

DECOMPOSITION OF GENDER WAGE DIFFERENTIAL BY EMPLOYER SIZE

SYEDA BATOOL*¹

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Abstract

There are hundreds of papers on gender wage gap but how the size of employer can alter the compensation structure of male and female wages is not studied in detail in the size-wage literature. Heckman two step estimation procedures and standard Oaxaca (1973) Blinder (1973) wage decomposition method is used to decompose the gender wage difference across employer size in order to compare the patterns of gender wage gap in different sizes of employer in French labor market. There is obvious gender wage gap in all employer size categories and in all occupations where men and women are evaluated differently for the same characteristics. Gender wage difference increases by size of employers. Two factors are important in explaining the employer size gender wage gap: first, the women segregation into low paying workplaces; stereotype selection of jobs hinder women career development. Second, employer's behavior is discriminatory against women. In large, men get an unfair advantage over women. Women are disproportionately represented in the low paid occupations. There is prevalence of horizontal segregation that results into low wages and increases gender wage gap. A larger part of the gender wage gap remains unexplained even after adjusting for selection.

JEL Classifications J31 J33 J71

Key words: Gender wage difference, selection bias, establishment size-wage gap, wage decomposition

¹ *PhD fellow at University of Paris-1 and Paris School of Economics, Centre d'Economie de la Sorbonne, Maison des Sciences Economiques, 106-112 Boulevard de l'Hôpital 75013 Paris Syeda.Batool@malix.univ-paris1.fr Ph : +33- 1 44 07 80 00*

1 Introduction

Why do women earn lower wages than men? What are the factors that determine gender wage differentials? These questions have been discussed many times in the literature of gender wage differential. This resulted in various theoretical and empirical explanations of gender wage gap. The traditional approach in analyzing the determinants of the wage gap is to consider the role of gender differences in human capital characteristics and labor market discrimination. Key determinants of gender discrimination include gender segregation in organizational hierarchies, undervaluing of women's work, uneven division of domestic labor based on the ability of women and men to devote time to labor market work and/or women's concentration in jobs where, on one hand, pay is lower and, on the other hand, career prospects are weaker (Smith 2010).

One of the earlier theory of explaining gender wage gap is 'human capital theory' which hypothesized that investment in training and acquisition of skills depend on the anticipated returns from such investment and since women are less likely to invest in education they are less likely to get returns on these skills because of breaks from employment.² This theory became less applicable with the increase in the female participation in the labor market and higher educational level. A second set of literature on gender wage gap shows segregation of women into low-wage jobs. Many studies found women segregation into low paying occupations as the main source of gender wage differentials. This is called the occupational sex segregation³. While another aspect of segregation is firm-segregation. The inter-firm wage differentials results in gender wage differentials. Such studies drawing on matched employer-employee data reveal that female segregation into low-wage workplaces play a particularly important negative impact on their relative wages.⁴ The size of the gender pay gap is related to the global characteristics of the wage structure and, in particular, to the extent of wage dispersion. As women are usually concentrated in the lower part of the wage structure, the more dispersed the structure prevailing in a country the greater the penalty for female wages. Accordingly, empirical evidence shows

²Becker (1975), *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, 2nd ed., National Bureau of Economic Research.

³Velling, Johannes 1995, Groshen 1991, Dolado et al. 2004, Bayard et al. 2003, Macpherson and Hirsch 1995, Simon 2012.

⁴Bayard et al., 2003, Meng, 2004, Groshen 1991

that gender wage gaps are generally higher in those countries with comparatively more dispersed wage structures.⁵ It is observed that women are concentrated in low wage occupations but generally gender wage gap exists at all levels. According to European Commission Report of 2003, European countries are still suffering the discrimination for all positions particularly at a supervisory level despite women's higher educational levels and increasing labor force participation.

