.0000
Education	18,629	8.8776	4.8475	0.0000	21.0000	Education	26,152	10.4228	4.6257	0.0000	23.0000
Area: Rural	18,629	0.5396	0.4984	0.0000	1.0000	Area: Rural	26,152	0.6011	0.4897	0.0000	1.0000
Married	18,629	0.6705	0.4700	0.0000	1.0000	Married	26,152	0.7038	0.4566	0.0000	1.0000
Manager	18,622	0.0068	0.0823	0.0000	1.0000	Manager	26,111	0.0138	0.1166	0.0000	1.0000
Indep. contractor	18,622	0.0205	0.1418	0.0000	1.0000	Indep. contractor	26,111	0.0715	0.2576	0.0000	1.0000
Technician	18,622	0.0495	0.2168	0.0000	1.0000	Technician	26,111	0.0441	0.2053	0.0000	1.0000
Clerk	18,622	0.0374	0.1897	0.0000	1.0000	Clerk	26,111	0.0257	0.1582	0.0000	1.0000
Merchant	18,622	0.0281	0.1652	0.0000	1.0000	Merchant	26,111	0.1395	0.3465	0.0000	1.0000
Farmer	18,622	0.1043	0.3057	0.0000	1.0000	Farmer	26,111	0.2689	0.4434	0.0000	1.0000
Artisan	18,622	0.1745	0.3796	0.0000	1.0000	Artisan	26,111	0.1661	0.3722	0.0000	1.0000
Factory worker	18,622	0.1491	0.3562	0.0000	1.0000	Factory worker	26,111	0.1181	0.3228	0.0000	1.0000
Others	18,622	0.0966	0.2954	0.0000	1.0000	Others	26,111	0.1460	0.3531	0.0000	1.0000
Primary sector	18,629	0.3918	0.4882	0.0000	1.0000	Primary sector	26,152	0.3241	0.4681	0.0000	1.0000
Secondary sector	18,629	0.2231	0.4163	0.0000	1.0000	Secondary sector	26,152	0.2198	0.4141	0.0000	1.0000
Ethnicity: not indogenous						Ethnicity: not indogenous					
Log-wage	26,579	0.2393	1.3769	-4.7875	11.7361	Log-wage	38,089	0.8728	0.9420	-5.0752	10.6375
Sex: Male	26,579	0.6493	0.4772	0.0000	1.0000	Sex	38,089	0.6089	0.4880	0.0000	1.0000
Age	26,579	40.0252	15.4591	7.0000	96.0000	Age	38,089	41.5889	14.5760	9.0000	98.0000
Education	26,579	9.5310	4.9763	0.0000	21.0000	Education	38,089	11.0586	4.7451	0.0000	23.0000
Area: Rural	26,579	0.6073	0.4884	0.0000	1.0000	Area: Rural	38,089	0.6776	0.4674	0.0000	1.0000
Married	26,579	0.6119	0.4873	0.0000	1.0000	Married	38,089	0.6282	0.4833	0.0000	1.0000

Manager	26,569	0.0048	0.0692	0.0000	1.0000	Manager	38,045	0.0142	0.1183	0.0000	1.0000
Indep. contractor	26,569	0.0209	0.1430	0.0000	1.0000	Indep. contractor	38,045	0.1039	0.3051	0.0000	1.0000
Technician	26,569	0.0691	0.2537	0.0000	1.0000	Technician	38,045	0.0529	0.2239	0.0000	1.0000
Clerk	26,569	0.0491	0.2160	0.0000	1.0000	Clerk	38,045	0.0381	0.1915	0.0000	1.0000
Merchant	26,569	0.0468	0.2113	0.0000	1.0000	Merchant	38,045	0.2221	0.4156	0.0000	1.0000
Farmer	26,569	0.1663	0.3724	0.0000	1.0000	Farmer	38,045	0.1991	0.3993	0.0000	1.0000
Artisan	26,569	0.1422	0.3493	0.0000	1.0000	Artisan	38,045	0.1308	0.3372	0.0000	1.0000
Factory worker	26,569	0.1210	0.3262	0.0000	1.0000	Factory worker	38,045	0.0828	0.2756	0.0000	1.0000
Others	26,569	0.0692	0.2538	0.0000	1.0000	Others	38,045	0.1521	0.3591	0.0000	1.0000
Primary sector	26,579	0.3105	0.4627	0.0000	1.0000	Primary sector	38,089	0.2416	0.4281	0.0000	1.0000
Secondary sector	26,579	0.1801	0.3843	0.0000	1.0000	Secondary sector	38,089	0.1745	0.3796	0.0000	1.0000

