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Is there evidence of discrimination in urban labour market in Cameroon?

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ABSTRACT

This study uses 2010 Employment and Informal Sector Survey in Cameroon to investigate wage differentials in urban labor market in order to identify the potential existence of discrimination on that market. For that we use an endogenous switching model corrected for the working decision selection process and we run an Oaxaca decomposition to identify the two parts of the differentials: the first explained by the difference in characteristics and the second unexplained and attributed to discrimination. The results indicate that there is a significant differential between male workers salaries and female ones in the two sectors and that the discrimination accounts for 78% of the differential in the formal sector and 34% in the informal sector.

Key words: *gender, discrimination ,wages, formal sector, informal sector, selection bias*

1. Introduction

Gender discrimination issues have been of great interest for economists over the past decades as it is a source of labour market imperfection. The starting point is Becker's 1957 book "The economics of discrimination" where he developed a 'taste-based' discrimination model. In this model, he argued that minority workers have to compensate employers by accepting lower wage for identical productivity. Another theory took rise about two decades later on 'statistical-based' discrimination. The idea here is that firms have limited information about skills of job applicants and they use easily observable characteristics such as race or gender to infer the expected productivity of applicant. In labour markets in general both types of discrimination coexist. In developing countries context in particular, the major discriminatory factor is sex mainly related to culture and traditions which assumes women to play a secondary role in the society. The complexity of the labour market structure (segmentation into formal and informal sectors and occupational segregation) makes the task of identification of the problem even more difficult.

In Cameroon as in many other Sub-Saharan countries, governments are concerned about the issue of development and therefore put the labour market at the centre of attention. In the perspective of more effective use of human capital potential, analysis of discrimination is an element not to be neglected as it is linked to the total productivity of the country and to poverty.

The fact that women are disadvantaged in the labour market does not itself mean that there is discrimination. What is harder to explain is the source of the disadvantages they face. These disadvantages that women faces are on several ground: the human capital, the level of unemployment, the access to certain types of work, the access to capital (very relevant in developing countries context were people are mostly self-employed in the informal sector) and several others; but the most obvious is the difference in earnings.

We intend in this paper to: first estimated the size of the differential in earnings, second identify the part of this differential which is related to discrimination and provide justification of the results and policy recommendations on this regard. We will focus on the urban area in Cameroon because the rural area is homogeneous and is focused on the agricultural activities; so

taking it in our estimation will biased them. We will take into account the coexistence of the two sectors, formal and informal and correct for the selection process in the labour market.

Practically we will estimate a Mincerian equation for men and women correction for the double selection biases: the first resulting from the selection in the labour market and the second resulting from the selection in the formal sector. And then we will use the Oaxaca decomposition to determine the size of the differential which is related to discrimination.

2. Literature review

Wage gap is a common feature in the labor market around the world has spawned a rich literature on its development and sources. On one hand, it is important to specify the determinants of wage which can be used to narrow the gap. On the other hand, it is crucial to find the explanations to quantify significant wage differences between the groups which are not justified by differential productivity and human capital investment. This unexplained part is mainly referred to as discrimination. Thus it is important through various policies and regulatory measures to reduce the non-human capital and productivity related portion of the wage gap.

At the theoretical level there are three main economic genres regarding wage differential. One is the neoclassical theory stemming from the work of Becker (1957) which suggests that the prejudice is expressed in a discriminatory taste on the part of employers, workers and consumers. The second one is focused on the statistical theory of discrimination (Aigner and Cain, 1977). The premise of this one is that firms have limited information about the skills of the job applicants. This gives them an incentive to use easily observable characteristics such as race or gender, to infer the expected productivity of the applicants. The last one is the segmented labor market approach, which can be traced back to the theory of non-competing groups in the work of Mill (1885). This approach moves away from the concept of competitive labor market and views the labor market as being split into sectors that are either dominated by male or female workers respectively. An example of this approach is the "dual labor market". Theoretically whether it is better to view wage differential as an outcome of essentially competitive situations or as a product of non-competing groups in the labor market is a debatable point. Yet the segmented approach has an evident weakness in it. It cannot address the

issues on how occupations are segregated and the reasons for discrimination to persist or to be eroded over time.

The econometric investigation of discrimination started with Becker's seminal study on economics of discrimination in 1957. Since then, the proliferation of the use of micro data enables economists to analyze the productivity of individuals. In particular, the decomposition technique which was pioneered by Blinder (1973) and Oaxaca (1973) has frequently been applied to data acquired from various countries and at time periods (For examples, see Wolf and Petrela, 2004; Smith, 2002; Boraas and Rodgers, 2003; Bhandari and Heshmati, 2008; Jung and Choi, 2004). This method determines how much wage differential between two groups is attributed to the differences in the characteristic of each group where wage regressions are estimated separately. Heshmati (2004a) and (2004b) give general reviews on the measurement of inequality and its decomposition. Weichselbaumer (2005) provides a meta-analysis of the international gender wage gap and Jone (1983) provides a critical comment on Blinder's method. Several changes have been made with respect to the original Blinder-Oaxaca method. For instance, Reimers (1983) developed this model by taking account of possible selectivity bias due to the distinction between the offered wages and the observed wages. He claimed that discrimination, if affected the wage rate largely, it would influence the individual's decision on working participation. Therefore, the offered wage would be truncated and incidental as it depends on another variable, namely, labor participation as a conditional variable. Cotton (1988) reformulated the Blinder-Oaxaca model by further breakdown of the unexplained part, so that both the discrimination imposed on the minority and the benefit bestowed on a majority can be estimated. A more complicated transformation of this model was driven by Neumark (1988), in which he considered the linkage of the Blinder-Oaxaca method to a theoretical model on the employers' discriminatory behavior.

3. Model specification

What we want to do is to estimate wage equations for formal and informal sector and for men and women in each of these sectors. Then using the Oaxaca decomposition, we will determine whether or not the discrimination plays a role in the differential observed.

Let consider W_{1i} et W_{2i} as the monthly salary in the formal and in the informal sector respectively. The wage equations to estimate are:

$$\log W_{1i} = X_{1i}^{'}\beta_1 + \varepsilon_{1i} \quad (1)$$

$$\log W_{2i} = X_{2i}^{'}\beta_2 + \varepsilon_{2i} \quad (2)$$

Where the X_i are the explanatory variables matrixes; β_1 and β_2 are the vectors of corresponding coefficients; ε_1 and ε_2 are the error terms. In general estimates from these simple equations are biased for two reasons. On one hand, there is a selection bias due to the fact that some people are working (those that will be introduce in our regression) and other that are not working. This bias will come from the fact that those working are not selected randomly; they don't on average have the same characteristics. Heckman (1979), using a two step approach, offered a mean to correct this type of bias. On the other hand, once they decide to work, the sector is not chosen randomly and this can lead to another bias that needs to be corrected (Maddala & Nelson, 1975). Following Tunali (1986), we will take into account in our estimations both potential biases.

Taking into account the fact that STATA already has a command, `movestay,` that allow us to in one step to estimate the wage equations and the endogenous selection (selection in the sector). We will follow a three steps methodology.

The first step is the modeling of the working decision. Let consider the following equation to determine the working decision.

$$P_i^* = Z_{pi}^{'}\eta_p + \varepsilon_{pi} \quad (3)$$

$P*$ is a latent variable; Z_p is a vector of characteristics that explains the decision to work η_p is a vector of coefficients to be estimated and ε_p is the error term. As far as a latent variable is not observable, we define the dummy variable P such that:

$$P_i = 1 \quad \text{if} \quad P_i* > 0$$
$$P_i = 0 \quad \text{if} \quad P_i* \leq 0$$

So, an individual will decide to work ($P_i = 1$) if the utility gained from working is higher that the utility of staying unemployed (P=0). We will estimate a probit model for the working decision and the Inverted Mills Ratio $\hat{\lambda}_{i,p} = \phi(Z'_{pi}\hat{\eta}_p) / \Phi(Z'_{pi}\hat{\eta}_p)$, ϕ and Φ being univariate density function and distribution function respectively) taken from this step will be included as an explanatory variable for the second step.