The gender wage gap in France remains at an intermediate level compared to other European Union countries. The job characteristics and labor market segregation both contribute to the gender wage gap. Particularly, in France, the vertical segregation positively contributes to explaining the full-time gender wage gap (Matteazzi et al. (2013). There are other studies showing that women are more strongly discriminated against men in full-time than in part-time jobs (see Johnson and Stafford 1974). Similarly, Meurs and Ponthieux (2006) focused on the evolution of the wage gap in France between 1990 and 2002. They found that 60% of the explained part of the gender wage gap is due to the length of working hours. In other words, part-time employment is a key factor in explaining the gender wage gap. One other explanation could be the educational and professional choices of women that result into low wage. Women are less likely to go to mathematics and pure sciences field. Machin and Puhani (2003) in their project (using person-level data from Britain, France and Germany) focused on university graduates and showed that the subject of degree (diplome) matters for the gender wage gap. Wages differ by subject of degree where men are predominant in engineering and related fields and women are predominant in education and language studies. Luca (2011) found that a positive differential in College education for women is by now a common feature in OECD countries. The distribution between a first level degree (Maîtrise degree in France) and a second level degree (DEA in France) shows a greater concentration of women in first level degrees. Social Sciences, Business and Law are the preferred fields for women while the preferred fields for men are Engineering and Architecture with Business and Law. Women acquire a little more tertiary education than men but they are more concentrated in the first level of tertiary education (e.g. B.A.) than in the second level (e.g. Master).

⁵Blau and Kahn, 1992, 1996, 2003, Simón and Russell 2007, Simon, 2012.

The gender wage gap for France was 18 % in 2008 (European Structure of Earnings Survey). Based on 2011 European commission of justice report, gender wage difference in France is 17 %. The wage differential between women and men for France narrows very slowly because of its key determinants which remain stable over the years. Those may include activity profile and job status. 75% of this wage discrepancy is accounted for by differences in job characteristics, the duration of work and working hours. Without radical measures, further improvement is hardly expected (IRES 2012 draft).

We will examine the share of each component, explained and unexplained, in the total differential and in each size category. Thus, we will decompose the gender wage gap by employer size categories. The objective is to analyze why different size establishments pay male and female workers of similar characteristics differently. The gender wage gap is largely studied but the gender wage gap by work place is not explored in detail for French labor market. There are three types of selection: selection on the decision to work, selection for occupation and third is selection for employer size. As this study addresses the sample of employed workers only, we will particularly focus on the selection bias in the employer size and wage relationship. The other two types of selection biases are left for future work.

With the popularity of wage decomposition methodology introduced by Blinder (1973) and Oaxaca (1973, henceforth O-B) many forms of discriminations have been evaluated using this wage decomposition method including gender discrimination, wage differentials based on ethnicity or race etc. In the presence of nonrandom selection, OLS estimates are not consistent (sample selection bias). Sample selection has been shown to be a potential source of bias in several studies of earnings differentials. Wage decomposition with sample selectivity bias correction is realized by many authors⁶. Moreover, quintile regression approach is largely adopted in recent studies to observe the distribution patterns at upper and lower tails. Several papers decompose the gender wage gap across the distribution for different countries⁷. Results for gender wage decomposition in this paper are estimated through classical O-B wage decomposition. The contribution of discrimination, human capital and selectivity in different

⁶Neumark 1988, Oaxaca and Ransom 1994, Neuman and Oaxaca 2004, Reimers 1983, Dolton et al 1989.

⁷Badel A. & Pena X. (2010) for Columbia, Albrecht et al. (2003) for Sweden, de la Rica et al. (2007) for Spain, Ganguli and Terrell (2009) for Ukraine, and Ńopo (2006) and Fernández, (2006) for Chile. Albrecht et al (2004) for Netherlands.

sizes of establishments is examined following Jann (2008), Oaxaca and Ransom (1994) and Neuman and Oaxaca (2004).

2. DATA

2.1 Introduction and Brief History

The data is drawn from two sets of surveys called “The Cost of Labor” (ECMO) and “Wage Structure Survey” (ESS), jointly called ECMOSS (Labor Cost and Wage Structure Survey) for the private nonagricultural sector collected by INSEE.