Ethnicity: indigenous						Ethnicity: indigenous					
Log-wage	2,077	-0.2300	1.5016	-4.9698	10.8198	Log-wage	4,657	0.3215	0.9642	-4.6052	8.7403
Sex: Male	2,077	0.6601	0.4738	0.0000	1.0000	Sex	4,657	0.6352	0.4814	0.0000	1.0000
Age	2,077	40.4377	17.0121	10.0000	94.0000	Age	4,657	42.1188	15.3535	12.0000	94.0000
Education	2,077	5.8729	4.6048	0.0000	21.0000	Education	4,657	8.0844	4.8567	0.0000	21.0000
Area: Rural	2,077	0.2427	0.4288	0.0000	1.0000	Area: Rural	4,657	0.2132	0.4096	0.0000	1.0000
Married	2,077	0.6731	0.4692	0.0000	1.0000	Married	4,657	0.7269	0.4456	0.0000	1.0000
Manager	2,077	0.0005	0.0219	0.0000	1.0000	Manager	4,649	0.0054	0.0731	0.0000	1.0000
Indep. contractor	2,077	0.0077	0.0875	0.0000	1.0000	Indep. contractor	4,649	0.0521	0.2222	0.0000	1.0000
Technician	2,077	0.0202	0.1408	0.0000	1.0000	Technician	4,649	0.0161	0.1260	0.0000	1.0000
Clerk	2,077	0.0193	0.1375	0.0000	1.0000	Clerk	4,649	0.0116	0.1072	0.0000	1.0000

Merchant	2,077	0.0106	0.1024	0.0000	1.0000	Merchant	4,649	0.1073	0.3096	0.0000	1.0000
Farmer	2,077	0.0891	0.2849	0.0000	1.0000	Farmer	4,649	0.5214	0.4996	0.0000	1.0000
Artisan	2,077	0.3813	0.4858	0.0000	1.0000	Artisan	4,649	0.1017	0.3023	0.0000	1.0000
Factory worker	2,077	0.1271	0.3332	0.0000	1.0000	Factory worker	4,649	0.0286	0.1667	0.0000	1.0000
Others	2,077	0.0351	0.1842	0.0000	1.0000	Others	4,649	0.1523	0.3593	0.0000	1.0000
Primary sector	2,077	0.5368	0.4988	0.0000	1.0000	Primary sector	4,657	0.5600	0.4964	0.0000	1.0000
Secondary sector	2,077	0.2070	0.4053	0.0000	1.0000	Secondary sector	4,657	0.1430	0.3501	0.0000	1.0000
Rural areas						Rural areas					
Log-wage	12,011	-0.0898	1.4240	-4.9698	11.7361	Log-wage	15,944	0.4942	0.9422	-4.6052	8.8739
Sex: Male	12,011	0.7140	0.4519	0.0000	1.0000	Sex	15,944	0.6544	0.4756	0.0000	1.0000
Age	12,011	40.8468	16.9324	8.0000	94.0000	Age	15,944	42.8066	15.8154	9.0000	95.0000
Education	12,011	6.7236	4.0531	0.0000	21.0000	Education	15,944	8.5411	4.4753	0.0000	22.0000
Married	12,011	0.6252	0.4841	0.0000	1.0000	Married	15,944	0.6742	0.4687	0.0000	1.0000
Manager	12,008	0.0007	0.0274	0.0000	1.0000	Manager	15,912	0.0074	0.0854	0.0000	1.0000
Indep. contractor	12,008	0.0057	0.0756	0.0000	1.0000	Indep. contractor	15,912	0.0441	0.2052	0.0000	1.0000
Technician	12,008	0.0144	0.1192	0.0000	1.0000	Technician	15,912	0.0179	0.1326	0.0000	1.0000
Clerk	12,008	0.0172	0.1302	0.0000	1.0000	Clerk	15,912	0.0134	0.1152	0.0000	1.0000
Merchant	12,008	0.0120	0.1089	0.0000	1.0000	Merchant	15,912	0.1236	0.3291	0.0000	1.0000
Farmer	12,008	0.0799	0.2712	0.0000	1.0000	Farmer	15,912	0.4986	0.5000	0.0000	1.0000
Artisan	12,008	0.3231	0.4677	0.0000	1.0000	Artisan	15,912	0.0941	0.2919	0.0000	1.0000
Factory worker	12,008	0.0862	0.2807	0.0000	1.0000	Factory worker	15,912	0.0557	0.2294	0.0000	1.0000
Others	12,008	0.0420	0.2005	0.0000	1.0000	Others	15,912	0.1420	0.3490	0.0000	1.0000