The second step is what is commonly called "endogenous switching model". The selection into the sector is different from the former one (decision to work or not). In fact, from the working decision equation, we will observe only the wages of those who are working; they are indeed the only ones to have a salary among the two groups. Whereas the wages of individuals working in both sectors (subject of the second selection process) will be observed.

We consider the following equation for the choice of the sector:

$$S_i^* = Z'_{si}\eta_s + \varepsilon_{si} \quad (4)$$

Where S^* is a latent variable, Z_s a vector of characteristics that explains the choice of a sector η_s is a vector of coefficients to be estimated and ε_s is the error term. As we did for P^*, we define a dummy variable S such that:

$S_i = 1$ if $S_i^* > 0$: formal sector choice

$S_i = 0$ if $S_i^* \leq 0$: informal sector choice

Considering that Y_i is the log of wages, our wage equation can be rewritten as:

$Y_i = \log W_{1i}$ if $S_i = 1$

$Y_i = \log W_{2i}$ if $S_i = 0$

A probit equation will be used for the sector choice and from that we will have two correction terms, one for the formal sector (equation (5)) and the other for the informal sector (equation (6)).

$$\hat{\lambda}_{i,s_1} = \phi(Z'_{si}\hat{\eta}_s) / \Phi(Z'_{si}\hat{\eta}_s) \quad\quad\quad (5)$$

$$\hat{\lambda}_{i,s_2} = -\phi(Z'_{si}\hat{\eta}_s) / \Phi(-Z'_{si}\hat{\eta}_s) \quad\quad (6)$$

Taking into account these correction terms, equations (1) and (2) will be rewritten as:

$$E(\log w_{1i} \mid X_i' P_i = 1, S_i = 1) = X_{1,i}'\beta_1 + \sigma_{11}\rho_{1\varepsilon_p}\hat{\lambda}_{i,p} + \sigma_{11}\rho_{1\varepsilon_s}\hat{\lambda}_{i,s_1} \quad (7)$$

$$E(\log w_{2i} \mid X_i' P_i = 1, S_i = 0) = X_{2,i}'\beta_2 + \sigma_{22}\rho_{2\varepsilon_p}\hat{\lambda}_{i,p} + \sigma_{22}\rho_{2\varepsilon_s}\hat{\lambda}_{i,s_2} \quad (8)$$

A fundamental identification hypothesis for that model is that there should be at least one variable in the matrix Z_s that does not enter the matrix Z_p and one variable in the matrix X that does not enter the matrix Z_s. Considering that the sex of an individual is random, we will run three regressions for each of equation (7) and (8), one for the sector, one for men and one for women.

The third step is the decomposition. The differential between men and women will be estimated in each sector using the Oaxaca and Neuman decomposition (2002).

The gender wage gap in the formal sector can be expressed as:

$$\overline{\log w_{m1}} - \overline{\log w_{w1}} = (\overline{X}_{m1}'\hat{\beta}_{m1} + \sigma_{m11}\rho_{m1\varepsilon_p}\hat{\lambda}_{m1,p} + \sigma_{m11}\rho_{m1\varepsilon_s}\hat{\lambda}_{m1,s_1})$$

$$-(\overline{X}_{w1}\hat{\beta}_{w1} + \sigma_{w11}\rho_{w1\varepsilon_p}\hat{\lambda}_{w1,p} + \sigma_{w11}\rho_{w1\varepsilon_s}\hat{\lambda}_{w1,s_1})$$

$$= \hat{\beta}_{m1}(\overline{X}_{m1}' - \overline{X}_{w1}') + \overline{X}_{w1}'(\hat{\beta}_{m1} - \hat{\beta}_{w1})$$

$$+ \left[(\sigma_{m11}\rho_{m1\varepsilon_p}\hat{\lambda}_{m1,p} - \sigma_{w11}\rho_{w1\varepsilon_p}\hat{\lambda}_{w1,p}) + (\sigma_{m11}\rho_{m1\varepsilon_s}\hat{\lambda}_{m1,s_1} - \sigma_{w11}\rho_{w1\varepsilon_s}\hat{\lambda}_{w1,s1}) \right]$$

And gender wage gap in the informal sector can be expressed as:

$$\overline{\log w_{m2}} - \overline{\log w_{w2}} = (\overline{X}_{m2}'\hat{\beta}_{m2} + \sigma_{m22}\rho_{m2\varepsilon_p}\hat{\lambda}_{m2,p} + \sigma_{m22}\rho_{m2\varepsilon_s}\hat{\lambda}_{m2,s2})$$

$$-(\overline{X}_{w2}\hat{\beta}_{w2} + \sigma_{w22}\rho_{w2\varepsilon_p}\hat{\lambda}_{w2,p} + \sigma_{w22}\rho_{w2\varepsilon_s}\hat{\lambda}_{w2,s2})$$

$$= \hat{\beta}_{m2}(\overline{X}_{m2}' - \overline{X}_{w2}') + \overline{X}_{w2}'(\hat{\beta}_{m2} - \hat{\beta}_{w2})$$

$$+ \left[(\sigma_{m22}\rho_{m2\varepsilon_p}\hat{\lambda}_{m2,p} - \sigma_{w22}\rho_{w2\varepsilon_p}\hat{\lambda}_{w2,p}) + (\sigma_{m22}\rho_{m2\varepsilon_s}\hat{\lambda}_{m2,s_1} - \sigma_{w22}\rho_{w2\varepsilon_s}\hat{\lambda}_{w1,s1}) \right]$$

Where the subscript m and w indicate men and women respectively, $\overline{\log w}$ is the predicted mean of the log of the wage, $\overline{X}$ the mean vector of characteristics, the vector of the estimated coefficients and $\hat{\beta}$ the estimated mean of the correction term. The mean of the correction term

is estimated to $\hat{\lambda} = \sum_{i=1}^{N_j} \hat{\lambda}_i / N_j$. $\hat{\lambda}_i$ being the correction term and N_j the total number of observations for each sex.

As in the simple Oaxaca decomposition (1973), the term $\hat{\beta}_m (\overline{X}'_m - \overline{X}'_w)$, is the part of the differential explained by the differences in characteristics. The term $\overline{X}'_w (\hat{\beta}_m - \hat{\beta}_w)$ is the part of the differential attributed to discrimination; the answer of our research question depends on the significativity of this term. The third part

$$\left[(\sigma_{m22}\rho_{m2\varepsilon_p}\hat{\lambda}_{m2,p} - \sigma_{w22}\rho_{w2\varepsilon_p}\hat{\lambda}_{w2,p}) + (\sigma_{m22}\rho_{m2\varepsilon_s}\hat{\lambda}_{m2,s_1} - \sigma_{w22}\rho_{w2\varepsilon_s}\hat{\lambda}_{w1,s1}) \right]$$ will be moved to the

left hand side of the equation and we will have a selection corrected wage differential.