The survey on the cost of labor (ECMO) is designed to examine the average annual cost of labor per employee (that includes wages, social charges, expenses of training, etc.) and the average hourly cost of labor per hour actually worked (excluding holidays, sick leaves, strikes, training periods, etc.) . It provides the detailed structure of these costs by sector, by economic activity, region where the establishment is based and by the size of the establishment. It aims to evaluate the total cost of an hour actually worked, across the European Union and for a given sector to compare the price competitiveness.

The survey on the structure of wages (ESS) aims to provide to Eurostat the individual data for a sample of employees on wages, its components (basic wage, various kinds of bonuses, overtime payments), the determinants of wages (education, qualification, professional experience etc) and the workplace characteristics (business sector, firm size, region, actual duration of work, occupation, nature of the employment contract). The objective is to compare the wages (hourly and annual) and its components among European Union for a given profession, for a given level of qualification or in a particular sector.

Surveys on the structure of wages (ESS) were conducted in 1966, 1972, 1974, 1978, 1986, 1992, 1994 and 2002. Two broad regulations were made concerning these surveys. The first regulation was made in 1999 for the frequency of these two surveys (ECMO & ESS) that these are quadrennial. Second regulation was made in 2000 for the list of variables to be included in ESS. Variables related to employees fall within three broad themes: identification, individual characteristics and elements of remuneration. Lately, INSEE merged three surveys ESS, ECMO and ACEMO and launched first ECMOSS in 2006 on the 2005 data. Since then, ECMOSS is an annual survey. For this paper, the survey for the year 1992 is used as it contains maximum employers' and workers' characteristics¹.

2.2 Sample

The sample consists of 14,000 establishments and approximately 140,000 employees from the nonagricultural private sector. Employers respond to a questionnaire describing many workplace characteristics and give information about a random sample of their employees. This data set has many observations and a large variety of employer and employee characteristics which can be used as interesting instruments for the work on the cost of labor and structure of wages.

This is a very rich database consisting of socio economic characteristics of workers along with characteristics of establishments. There is no other data set that provides at the same time such information on the size of the establishment, its principal activity, its geographic location, its wage structure, the composition of its wages. Moreover, one can find detailed information on the education, profession, industrial distribution, age, nationality, family situation and number of dependent children of the workers.

The detail description and definition of variables is provided in Appendix-Table 1. It is followed by summary statistics in Appendix-Table 2.

3. SELECTION OF INSTRUMENTAL VARIABLES FOR TREATMENT CHOICE

As the main objective of this paper is to control for unobserved heterogeneity, therefore, valid instruments are required to satisfy the exclusion restriction requirement. In order to choose instruments we use ECMOSS 1992 which is the most relevant dataset available to us, as this data contains maximum information related to employer and employees characteristics.

The instrument used in the selection model (first step) is the *interaction of regional size with type of industry*. The intuition behind this interaction is that as large firms and establishments are mostly found in large regions and people living in large regions would more likely be working in large firms, their choice will vary on the type of industry they want to work. This suggests that information on region size may help to explain the choice of establishment size beyond industry choice or controlling for type of industry. With this, we assume that the regional wage premium should be the same for all industries in one region and for the average region, there is no additional region impact by industry. There is an industry wage premium and similarly there is a regional wage premium but in general industry wage premium does not depend on the regional size where it is based, in other words, there is no direct region-industry interaction effect. The size of the region may depend on many factors. The regional distribution of population, of building and of commercial services depends on the regional distribution of employment in industry. In France, based on European Commission report, four regions (Ile de France, Rhône-Alpes, Provence Alpes Côte-d'Azur and Nord Pas-de-Calais) are together responsible for about

50% of the French GDP. A second group of regions, composed of Western regions (Pays de la Loire, Aquitaine, Bretagne) are responsible for slightly less than 15%. Overall, there has been a reduction in disparities to the benefit of “peripheral” regions. Western and Southern regions (Pays de la Loire, Bretagne, Aquitaine, Midi-Pyrénées, Provence Alpes Côte-d’Azur, Corse) have had rates of growth of GDP and population higher than average, some of them are experiencing significant inward migration from Ile de France and Northern Franceⁱⁱ. This reflects that regions are heterogeneous and it is important to control each region separately and rank them so that we capture all the regional heterogeneities.