Primary sector	12,011	0.6456	0.4784	0.0000	1.0000	Primary sector	15,944	0.5650	0.4958	0.0000	1.0000
Secondary sector	12,011	0.1428	0.3499	0.0000	1.0000	Secondary sector	15,944	0.1352	0.3420	0.0000	1.0000
Urban areas						Urban areas					
Log-wage	16,645	0.4182	1.3276	-3.6391	11.0429	Log-wage	26,802	1.0022	0.9194	-5.0752	10.6375
Sex: Male	16,645	0.6040	0.4891	0.0000	1.0000	Sex	26,802	0.5865	0.4925	0.0000	1.0000
Age	16,645	39.4838	14.4940	7.0000	96.0000	Age	26,802	40.9566	13.8875	9.0000	98.0000
Education	16,645	11.1003	4.8840	0.0000	21.0000	Education	26,802	12.0393	4.5811	0.0000	23.0000
Married	16,645	0.6099	0.4878	0.0000	1.0000	Married	26,802	0.6180	0.4859	0.0000	1.0000
Manager	16,638	0.0072	0.0846	0.0000	1.0000	Manager	26,782	0.0167	0.1283	0.0000	1.0000
Indep. contractor	16,638	0.0302	0.1711	0.0000	1.0000	Indep. contractor	26,782	0.1305	0.3368	0.0000	1.0000
Technician	16,638	0.1025	0.3034	0.0000	1.0000	Technician	26,782	0.0673	0.2506	0.0000	1.0000
Clerk	16,638	0.0683	0.2523	0.0000	1.0000	Clerk	26,782	0.0482	0.2142	0.0000	1.0000
Merchant	16,638	0.0674	0.2508	0.0000	1.0000	Merchant	26,782	0.2607	0.4390	0.0000	1.0000
Farmer	16,638	0.2190	0.4136	0.0000	1.0000	Farmer	26,782	0.0771	0.2668	0.0000	1.0000
Artisan	16,638	0.0415	0.1995	0.0000	1.0000	Artisan	26,782	0.1476	0.3547	0.0000	1.0000
Factory worker	16,638	0.1470	0.3541	0.0000	1.0000	Factory worker	26,782	0.0895	0.2855	0.0000	1.0000
Others	16,638	0.0846	0.2782	0.0000	1.0000	Others	26,782	0.1582	0.3649	0.0000	1.0000
Primary sector	16,645	0.0970	0.2959	0.0000	1.0000	Primary sector	26,802	0.1045	0.3060	0.0000	1.0000
Secondary sector	16,645	0.2105	0.4076	0.0000	1.0000	Secondary sector	26,802	0.1924	0.3942	0.0000	1.0000

Appendix B: Standard Oaxaca-Blinder decomposition estimates

Table B1. estimation results for standard Oaxaca-Blinder decomposition for ethnic wage gap

	2007		2017	
Estimated Log-wage gap	0.4696 (0.0340)	***	0.5518 (0.0149)	***
	Explained			
Age	-0.0123 (0.0119)		-0.0201 (0.0087)	*
Age ²	0.0238 (0.0104)	*	0.0275 (0.0089)	**
Education	0.1772 (0.0101)	***	0.1010 (0.0045)	***
Sex: Male	-0.0019 (0.0019)		-0.0065 (0.0018)	***
Area: Rural	0.0312 (0.0071)	***	0.0545 (0.0046)	***
Married	-0.0045 (0.0013)	**	-0.0056 (0.0009)	***
Manager	0.0044 (0.0008)	***	0.0016 (0.0006)	**
Indep. contractor	0.0157 (0.0027)	***	-0.0159 (0.0019)	***
Technician	0.0347 (0.0032)	***	-0.0185 (0.0016)	***
Clerk	0.0137 (0.0019)	***	-0.0173 (0.0015)	***
Merchant	0.0105 (0.0017)	***	-0.1122 (0.0060)	***
Farmer	0.0014 (0.0020)		0.4036 (0.0146)	***
Artisan	-0.0095 (0.0071)		-0.0309 (0.0051)	***
Factory worker	0.0002 (0.0003)		-0.0506 (0.0031)	***
Others	0.0068 (0.0014)	***	0.0002 (0.0059)	
Primary sector	0.0265 (0.0062)	***	0.0086 (0.0057)	
Secondary sector	-0.0017 (0.0009)	*	0.0007 (0.0004)	
Total	0.3160 (0.0133)	***	0.3203 (0.0084)	***
	Unexplained			
Age	0.7414 (0.5144)		0.4820 (0.2113)	*
Age ²	-0.2192 (0.2698)		-0.1906 (0.1115)	*
Education	0.2160 (0.0559)	***	0.1778 (0.0306)	***
Sex: Male	0.0556 (0.0543)		0.0220 (0.0192)	
Area: Rural	0.0055 (0.0179)		-0.0232 (0.0085)	**
Married	-0.0522 (0.0566)		0.0373 (0.0226)	
Manager	-0.0002 (0.0002)		-0.0011 (0.0018)	