4. The data

The data we are going to use are those of the Survey on Employment and the Informal Sector (SEIS) 2010 carried out by the National Institute of Statistics in Cameroon. This operation, which covered the entire territory of Cameroon, consists of two phases: the first phase is an employment survey to collect data on socio-demographic characteristics and employment; the second phase is a survey of "businesses" led among non-agricultural informal units identified during the first phase. This survey supports the analysis of the labour market, including business conditions, formation of income, characteristics of unemployment and underemployment. For our study, we will use the first phase that concerns 34314 individuals surveyed. We will also focus on the urban area (18 111 individuals) because of the homogeneity of the rural area that focuses on agricultural activities and we will work on the active population (7 777 individuals) under the hypothesis that the inactive population is not concerned by wage issues because they are not on the labour market. The age group of interest is 10 years old and above as working activities done by children under 10 are not taken into account in this survey. Our main variable of interest will be the wage from the principal activity as income of people can come from several activities. The results presented take into account the weights to be representative of the population.

From the model defined above, we have three equations of interest: The working decision choice, the sector choice and the wage equation. As we saw above, we should have at least one explanatory variable in each of our equations of interest that does not enter in the two others.

4.1. Explanatory variables for the working decision

This first equation of our model will take all the variables that can potentially explain the choice between taking a job and staying unemployed. Those variables are personal and household characteristics.

4.1.1. Personal characteristics

Sex: The sex is a characteristic that will be included in our three equation of interest. At this step (working decision), we can observe that women face a disadvantage at the entry of the labour market. At the national level, the men activity rate is 74.1% and the women activity rate is 64.2%. The gap is even wider in urban area (67.2% for men and 52.2% for women). Women also have less access to jobs. In fact the unemployment rate for women is 4.5% and 3.1% for men at the national level and in the urban area the unemployment rate of women (10.8%) is almost the double of men's unemployment rate (5.8%). That disadvantage that women face at the entry of the labour market and for the access to jobs can be attributed to the responsibility women have in the household. She is the one generally cleaning the house, cooking and taking care of children. These activities that are not paid when done by women belonging to the household are not considered as labour market activities. They also prevent women from entering the labour market or limit their access to job because they would prefer to work less time than men, they would need more flexible jobs than men and even more leave than men mainly when they are pregnant. This variable will take the value 1 for men and 0 for women and we expect the probability to be employed to increase when sex=1.

Age: The age is also a determinant variable at every step of our modelisation. From the SEIS, we see that the unemployment rate is the highest among young people (15 -34 years old); it is 6.0% and 11.2% at the national level and in the urban area respectively. The access to jobs for this category of people is more difficult because of their lack of experience. The more the experience people will have, the easier will be their access to jobs. This will be a discrete variable of completed years and we expect the probability to be employed to increase with age.

Level of education: Cameroon faces a problem of mismatch between the educational system and the labour market demand. In fact, the level of unemployment is increasing with the level of education (see table 1 in annex). This is correlated to the low absorption of workers by the formal sector. Educated people generally seek work in the formal sector and it is the only sector where they can really put into contribution their knowledge. Meanwhile, as the results of the survey suggest the supply of skilled labour is higher to the demand and this is more accurate in urban sector where for example we have 14.7% of unemployment rate among higher education products in urban area and 12.9% at the national level. Four dummy variables will be introduced for the level of education, the level 'no education' is taken as the reference. We will then have one dummy for the primary education, one dummy for the lower secondary, one dummy for the upper secondary and another dummy for the higher education. We expect the probability to be employed to decrease with the level of education as suggested by our data.

Relationship with the household head: The household head being the person responsible for taking care of the household materially and financially, (s)he is generally the main bread winner and thus the one needing the most a job. The earning that can come from the other members of the household is generally complementary and for the personal needs. As we can see from our data, the unemployment rate is the lowest for household heads (3.8% in urban area and 2.1% at the national level). For spouses of household heads, it is 10.3% in urban area and 3.5% at national level and it is even higher for the other members of the household.

Two dummy variables will be introduced in our regression for the relationship with the household head: one for the household head and the second for the spouse of the household head, the reference group being the others (children and other relatives).

4.1.2. Household characteristics

Household size: The household size in Cameroon is 4.4, this size is reduced to 4 un urban area. Generally, the more the number of persons in a household, the more the need for material and financial means and so the more people would be motivated to find a job. This will be a discrete variable of the number of persons in persons generally leaving in the household at the time of the survey. This variable will be a discrete variable and we expect the probability to be working to increase with the household size.

Number of children under 10 years old: In 2010, the average number of children under 10 years old in the households was 1.4. This variable can have contrary effects on the employment situation of the people living in the household. On one hand, as they need permanent care, they need people to look after them at least at part time so at least one person in the household will not work or will be looking for part time work which is not also easy to find (in the case the family doesn't have the means to pay for child care assistance). On the other hand, as they increase the family size, the household might need more earnings to take care of them. This second aspect will be already taken into account by the household size variable. So this variable will only capture the negative impact on job access. This variable will be a discrete variable and we expect the probability to have a job to decrease with the number of children and this decrease will be more accurate for women.

4.2. Explanatory variables for sector choice

The variables listed above (less the relationship with the household head) are also potential explanatory variables for the sector choice. In addition to those variables we can have the activity sector (primary, industry, trade and services).

4.2.1. Personal characteristics

Sex: Sex is also determinant for sector choice. In fact because of the flexibility needed by women on the labour market, especially for those who do not have means to pay for child care assistance and for housewife, they will prefer to insert in the informal sector. From SEIS 2010, informal sector activities are predominant, 90.4% of the working population is in that sector. This percentage is higher for women (93.8% at the national level and 85.7% in urban area) than for men (87.1% at the national level and 65.2% in urban area). We expect the probability of being employed in formal sector to be higher for men than for women.

Age: The flexibility of the informal labour market allows young (15-34 years old) to find more easily a job in the informal sector. As shown in our data, 50.6% of people working in the informal sector belong to the age interval 15-34 years old. This proportion is even higher in urban area (58.5%). These proportions are much lower in the formal sector. We expect the probability of working in the formal sector to increase with age.

Level of education: Informal sector activities in Cameroon as in general do not require long studies; a large proportion of workers in the informal sector will have attended at most primary education: 63.8% at national level and 39.8% in urban area. Whereas in the formal sector the proportion of those that have attended at most primary education is only 12.9% at the national level and 9.9% in the urban area. We then expect the probability of being in the formal sector to increase with the level of education.

4.2.2. Household characteristics

Household size: For the reasons listed above, the household size can influence positively the choice to work in the informal sector. In fact, as the access to formal jobs is difficult, individual in bigger households might be obliged to have an activity in order at least to contribute to the welfare of the family so they will easily turn to informal sector activities where they can either be an employee in a production unit or create their own production unit. So we expect the household size to have a positive impact on the probability to work in the informal sector.

Number of children under 10 years old: The number of children under 10 years old can influence the decision especially for women to work in the informal sector because of the flexibility of working time prevailing in this sector. We expect the number of children under 10 years old to have a positive impact on the decision to work in the informal sector, and this impact is also expected to be higher for women.

4.2.3. Job Characteristics

Activity sector: The choice of the institutional sector (formal or informal) can also be related to the sector of activity people want to exercise in. In fact whereas formal activities in urban area of Cameroon are concentrated in the services sector (74.4%), informal activities are spread in all the activity sectors. We expect then the fact of exercising in the services sector to impact positively the probability of working in the formal sector. We will take the primary sector as the reference and we will introduce three dummy variables for the industry, the trade and the services.

4.3.   Explanatory variables for the earning level

The sex of the individual, the level of education, the experience, the number of hours worked per week, the nationality and the handicap are potential personal characteristics that can explain the earning level. Job characteristics such as the activity sector, the enterprise size and the socio professional characteristics are other potential explanatory variables of the level of earnings.