In order to define the regional size, we have to choose among regional characteristics that take into account regional heterogeneity. The geographical areas of reference frequently used in France, are the “*aires urbaines*”. They have been introduced in the middle of the 90’s and applied at the time of the last Census of population (1999). As defined by the INSEE, they are units formed with “*communes*”ⁱⁱⁱ, which correspond to local labor markets and economic attractiveness. They are composed of one urban pole (at least 5000 jobs) and adjacent “*communes*”, called “*péri-urbain*” ring. At least, 40% of the labor force population works in the “pole” or in the “ring”. The French zoning method barely relies upon population density, but also upon job concentration and home-to-work commuting flows. This has the advantage of focusing upon the connections between urban and rural areas. Based on this definition of urbanization, we can find the rate of urbanization and the figure of urban population by department. In every region there are further departments and communes. Therefore, in one region there can be more than one urban pole or ring. In urban areas there are more employment opportunities and more facilities, people are likely to go in big cities and big urban poles. We do not have data to control

for the mobility or migration between cities or between regions but we can expect that people can move to the center pole for employment from peripheral cities or rural areas.

Regarding the size of the regions, they are sufficiently big in terms of population to allow reliable conclusions and sufficiently distinct to allow differences among them. Every region has its own characteristics. Moreover in France, the collective bargaining agreements apply to all sectors uniformly and apply to all firms: this eliminates the direct interaction effect. Similarly, working conditions and living conditions are different across regions and in one region people will face the same living conditions and same working conditions that should not differ by industry if we assume that regional wage premium is the compensating premium for living conditions in large regions. Thus, we would expect the same premium for people living in Paris and working in different types of industries whereas it can be different from a person living in Brittany region.

Interactions of industry and region size are created on the basis of various regional characteristics. We have data on all departments^{iv} and we regrouped departments into regions. We used regional urban population, population density, surface area, ranking of regions by GDP and by rate of urbanization.^vThe estimation results in the next section show regional size ranked with respect to urban population. Table 3 in Appendix provides ranking of regions with respect to various categories. Table 4 and 5 in Appendix shows that distribution of type of sector and type of establishment in each region respectively. Table 6 in Appendix show correlation of establishment size with interaction variables.

4 Methodology

The switching regression model is employed to compare the expected earnings of a male worker compared to a female one in small size establishments if he self-selected into small size establishment and the expected earnings of a male employee working in large size establishments who self-selected into large size compared to his female counterpart. The usual procedure to measure the male-female wage gap is to consider the differences between the average male wage and his female counterpart in different employers' classes.

The comparison of mean wage differences motivates to explore further the gender wage gap patterns in the presence of selection bias. For this purpose, Heckman method is employed to study the gender wage gap across employer sizes. A simple two equations model of wage determination and employer size selection among employed workers illustrates the application. The Heckman two step estimation procedures is used for identifying parameters and later standards O-B decomposition is applied to the regression equations.

4.1 Wage Determination

Following the methodology of Neuman and Oaxaca (2004), we consider the gender wage differential by employer size. First, we determine the hourly wages of male and female by employer size and later we decompose the wage differential into explained and unexplained components. The unadjusted (without taking into account selection) and adjusted (with selection effect) wage gap is estimated in large and small establishments.⁸We make a simple two equations model of wage determination and employer assignment to illustrate the Heckman two steps estimation procedure. We assume that the employer size and wage functions for individual i in gender group j be given by;

$$Y_{ij}^* = Z_{ij}\gamma_j + \varepsilon_{ij} \quad (1)$$

$$W_{ij} = X_{ij}\beta_j + v_{ij} \quad (2)$$

⁸The employer size dummy is used in this paper unlike three size groups as in the last paper because the difference in coefficients of small and medium was less. Moreover, the program in stata 'oaxaca' command only allows the dummy variable for decomposition. Large establishments are defined with 200 and more workers and small establishments are defined as less than 200 workers.