Indep. contractor	0.0006 (0.0016)		-0.0038 (0.0063)	
Technician	-0.0005 (0.0034)		0.0018 (0.0024)	
Clerk	-0.0149 (0.0067)	*	-0.0005 (0.0016)	
Merchant	-0.0019 (0.0048)		0.0174 (0.0126)	
Farmer	0.0095 (0.0088)		0.0622 (0.0599)	
Artisan	0.0610 (0.0335)	*	0.0058 (0.0120)	
Factory worker	0.0013 (0.0142)		0.0009 (0.0038)	
Others	0.0058 (0.0045)		0.0208 (0.0164)	
Primary sector	0.0539 (0.0532)		0.1288 (0.0349)	***
Secondary sector	-0.0314 (0.0217)		0.0091 (0.0071)	
Constant	-0.6768 (0.2624)	*	-0.5150 (0.1544)	**
Total	0.1536 (0.0339)	***	0.2316 (0.0136)	***
Observations	26569/2077		38045/4649	

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

Table B2. estimation results for standard Oaxaca-Blinder decomposition for rural-urban wage gap

	2007		2017	
Estimated Log-wage gap	0.5082 (0.0165)	***	0.5070 (0.0093)	***
	Explained			
Age	-0.0418 (0.0071)	***	-0.0694 (0.0063)	***
Age ²	0.0533 (0.0078)	***	0.0859 (0.0069)	***
Sex: Male	0.2120 (0.0108)	***	0.1187 (0.0047)	***
Indigenous	-0.0194 (0.0024)	***	-0.0164 (0.0013)	***
Education	0.0155 (0.0035)	***	0.0447 (0.0028)	***
Married	-0.0011 (0.0005)	*	-0.0032 (0.0006)	***
Manager	0.0066 (0.0010)	***	0.0017 (0.0006)	**
Indep. contractor	0.0291 (0.0026)	***	-0.0264 (0.0028)	***
Technician	0.0625 (0.0042)	***	-0.0248 (0.0018)	***
Clerk	0.0234 (0.0022)	***	-0.0227 (0.0015)	***
Merchant	0.0161 (0.0024)	***	-0.1341 (0.0055)	***
Farmer	0.0026 (0.0035)		0.5277 (0.0155)	***
Artisan	-0.0112 (0.0084)		-0.0569 (0.0038)	***
Factory worker	-0.0019 (0.0018)		-0.0315 (0.0026)	***

The Multifaceted Dimensions of the Wage Gap in Ecuador

Others	0.0085 (0.0015)	***	-0.0172 (0.0038)	***
Primary sector	0.0642 (0.0146)	***	0.0125 (0.0082)	
Secondary sector	0.0044 (0.0018)	*	0.0012 (0.0007)	
Total	0.4226 (0.0142)	***	0.3898 (0.0073)	***
Unexplained				
Age	0.6365 (0.2286)	**	0.5117 (0.1392)	***
Age ²	-0.2496 (0.1195)	*	-0.2064 (0.0743)	**
Sex: Male	0.2801 (0.0423)	***	0.1587 (0.0256)	***
Indigenous	-0.0131 (0.0281)		-0.0477 (0.012)	***
Education	0.0096 (0.0039)	*	0.0182 (0.0027)	***
Married	0.0152 (0.0229)		0.0207 (0.012)	*
Manager	0.0002 (0.0004)		-0.0003 (0.0014)	
Indep. contractor	-0.0052 (0.0026)	*	0.0010 (0.0048)	
Technician	-0.0050 (0.0034)		0.0014 (0.0023)	
Clerk	0.0001 (0.0027)		0.0007 (0.0017)	
Merchant	0.0008 (0.0029)		0.0264 (0.011)	*
Farmer	0.0107 (0.007)		0.0090 (0.0257)	
Artisan	-0.0054 (0.0072)		0.0033 (0.0077)	
Factory worker	0.0138 (0.0070)	*	0.0044 (0.0045)	
Others	0.0035 (0.0040)		0.0103 (0.0098)	
Primary sector	0.0889 (0.0235)	***	0.0909 (0.0130)	***
Secondary sector	0.0046 (0.0104)		0.0141 (0.0041)	**
Constant	-0.7001 (0.1287)	***	-0.4991 (0.1011)	***
Total	0.0856 (0.0194)	***	0.1172 (0.0097)	***
Observations	16638/12008		26782/15912	