4.3.1.   Personal characteristics

Sex: Women in Cameroon earn less than men. In fact the average earning of women is CFA F[1] 24 795 and CFA F 48 220 at the national level and in urban area respectively. Whereas, men earn on average CFA F 52 648 and CFA F 87 329 at the national level and in urban area. In nominal term the earning gap in wider in urban area. We expect in our regression to have a positive impact of sex=1 on our log wage.

Level of education: From the human capital theory, the wage is supposed to increase with the level of education and our data confirms this theory. In fact at the national level and for the urban area respectively, the average earning from the main activity is CFA F 17 680 and CFA F 41 007 for those without education, CFA F 25 960 and CFA F 42 582 for those with a primary level of education, CFA F 38 742 and CFA F 54 372 for those with a lower secondary education, CFA F 69 718 and CFA F 80 140 for those with an upper secondary education, CFA F 146 190 and CFA F 159 741 for those with a higher education level. We then expect to confirm this positive impact of the level of education in our regression.

Experience: Experience is the second main explanatory variable of the level of earnings. It is expected to have a positive impact on the level of earnings but in general this positive impact is decreasing with the increasing number of years of experience. We will introduce two variables to assess the impact of experience on the earnings: the variable experience and the variable experience squared.

Number of hours worked per week: What can be expected as impact of number of hours worked is ambiguous. In fact, for jobs paid hourly, the more the number of hours worked, the more the person earns. But in the case of Cameroon, those working longer hours are not

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[1] 1 Euro= 655.957 CFA F

necessary the most paid. In fact bosses that have the highest earnings are not those working longest hours. Those working the longest hours are found among workmen and skilled employees. This variable is a discrete variable and we have a priori no idea of the direction of the impact on the earnings.

4.3.2.   Job characteristics

Activity sector: As for the sector choice, the primary sector is taken as the reference. The estimated impact of the other activity sector is expected to be positive, the average earning in the primary sector being the lower (CFA F 18 237 in urban area). As suggested by the mean earning in each activity sector, we expect the impact of working in the services sector to be the highest (the mean earning of this sector being CFA F 83 611 in urban area). It shall be followed by the industry (the mean earning is CFA F 73 446 in urban area) sector and then the trade sector (the mean earning is CFA F 62396 in urban area).

Enterprise size: As a big size enterprise is supposed to have more resources, it shall have higher productivity and shall pay high salary to workers. It is the reason why we expect the impact of the enterprise size to be positive on the salary. Taking the very small enterprises (up to 5 workers) as the reference, we will introduce four dummies: one for the small enterprises (6-20 workers), one for the medium size enterprises (21-50 workers) and another for the big enterprises (above 50 workers).

Socio professional characteristic: The level of salary is very dependant of the position of the person in the enterprise. In fact employers are the one earning the most in the formal as in the informal sector. They are followed respectively by the executives, the skilled employees, the own account workers, the workmen and the family helpers. Taking the family helpers group as the reference, we will introduce five dummy variables for the socio professional characteristic: one for the employers, one for the executives, one for the skilled employees, one for the own account workers and a last one for workmen.

4.3.3.   Town characteristics

Capital city: Douala and Yaoundé are the economic and politic capital cities of Cameroon. The level of development is far higher than in other parts of the country. A high cost of living and a

high level of salary could be the consequences of this status of capital city. So we will introduce in our regressions a dummy variable for the capital cities.

5. Estimations and results

Before we run our model, we have to notice that, as we are working with the logarithm of the earnings, and taking into account the fact that there are some individuals in our data set, mainly family helpers that earn zero CFA F in nominal terms, we will add CFA F 10 to every working person in our data set. This sum is insignificant and will help us to maintain zero earning individuals in our estimations.

5.1. Working decision

All three regressions are significant (Prob > chi2 =0000). Men have a higher probability to be employed than women and that probability is increasing with age on average. But when running two separate regressions for men and women, we realise that, age doesn't really have an impact on the probability of being employed for men and that, that positive impact observed in the general regression is pulled up by women.

For the level of education, on average, it makes no significant difference between having no education, having a primary level of education and having a lower secondary education; and moving above those levels (upper secondary and higher education) lowers the probability to be employed. The higher education is the only level of education that makes a significant difference in the working probability when we do regressions by sex. This is the consequence of the structure of the labour market which does not have enough places for highly educated people.

In the household, being the household head increases the probability of being employed more that for the other members of the household. The impact of being the household spouse is not significant in the three regressions. As expected, the impact of the household size is significant at the 5% level and positive in the general regression and in the regression for women. The impact of the number of children below 10 years old is also significant at 5% level in the general regression and in the regression for women as expected. For these two last variables, we can conclude that the significant impact in the general regression is pulled by the female population. This can be justified by the fact that, in general, as the size of the household is increasing, there is

a need for a higher level of income and the additional income is in general brought by the wife. For number of kids, the negative effect can be justified by the reason presented in the data section with the additional comment that it concerns more the women than the men.

5.2. Sector Choice

Contrary to our expectations, all else being equal, the probability to be employed in the formal sector is higher for men than for women. Whatever the sex of the individual, the probability to be working in the formal sector increases with the age.

The probability of working in the formal sector increases with the level of education independently of the sex of the individual. The rate at which this probability increases is higher for men than for women than for women. In fact when comparing the coefficients from regression by sex, we realise that from one level to the following, the coefficient is multiplied by 1.5 or more for men and much less for women.

Household characteristics (household size and the number of children under 10 years old) do not have significant impact on the probability to work in the formal sector. We don't observe the expected results here. Those expected results might have been already captured in the working decision rather than the sector choice.

As compared to the primary sector, independently of the sex of the individual, working in the other sectors increases the probability to be in the formal sector. The sector of services is the most promising for formal sector activities, it is followed by industry and trade.

The inverse mills ratio, collected from the first regression has a significant coefficient in our regression. This confirms that there would be a bias in the regression if the working decision was not taken into account in our regressions.

5.3. Wage determinants
5.3.1. In the formal sector

All else being equal, the impact of the sex is not significant in the general regression. If we use this general regression to assess the differential by sex, we shall conclude that the differential is not significant. But this is under the assumption that the impact of the other variables is

independent from the sex. We shall confirm or not this first result when decomposing the differential.

Whatever the sex of the individual, the impacts of the level of education variables are significant but negative. The wage level is decreasing with the level of education. This result is contradictory to what the human capital theory says. On another hand, the impact of the variables referring to the position in the enterprise is positive and increasing with the position in the general regression and for men. From the lower to the higher impact, we have the workmen, the skilled workers, and executives, own account workers and employers. For women as compared to the two other regressions, the own account workers move to the last position, the rest without change.

Experience presents here the expected results in the general regression and for men only: the wage level increases at a decreasing rate with the number of years of experience. The impact of experience is not significant for women. The number of hours worked in the formal sector doesn't impact significantly the level of wages. In fact, in general in Cameroun people are paid on a monthly basis, and even when the extra hours are supposed to be paid, they are not.

All activity sectors included in our regression have negative coefficients contrarily to our expectations. The impact of the enterprise size is only significant for large enterprise and in the general regression and in the regression for men. For women, the size of the enterprise doesn't impact significantly the wage level.

On average, all else being equal, a person living and working in a capital city earn 13% more than a person living in another part of the country. This rate is lower for men (12%) and higher for women (17%). The coefficient of the Inverse Mills Ratio is significant and positive for all three equations.

5.3.2.   In the informal sector

All else being equal, being a male makes a difference of about 24% in the wage as compared to women. This suggests a wage differential between men and women in this sector.

None of the coefficients related to the level of education are significant whatever the sex. For the position, all else being equal, employers have the highest salary, they are followed by

executives, the own account workers and the skilled workers have the third and the fourth position for men and their position are reverse for women. The last salaries are for the workmen followed by the family helpers (the reference group in this regression).