Where Y_{ij}^* is a latent variable associated with probability of being employed in large (or small) size establishment, Z_{ij} is a vector of determinants of employer assignment, W_{ij} is the hourly wage (in logs), X_{ij} is a vector of wage determinants, γ_j and β_j are the associated parameter vectors and ε_{ij} and v_{ij} are i.i.d. error terms that follow a bivariate normal distribution $(0, 0, \sigma_{\varepsilon_j}, \sigma_{v_j}, \rho_j)$.

The probability of belonging to large size establishment is given by;

$$\begin{aligned} \text{prob}(Y_{ij}^* > 0) &= \text{prob}(\varepsilon_{ij} > -Z_{ij} \gamma_j) \\ &= \Phi(Z_{ij} \gamma_j) \end{aligned} \quad (3)$$

Where $\Phi(\cdot)$ is the standard normal C.D.F. (the variance of ε_j is normalized to 1). Wages are observed for those for whom $Y_{ij}^* > 0$, so that the expected wage of a large establishment worker is determined by;

$$\begin{aligned} E(W_{ij} | Y_{ij}^* > 0) &= X_{ij} \beta_j + E(v_{ij} | \varepsilon_{ij} > -Z_{ij} \gamma_j) \\ &= X_{ij} \beta_j + \theta_j \lambda_{ij} \end{aligned} \quad (4)$$

Where $\theta_j = \rho_j \sigma_{v_j}$ and $\lambda_{ij} = \frac{\phi(Z_{ij} \gamma_j)}{\Phi(Z_{ij} \gamma_j)}$ and $\phi(\cdot)$ is the standard normal density function. The expected wage for small establishment workers ($Y_{ij}^* < 0$) is determined by $\lambda_{ij} = \frac{\phi(Z_{ij} \gamma_j)}{1 - \Phi(Z_{ij} \gamma_j)}$. The estimating equation for individuals may be expressed as

$$W_{ij} | Y_{ij}^* > 0 = X_{ij} \beta_j + \theta_j \lambda_{ij} + \text{error} \quad (5)$$

The parameters of (5) will be estimated by Heckman two-step estimation procedure separately for male and female.

2.2 Wage Decomposition

We denote M for males and F for females. We use the classic threefold B-O decomposition (Blinder 1973, Oaxaca 1973): Stata command ‘oaxaca’ computes decomposition (see Jann (2008) for details of the procedure). The decomposition below is formulated from the view point of women;

$$G = \{E(X_M) - E(X_F)\}\beta_F + E(X_F)(\beta_M - \beta_F) + \{E(X_M) - E(X_F)\}(\beta_M - \beta_F) \quad (6)$$

G represents the gender wage gap on the left-hand side. This is threefold decomposition where gender wage gap is divided into three components;

$$G=E +C+ I$$

The first components, $\{E(X_M) - E(X_F)\}\beta_F$ represents the effect of endowments. This amounts to the part of differential that is due to group difference in the predictors. The group differences in the predictors are weighted by the coefficients of women i.e. the expected change of women’s mean wage if they had the same predictor levels as men. This is also called the explained component of the gender wage gap.

The second component, $E(X_F)(\beta_M - \beta_F)$, measures the contribution of differences in the coefficients and intercept. The difference in coefficients of both groups is weighted by women’s predictor levels, i.e. the expected change of women’s mean outcome if they had the same coefficients as men. This component represents the “discrimination component”, or the unexplained part of the gender wage gap.