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.

Table B3. estimation results for standard Oaxaca-Blinder decomposition for gender wage gap

	2007		2017	
Estimated Log-wage gap	0.0646 (0.0181)	***	0.1208 (0.0096)	***
	Explained			
Age	0.0227 (0.0061)	***	0.0178 (0.0053)	**
Age ²	-0.0308 (0.0059)	***	-0.0310 (0.0054)	***
Education	-0.0537 (0.0041)	***	-0.0272 (0.0019)	***
Indigenous	-0.0005 (0.0005)		-0.0025 (0.0007)	***
Area: Rural	-0.0101 (0.0023)	***	-0.0078 (0.0009)	***
Married	0.0113 (0.0027)	***	0.0095 (0.0015)	***
Manager	0.0068 (0.0010)	***	0.0003 (0.0002)	
Indep. contractor	0.0020 (0.0020)		0.0211 (0.0023)	***
Technician	-0.0327 (0.0031)	***	0.0062 (0.0012)	***
Clerk	-0.0125 (0.0017)	***	0.016 (0.0015)	***
Merchant	-0.0133 (0.0021)	***	0.1764 (0.0068)	***
Farmer	-0.0030 (0.0041)		-0.1120 (0.0059)	***
Artisan	0.0017 (0.0013)		-0.1052 (0.0045)	***
Factory worker	-0.0025 (0.0023)		-0.0990 (0.0038)	***
Others	0.0170 (0.0028)	***	0.0169 (0.0038)	***
Primary sector	-0.0217 (0.0050)	***	-0.0033 (0.0022)	
Secondary sector	0.0076 (0.0031)	*	0.0027 (0.0016)	*
Total	-0.1116 (0.0097)	***	-0.1211 (0.0062)	***
	Unexplained			
Age	-0.1678 (0.2498)		0.2802 (0.1417)	*
Age ²	0.1246 (0.1301)		-0.1486 (0.0752)	*
Education	-0.0852 (0.0503)	*	-0.1352 (0.0288)	***
Indigenous	-0.0041 (0.0055)		-0.0138 (0.0031)	***
Area: Rural	-0.0689 (0.0270)	*	-0.0167 (0.0130)	
Married	-0.0234 (0.0211)		0.0574 (0.0106)	***
Manager	-0.0010 (0.0010)		0.0077 (0.0014)	***
Indep. contractor	0.0026 (0.0030)		0.0659 (0.0052)	***

The Multifaceted Dimensions of the Wage Gap in Ecuador

Technician	0.0133 (0.0065)	*	0.0208 (0.0024)	***
Clerk	0.0013 (0.0040)		0.0186 (0.0020)	***
Merchant	-0.0039 (0.0042)		0.1744 (0.0111)	***
Farmer	-0.0011 (0.0092)		0.0400 (0.0120)	**
Artisan	-0.0341 (0.0118)	**	0.0389 (0.0044)	***
Factory worker	0.0265 (0.0072)	***	0.0006 (0.0013)	
Others	0.0013 (0.0029)		0.0465 (0.0064)	***
Primary sector	-0.0306 (0.0165)	*	0.0559 (0.0107)	***
Secondary sector	-0.0053 (0.0098)		0.0138 (0.0044)	**
Constant	0.4321 (0.1396)	**	-0.2647 (0.0817)	**
Total	0.1762 (0.0194)	***	0.2419 (0.0091)	***
Observations	18622/10024		26111/ 16583	

Notes: *** p<0.01, ** p<0.05, *<0.10. Std. errors in brackets.