In the informal sector, experience has a significant impact only for women. All else being equal, the wage level of women is increasing with the number of years of experience at a decreasing rate. Contrarily to the formal sector, the number of hours worked have a significant and positive impact on the level of wages. In fact each additional hour of work yield 0.2% increase in the wage level.

Contrary to the formal sector, the impact of working in the other activity sector than the primary sector is positive and significant. All else being equal, the impact of being in trade is the highest; it is followed by industry and services for men and by services and industry for women. Whatever the sex of the individual, all else being equal, salaries are the highest in medium enterprises, then in large enterprises and in small enterprises; the very small enterprises (the reference group) comes at the last position.

On average, all else being equal, a person living and working in a capital city earn 28% more than a person living in another part of the country. This rate is lower for men (27%) and higher for women (30%). The coefficient of the Inverse Mills Ratio is significant and negative for all three equations.

5.4. Wage de composition and assessment of discrimination

As described in the methodology, we compute selectivity corrected wages that we decompose in two parts: the first explained by the difference in characteristics and the second attributed to discrimination. As shown in the bellow table, in the formal sector as in the informal sector, the differential is positive and significant; meaning that on average men have higher salaries than women. The size of that differential is higher in the informal sector. We can also see that both parts of the differential are significant and that the contribution of the discrimination in the formal sector is higher (78% of the differential) than in the formal sector (34%). So according to our study, there is evidence of significant discrimination in urban labour market in Cameroon.

Table 1 : Oaxaca Blinder décomposition

	Formal	Informal
	Group 1= Men Group 2= Women	Group 1= Men Group 2= Women
Group 1	11.95*** (0.00238)	9.858*** (0.00268)
Group 2	11.25*** (0.00462)	8.850*** (0.00311)
Differential	0.706*** (0.00519)	1.009*** (0.00411)
Explained part	0.152*** (0.00491)	0.669*** (0.00391)
Unexplained part (discrimination)	0.554*** (0.00239)	0.339*** (0.00161)
Number of observations	1363	5804

Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

**Source** : EESI 2010

6. Conclusion and recommendations

The aim of this work was to analyse the gender wage differential in urban labour market in Cameroon in order to determine wheter or not discrimination exist. For that we first ran mincerian equation of wages corrected for the two selection processes employed people pass through: the working decision and the selection in either the formal or the informal sector. At the end of this work we find an important differential between men and women in both sectors and a non neglectable part of these differentials is due to discrimination. In fact the unexplained part of the differential accounts for 78% in the formal sector and for 34% in the informal sector. The main limitation of this work is that, as there is an absence of detailed controls for all possible relevant factors of job characteristics and person-specific skills, the unexplained differential is not an exact measure of discrimination, this differential is likely to overestimate the magnitude of discrimination (Macpherson and Hirsch, 1995). However, as in our results, when the unexplained differential is a large percentage of the total differential, the possibility of gender discrimination cannot be completely ruled out (Blau, Ferber, and Winkles, 1998).

As recommendation from these results, Cameroonian government should put an emphasis on the anti discrimination laws at every step to the labour market and even in the labour market. They should promote gender equality by for exemple increase the number of women in the public sector. Government should also give equal opportunity for educational attainment to boys and girls and improve the quality of education. As education is a time and money consuming investment it should act as a role to improve one's productivity rather than simple signaling. Only through improved quality combined with necessary incentives and regulations can education narrow the gender wage gap. For the informal sector, government should give more incentive to women to create their own enterprises by giving them easy access to vocational training for example. Thus state intervention and incentive provision and regulations are among the measures to be combined with education and general public awareness to tackle wage discrimination effectively.

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ANNEXES

Working decision

all

```
Probit regression                              Number of obs   =        7777
                                               Wald chi2(10)   =      162.92
                                               Prob > chi2     =      0.0000
Log pseudolikelihood = -2027.2422              Pseudo R2       =      0.0864
```

employed	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
male	.2622113	.0695085	3.77	0.000	.125977	.3984455
age	.012347	.0033287	3.71	0.000	.0058228	.0188711
primary	-.1225244	.1418467	-0.86	0.388	-.4005388	.1554901
lsecondary	-.1509795	.1386689	-1.09	0.276	-.4227655	.1208065
usecondary	-.3570931	.1411906	-2.53	0.011	-.6338216	-.0803645
higheredu	-.7130131	.1407944	-5.06	0.000	-.9889651	-.4370611
hhh	.4884276	.0817426	5.98	0.000	.3282151	.6486401
hhhspouse	.1173456	.0943906	1.24	0.214	-.0676567	.3023478
hhsize	.0660575	.0239241	2.76	0.006	.0191672	.1129478
uder10	-.0739108	.0321515	-2.30	0.022	-.1369266	-.010895
_cons	.9112146	.1711614	5.32	0.000	.5757444	1.246685

Men

```
Probit regression                              Number of obs   =        4292
                                               Wald chi2(9)    =       98.63
                                               Prob > chi2     =      0.0000
Log pseudolikelihood = -887.74851              Pseudo R2       =      0.0979
```

employed	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
age	-.0013542	.0043986	-0.31	0.758	-.0099752	.0072669
primary	.0428682	.2001554	0.21	0.830	-.3494291	.4351656
lsecondary	-.0886667	.1920551	-0.46	0.644	-.4650878	.2877544
usecondary	-.2347838	.1982299	-1.18	0.236	-.6233073	.1537397
higheredu	-.5746805	.1894615	-3.03	0.002	-.9460181	-.2033428
hhh	.7549389	.1112936	6.78	0.000	.5368074	.9730703
hhhspouse	.0400099	.6169779	0.06	0.948	-1.169245	1.249264
hhsize	.0604032	.0354214	1.71	0.088	-.0090214	.1298279
uder10	-.0773484	.0490712	-1.58	0.115	-.1735262	.0188294
_cons	1.385026	.2209565	6.27	0.000	.9519596	1.818093

Women

```
Probit regression                              Number of obs   =        3485
                                               Wald chi2(9)    =       70.69
                                               Prob > chi2     =      0.0000
Log pseudolikelihood = -1116.8155              Pseudo R2       =      0.0717
```

employed	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf. Interval]	
age	.0230773	.0050286	4.59	0.000	.0132214	.0329332
primary	-.2178445	.2095093	-1.04	0.298	-.6284752	.1927861
lsecondary	-.1630863	.2045055	-0.80	0.425	-.5639096	.237737
usecondary	-.3997326	.2081372	-1.92	0.055	-.807674	.0082089
higheredu	-.7982312	.2138118	-3.73	0.000	-1.217295	-.3791677
hhh	.2196217	.1264906	1.74	0.083	-.0282954	.4675387
hhhspouse	-.0169892	.1108914	-0.15	0.878	-.2343324	.2003541
hhsize	.0806521	.0333782	2.42	0.016	.015232	.1460721
uder10	-.0760415	.0434947	-1.75	0.080	-.1612896	.0092066
_cons	.6856669	.2479496	2.77	0.006	.1996947	1.171639

Sector Choice

select	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
male	.0634066	.0518423	1.22	0.221	−.0382024	.1650156
age	.0161362	.0018882	8.55	0.000	.0124354	.019837
primary	.6346041	.1347784	4.71	0.000	.3704432	.898765
lsecondary	1.039676	.132494	7.85	0.000	.7799924	1.299359
usecondary	1.602363	.1343383	11.93	0.000	1.339065	1.865661
higheredu	2.424838	.1431004	16.95	0.000	2.144366	2.705309
hhsize	.0063879	.0098141	0.65	0.515	−.0128473	.0256232
uder10	.0097135	.0141453	0.69	0.492	−.0180109	.0374378
industry	1.568224	.1301658	12.05	0.000	1.313104	1.823344
trade	1.076621	.1348836	7.98	0.000	.8122539	1.340988
services	1.78322	.125871	14.17	0.000	1.536518	2.029923
IMR	−2.106795	.3432344	−6.14	0.000	−2.779522	−1.434068
_cons	−4.06155	.2101052	−19.33	0.000	−4.473349	−3.649752

select	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
age	.0122041	.0023043	5.30	0.000	.0076878	.0167204
primary	.4965944	.1484706	3.34	0.001	.2055974	.7875913
lsecondary	.9000747	.1456525	6.18	0.000	.6146011	1.185548
usecondary	1.332795	.148363	8.98	0.000	1.042009	1.623581
higheredu	2.224895	.1587935	14.01	0.000	1.913666	2.536125
hhsize	−.0028431	.01209	−0.24	0.814	−.026539	.0208528
uder10	.0319885	.017817	1.80	0.073	−.0029322	.0669092
industry	1.536568	.1589309	9.67	0.000	1.22507	1.848067
trade	1.071135	.1670054	6.41	0.000	.7438107	1.39846
services	1.645359	.154685	10.64	0.000	1.342182	1.948537
IMR	−3.452774	.4871573	−7.09	0.000	−4.407585	−2.497963
_cons	−3.4595	.230736	−14.99	0.000	−3.911735	−3.007266

select	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
age	.0159311	.0037859	4.21	0.000	.0085109	.0233512
primary	1.705867	.5558428	3.07	0.002	.6164349	2.795298
lsecondary	2.157907	.5529645	3.90	0.000	1.074116	3.241697
usecondary	3.018048	.5527496	5.46	0.000	1.934679	4.101418
higheredu	3.964958	.5629162	7.04	0.000	2.861662	5.068253
hhsize	−.0270109	.020476	−1.32	0.187	−.0671431	.0131214
uder10	.039524	.0283096	1.40	0.163	−.0159618	.0950098
industry	1.64486	.2397151	6.86	0.000	1.175027	2.114693
trade	1.199618	.2431649	4.93	0.000	.7230239	1.676213
services	2.105145	.2284302	9.22	0.000	1.65743	2.55286
IMR	−2.157342	.5659815	−3.81	0.000	−3.266646	−1.048039
_cons	−5.515337	.6427829	−8.58	0.000	−6.775168	−4.255506

Wage determinants

In the formal sector

All

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
logrev1						
male	.0981706	.066403	1.48	0.139	-.0319768	.228318
primary	-.459318	.2060594	-2.23	0.026	-.863187	-.055449
lsecondary	-.6386112	.2039635	-3.13	0.002	-1.038372	-.2388501
usecondary	-1.072411	.2086804	-5.14	0.000	-1.481417	-.6634048
higheredu	-1.533187	.2210697	-6.94	0.000	-1.966475	-1.099898
industry	-1.616019	.1997204	-8.09	0.000	-2.007464	-1.224574
trade	-1.115303	.2042288	-5.46	0.000	-1.515584	-.7150224
services	-1.978311	.1965348	-10.07	0.000	-2.363512	-1.59311
exp	.0115427	.0036621	3.15	0.002	.0043651	.0187202
expsqr	-.0001554	.0000529	-2.94	0.003	-.0002591	-.0000516
nbrofhours	.0000903	.0002794	0.32	0.747	-.0004573	.0006379
smallent	.00248	.0805143	0.03	0.975	-.1553251	.1602851
mediument	.1073	.0924751	1.16	0.246	-.0739479	.2885479
largeent	.2149987	.076274	2.82	0.005	.0655044	.364493
executive	9.194497	.150727	61.00	0.000	8.899078	9.489917
skilledwor~r	8.789712	.1452351	60.52	0.000	8.505056	9.074368
workman	8.370695	.1493386	56.05	0.000	8.077997	8.663393
employer	9.583558	.181203	52.89	0.000	9.228407	9.93871
ownaccount	9.26768	.2716427	34.12	0.000	8.73527	9.80009
capcity	.1257985	.0360554	3.49	0.000	.0551312	.1964658
IMR	1.475294	.3879315	3.80	0.000	.7149626	2.235626
_cons	6.054782	.3327555	18.20	0.000	5.402593	6.706971

Men

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
logrev1						
primary	-.346841	.2334942	-1.49	0.137	-.8044812	.1107992
lsecondary	-.5026687	.2307935	-2.18	0.029	-.9550156	-.0503219
usecondary	-.8511953	.2362758	-3.60	0.000	-1.314287	-.3881033
higheredu	-1.369194	.2527794	-5.42	0.000	-1.864632	-.8737551
industry	-1.589301	.244458	-6.50	0.000	-2.068429	-1.110172
trade	-1.110889	.2532582	-4.39	0.000	-1.607266	-.614512
services	-1.861956	.2397038	-7.77	0.000	-2.331767	-1.392145
exp	.0094886	.0045035	2.11	0.035	.0006619	.0183153
expsqr	-.0001406	.0000586	-2.40	0.016	-.0002554	-.0000258
nbrofhours	.000127	.0003352	0.38	0.705	-.00053	.0007841
smallent	.0236816	.0958589	0.25	0.805	-.1641984	.2115616
mediument	.1645181	.1096161	1.50	0.133	-.0503256	.3793618
largeent	.3027844	.0906938	3.34	0.001	.1250278	.4805409
executive	9.592324	.2529013	37.93	0.000	9.096646	10.088
skilledwor~r	9.142495	.2494169	36.66	0.000	8.653647	9.631343
workman	8.745311	.2516067	34.76	0.000	8.25217	9.238451
employer	10.01417	.2831166	35.37	0.000	9.459271	10.56907
ownaccount	9.786278	.3642251	26.87	0.000	9.07241	10.50015
capcity	.1240973	.0451061	2.75	0.006	.035691	.2125037
IMR	1.77376	.5766843	3.08	0.002	.6434791	2.90404
_cons	5.470895	.4321541	12.66	0.000	4.623889	6.317902

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
logrev1						
primary	−1.474969	.6492848	−2.27	0.023	−2.747544	−.2023944
lsecondary	−1.757451	.6419087	−2.74	0.006	−3.015569	−.4993334
usecondary	−2.229136	.6487922	−3.44	0.001	−3.500745	−.9575264
higheredu	−2.632472	.6635324	−3.97	0.000	−3.932972	−1.331972
industry	−1.560909	.3590697	−4.35	0.000	−2.264672	−.8571449
trade	−1.156912	.3530936	−3.28	0.001	−1.848963	−.4648611
services	−2.087909	.3508097	−5.95	0.000	−2.775484	−1.400335
exp	.0166063	.0117456	1.41	0.157	−.0064147	.0396273
expsqr	−.0001414	.0003731	−0.38	0.705	−.0008726	.0005897
nbrofhours	−.0009964	.0008788	−1.13	0.257	−.0027188	.000726
smallent	−.1681278	.1658523	−1.01	0.311	−.4931923	.1569368
mediument	−.0938274	.1885083	−0.50	0.619	−.4632968	.275642
largeent	−.1009607	.1589396	−0.64	0.525	−.4124766	.2105551
executive	9.090975	.1937678	46.92	0.000	8.711197	9.470753
skilledwor~r	8.746046	.184841	47.32	0.000	8.383765	9.108328
workman	8.358445	.2082887	40.13	0.000	7.950207	8.766684
employer	9.258737	.2652462	34.91	0.000	8.738864	9.77861
ownaccount	7.983037	.5732738	13.93	0.000	6.859441	9.106633
capcity	.1659833	.0601778	2.76	0.006	.0480369	.2839296
IMR	1.525615	.5311214	2.87	0.004	.4846358	2.566594
_cons	7.341991	.7867733	9.33	0.000	5.799944	8.884038

In the informal sector

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
logrev0						
male	.2416714	.037945	6.37	0.000	.1673006	.3160421
primary	.1130221	.0599485	1.89	0.059	−.0044749	.230519
lsecondary	.1266487	.0614838	2.06	0.039	.0061427	.2471548
usecondary	.094854	.0721427	1.31	0.189	−.046543	.236251
higheredu	−.1062212	.1024272	−1.04	0.300	−.3069748	.0945323
industry	.6555831	.0574487	11.41	0.000	.5429856	.7681805
trade	.8462856	.0576081	14.69	0.000	.7333757	.9591955
services	.6827954	.0559374	12.21	0.000	.5731601	.7924307
exp	.0070964	.0032691	2.17	0.030	.0006891	.0135038
expsqr	−.0001847	.0000488	−3.78	0.000	−.0002803	−.000089
nbrofhours	.0021041	.000284	7.41	0.000	.0015474	.0026608
smallent	.0887625	.0495613	1.79	0.073	−.0083758	.1859008
mediument	.2849987	.0917527	3.11	0.002	.1051668	.4648306
largeent	.1580916	.0713486	2.22	0.027	.0182508	.2979324
executive	7.811903	.117824	66.30	0.000	7.580972	8.042834
skilledwor~r	7.282342	.0605824	120.21	0.000	7.163603	7.401081
workman	7.110497	.0673977	105.50	0.000	6.978399	7.242594
employer	7.975059	.0821717	97.05	0.000	7.814006	8.136113
ownaccount	7.266598	.0508669	142.86	0.000	7.166901	7.366296
capcity	.2823326	.0324563	8.70	0.000	.2187194	.3459458
IMR	−1.234237	.2616274	−4.72	0.000	−1.747017	−.7214564
_cons	1.913734	.0980734	19.51	0.000	1.721513	2.105954

Men

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
logrev0						
primary	.0810973	.0857134	0.95	0.344	−.0868978	.2490925
lsecondary	.0294977	.0877487	0.34	0.737	−.1424867	.201482
usecondary	−.0045235	.0986217	−0.05	0.963	−.1978185	.1887715
higheredu	−.1706758	.1343984	−1.27	0.204	−.4340918	.0927403
industry	.6011472	.082524	7.28	0.000	.4394032	.7628912
trade	.7881768	.0828997	9.51	0.000	.6256964	.9506573
services	.5764604	.0779119	7.40	0.000	.4237559	.7291649
exp	−.0004757	.004487	−0.11	0.916	−.00927	.0083186
expsqr	−.0000952	.0000643	−1.48	0.139	−.0002211	.0000308
nbrofhours	.0020675	.0003304	6.26	0.000	.0014199	.002715
smallent	.0707253	.0625153	1.13	0.258	−.0518024	.193253
mediument	.2580163	.1073993	2.40	0.016	.0475176	.468515
largeent	.164882	.0931362	1.77	0.077	−.0176617	.3474256
executive	7.952879	.1568318	50.71	0.000	7.645494	8.260264
skilledwor~r	7.358625	.0819762	89.77	0.000	7.197955	7.519296
workman	7.235935	.0874764	82.72	0.000	7.064485	7.407386
employer	8.089752	.1062628	76.13	0.000	7.881481	8.298024
ownaccount	7.43372	.0764121	97.28	0.000	7.283955	7.583485
capcity	.2766398	.0444664	6.22	0.000	.1894873	.3637923
IMR	−1.555728	.390059	−3.99	0.000	−2.32023	−.7912264
_cons	2.27256	.1284326	17.69	0.000	2.020837	2.524283

Women

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
logrev0						
primary	.1420468	.0837576	1.70	0.090	−.022115	.3062087
lsecondary	.2175007	.0865966	2.51	0.012	.0477744	.387227
usecondary	.1888474	.1069595	1.77	0.077	−.0207894	.3984842
higheredu	.0132376	.1623602	0.08	0.935	−.3049826	.3314577
industry	.7174712	.0818182	8.77	0.000	.5571104	.877832
trade	.901846	.080723	11.17	0.000	.7436319	1.06006
services	.786583	.082319	9.56	0.000	.6252407	.9479254
exp	.014396	.0048968	2.94	0.003	.0047985	.0239935
expsqr	−.0002801	.0000761	−3.68	0.000	−.0004291	−.000131
nbrofhours	.0021729	.0005618	3.87	0.000	.0010717	.0032741
smallent	.1501329	.0817541	1.84	0.066	−.0101023	.310368
mediument	.3497225	.1736875	2.01	0.044	.0093012	.6901438
largeent	.220712	.1187471	1.86	0.063	−.012028	.4534521
executive	7.566056	.1760449	42.98	0.000	7.221014	7.911097
skilledwor~r	7.237643	.0992251	72.94	0.000	7.043165	7.43212
workman	6.874144	.1233322	55.74	0.000	6.632417	7.115871
employer	7.842526	.1426269	54.99	0.000	7.562982	8.122069
ownaccount	7.128008	.0681913	104.53	0.000	6.994356	7.261661
capcity	.3055894	.0475193	6.43	0.000	.2124533	.3987254
IMR	−1.261769	.3610185	−3.50	0.000	−1.969353	−.5541859
_cons	1.833371	.1347798	13.60	0.000	1.569207	2.097534

Correction terms

/lns0	.1845327	.010865	16.98	0.000	.1632377	.2058278
/lns1	.1816961	.0250939	7.24	0.000	.132513	.2308793
/r0	-.7835947	.0421677	-18.58	0.000	-.8662419	-.7009476
/r1	-2.022664	.0655044	-30.88	0.000	-2.15105	-1.894278
sigma0	1.202656	.0130669			1.177316	1.228542
sigma1	1.19925	.0300938			1.141694	1.259707
rho0	-.6547651	.0240897			-.6994597	-.6049689
rho1	-.9655943	.0044299			-.9732816	-.9557449

/lns0	.1900649	.0157061	12.10	0.000	.1592815	.2208482
/lns1	.2145587	.0299218	7.17	0.000	.1559131	.2732043
/r0	-.7622567	.0556185	-13.71	0.000	-.871267	-.6532464
/r1	-2.009046	.0764321	-26.29	0.000	-2.15885	-1.859242
sigma0	1.209328	.0189938			1.172668	1.247134
sigma1	1.239315	.0370825			1.168725	1.314169
rho0	-.6424043	.0326657			-.7020173	-.5738514
rho1	-.9646611	.0053066			-.9736897	-.9526087

LR test of indep. eqns. :   chi2(2) =   371.75   Prob > chi2 = 0.0000

/lns0	.1728255	.0147882	11.69	0.000	.1438411	.2018099
/lns1	.0331348	.0462692	0.72	0.474	-.0575512	.1238208
/r0	-.9394415	.0662527	-14.18	0.000	-1.069294	-.8095885
/r1	-2.016039	.1346682	-14.97	0.000	-2.279984	-1.752094
sigma0	1.188659	.0175781			1.154701	1.223615
sigma1	1.03369	.047828			.9440735	1.131813
rho0	-.7349655	.0304647			-.7891953	-.6693632
rho1	-.9651434	.0092245			-.9792919	-.9416134

LR test of indep. eqns. :   chi2(2) =   208.51   Prob > chi2 = 0.0000

Oaxaca decomposition

```
Blinder-Oaxaca decomposition                    Number of obs    =        1363
                                                Model            =      linear
Group 1: male = 1                               N of obs 1       =         954
Group 2: male = 0                               N of obs 2       =         409
```

logrevfc	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
overall						
group_1	11.95369	.0023848	5012.47	0.000	11.94902	11.95837
group_2	11.24796	.0046151	2437.23	0.000	11.23892	11.25701
difference	.7057318	.0051948	135.85	0.000	.6955502	.7159134
explained	.1517608	.0049076	30.92	0.000	.1421421	.1613795
unexplained	.553971	.0023886	231.92	0.000	.5492894	.5586527
explained						
primary	.0358645	.000889	40.34	0.000	.0341221	.0376068
lsecondary	.017463	.0008856	19.72	0.000	.0157273	.0191988
usecondary	−.0802464	.0016486	−48.68	0.000	−.0834777	−.0770152
higheredu	−.0019804	.0015557	−1.27	0.203	−.0050295	.0010687
industry	.2081413	.0028812	72.24	0.000	.2024942	.2137884
trade	−.0009491	.0009162	−1.04	0.300	−.002745	.0008467
services	−.1896984	.002953	−64.24	0.000	−.1954862	−.1839107
exp	.0253881	.0006457	39.32	0.000	.0241226	.0266537
expsqr	−.0164663	.0003993	−41.24	0.000	−.0172489	−.0156838
nbrofhours	.0014441	.0001676	8.62	0.000	.0011157	.0017725
smallent	.000345	.0001009	3.42	0.001	.0001472	.0005428
mediument	.003314	.0001855	17.86	0.000	.0029504	.0036776
largeent	−.014775	.0004935	−29.94	0.000	−.0157423	−.0138077
executive	−.2443136	.0137098	−17.82	0.000	−.2711844	−.2174429
skilledwor~r	−.1750684	.0125555	−13.94	0.000	−.1996769	−.15046
workman	.4349415	.0052632	82.64	0.000	.4246258	.4452573
employer	.0700342	.0037009	18.92	0.000	.0627806	.0772878
ownaccount	.08256	.0020634	40.01	0.000	.0785158	.0866042
capcity	−.0042372	.0001993	−21.26	0.000	−.0046278	−.0038466
unexplained						
primary	.0251601	.003491	7.21	0.000	.0183179	.0320023
lsecondary	.1227198	.013506	9.09	0.000	.0962486	.1491909
usecondary	.1298944	.0282915	4.59	0.000	.0744442	.1853447
higheredu	.1743144	.0341856	5.10	0.000	.1073118	.241317
industry	.0916696	.0029303	31.28	0.000	.0859263	.0974129
trade	.0865195	.002802	30.88	0.000	.0810276	.0920115
services	.7875716	.0290666	27.10	0.000	.7306022	.844541
exp	−.5377304	.0068649	−78.33	0.000	−.5511853	−.5242755
expsqr	.1758387	.0038092	46.16	0.000	.1683728	.1833045
nbrofhours	−.0109649	.0015684	−6.99	0.000	−.0140388	−.0078909
smallent	−.0075668	.0019215	−3.94	0.000	−.011333	−.0038007
mediument	.0068346	.0008227	8.31	0.000	.0052221	.0084471
largeent	.2538065	.0097654	25.99	0.000	.2346666	.2729463
executive	.3417206	.0080149	42.64	0.000	.3260117	.3574295
skilledwor~r	.1510493	.0067224	22.47	0.000	.1378737	.164225
workman	.0075638	.0006592	11.47	0.000	.0062719	.0088557
employer	.0148824	.0004864	30.60	0.000	.0139291	.0158358
ownaccount	.0025333	.0001555	16.30	0.000	.0022286	.002838
capcity	−.0772583	.003663	−21.09	0.000	−.0844377	−.0700789
_cons	−1.184587	.0879841	−13.46	0.000	−1.357033	−1.012141

In the informal sector

```
Blinder-Oaxaca decomposition                    Number of obs   =        5804
                                                Model           =      linear
Group 1: male = 1                               N of obs 1      =        3074
Group 2: male = 0                               N of obs 2      =        2730
```

logrevic	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
overall						
group_1	9.858497	.0026811	3677.04	0.000	9.853242	9.863752
group_2	8.84998	.0031095	2846.13	0.000	8.843886	8.856075
difference	1.008517	.0041057	245.64	0.000	1.00047	1.016564
explained	.6693131	.0039118	171.10	0.000	.6616462	.67698
unexplained	.3392035	.0016078	210.98	0.000	.3360523	.3423547
explained						
primary	−.0033593	.0001302	−25.81	0.000	−.0036145	−.0031042
lsecondary	−.0123625	.0002543	−48.62	0.000	−.0128608	−.0118641
usecondary	.0170868	.0003004	56.89	0.000	.016498	.0176755
higheredu	.047773	.0004502	106.11	0.000	.0468905	.0486554
industry	.0067327	.0004023	16.74	0.000	.0059442	.0075212
trade	−.0538789	.000518	−104.01	0.000	−.0548942	−.0528637
services	.1036211	.0007284	142.26	0.000	.1021934	.1050487
exp	.0040247	.0001972	20.41	0.000	.0036383	.0044111
expsqr	.0037131	.0002239	16.58	0.000	.0032743	.0041519
nbrofhours	.0284998	.0003674	77.57	0.000	.0277798	.0292199
smallent	.0121328	.0002736	44.34	0.000	.0115966	.0126691
mediument	.0086726	.0002294	37.81	0.000	.0082231	.0091221
largeent	.0008345	.0000747	11.17	0.000	.0006881	.0009809
executive	.0217679	.0014621	14.89	0.000	.0189021	.0246336
skilledwor~r	1.112101	.0034546	321.92	0.000	1.10533	1.118872
workman	.392303	.0025684	152.74	0.000	.3872689	.397337
employer	.34327	.0022271	154.13	0.000	.3389049	.347635
ownaccount	−1.366081	.0046046	−296.68	0.000	−1.375106	−1.357056
capcity	.0024617	.0002245	10.96	0.000	.0020216	.0029017
unexplained						
primary	−.0249142	.0017877	−13.94	0.000	−.0284181	−.0214103
lsecondary	−.0026457	.0019263	−1.37	0.170	−.0064211	.0011297
usecondary	−.031192	.0011787	−26.46	0.000	−.0335022	−.0288818
higheredu	−.0309484	.000777	−39.83	0.000	−.0324712	−.0294256
industry	.0068745	.0012276	5.60	0.000	.0044685	.0092806
trade	−.0228359	.0010778	−21.19	0.000	−.0249483	−.0207235
services	−.0952727	.0024149	−39.45	0.000	−.1000059	−.0905395
exp	.0423994	.0021697	19.54	0.000	.0381469	.046652
expsqr	−.0038401	.0006884	−5.58	0.000	−.0051894	−.0024908
nbrofhours	.009309	.0017384	5.35	0.000	.0059017	.0127163
smallent	−.0191199	.0007951	−24.05	0.000	−.0206784	−.0175615
mediument	−.00994	.0004171	−23.83	0.000	−.0107574	−.0091226
largeent	−.0110055	.000444	−24.79	0.000	−.0118757	−.0101353
executive	.0083454	.0002606	32.02	0.000	.0078347	.0088562
skilledwor~r	.0685214	.0013847	49.48	0.000	.0658075	.0712354
workman	.0671623	.0008317	80.75	0.000	.0655322	.0687924
employer	.0262497	.0005721	45.89	0.000	.0251284	.0273709
ownaccount	.1738034	.0017098	101.65	0.000	.1704522	.1771545
capcity	−.050442	.0018051	−27.94	0.000	−.0539799	−.0469041
_cons	.2386947	.0072647	32.86	0.000	.2244562	.2529332