Finally, the third component, $\{E(X_M) - E(X_F)\}(\beta_M - \beta_F)$, is the interaction term that simultaneously measures the difference in endowments and coefficients between the two groups. The first two components are considered as most relevant in the gender wage gap literature. The decomposition from the viewpoint of men can be written as;

$$G = \{E(X_M) - E(X_F)\}\beta_M + E(X_M)(\beta_M - \beta_F) + \{E(X_M) - E(X_F)\}(\beta_M - \beta_F)$$

Now the endowment effect represents the expected change in men’s hourly wage if they had female’s predictor level. The coefficient effect quantifies the expected change in males’ hourly wage if they had the same coefficients as those of women. Alternative decomposition method in the discrimination literature is the use of nondiscriminatory coefficient vector to determine the contribution of differences in the predictors. Oaxaca (1973) proposed an index number to estimate the unknown nondiscriminatory coefficient vector, Reimers (1983) proposed using the average coefficients over both groups, Cotton (1988) suggested to weight the coefficients by the group size and Neumark (1988) and Oaxaca and Ransom (1994) suggested to use the coefficients from a pooled regression over both groups as an estimate of the unknown nondiscriminatory vector. Stata’s command ‘Oaxaca pooled’ implements this method.

For selectivity bias adjustment, we follow the Neuman and Oaxaca (2004) methodology (see Neuman and Oaxaca (2004) for details). This approach deducts the selection effect from the overall differential and then the standard threefold decomposition is applied. To implement this, ‘Oaxaca’ command in Stata is used with Heckman two steps procedure where the decomposition automatically adjust for selection. For decomposition of adjusted wage gaps, the formulation is expressed as:

$$G - (\theta_M \lambda_M - \theta_F \lambda_F) = \{E + C + I\}$$

5 Empirical Results

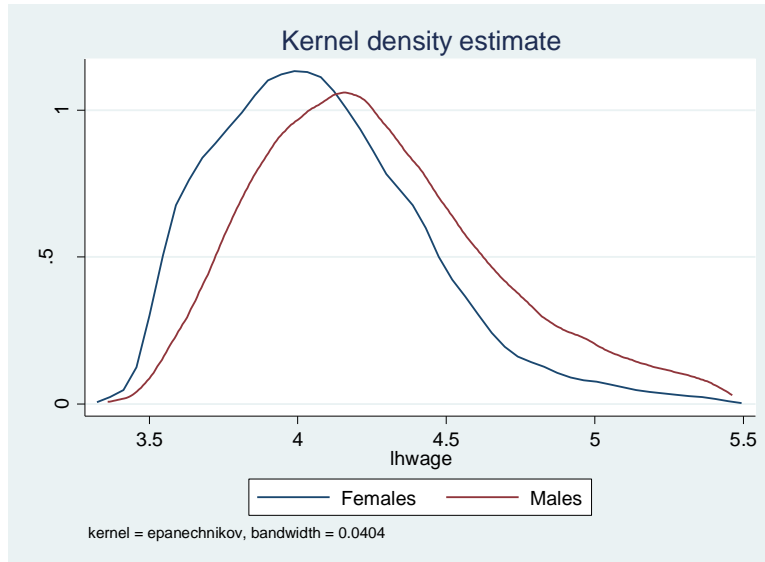
a. Wage Equation unadjusted and adjusted for selection

Table 7 in Appendix shows probit estimates for male and female. The adjusted and unadjusted wage equations are presented in Table 8. Standard Mincer type equation is estimated. These results are then used to calculate the share of the endowment, discrimination and selectivity components in the wage differential by size and by gender. The log of individual hourly wage is regressed on various control variables related to individual and employer's characteristics. The results of the wage equation complement the previous studies. We see the same sign and direction of the effect of observable individual characteristics on hourly wage. Education has a strong positive effect on the wages for both male and female workers. As education increases, rewards increases and as size increases reward increases. Similarly, experience and tenure pose positive impact on wage. The selection coefficient (λ) is only significant for male sample in large size establishments. The negative sign indicates that the unobservable factors are present in both the wage equation and selection equation and both are correlated with common factors. Therefore, it was important to treat them endogenous to study the employer size effects on wage. For female sample there is no evidence of nonrandom selection. There is negative selection on unobservable in the large establishments for male workers. This implies that workers who self-selected into large establishments possess unobserved traits that depress their wages. Positive selection on observables and negative selection on unobservables and both are negatively correlated with each other.

b. Blinder-Oaxaca Wage Decomposition

Figure 1 describes the kernel density distribution of log wage for male and female. We see that females are concentrated more in the lower level of log distribution of hourly wage.

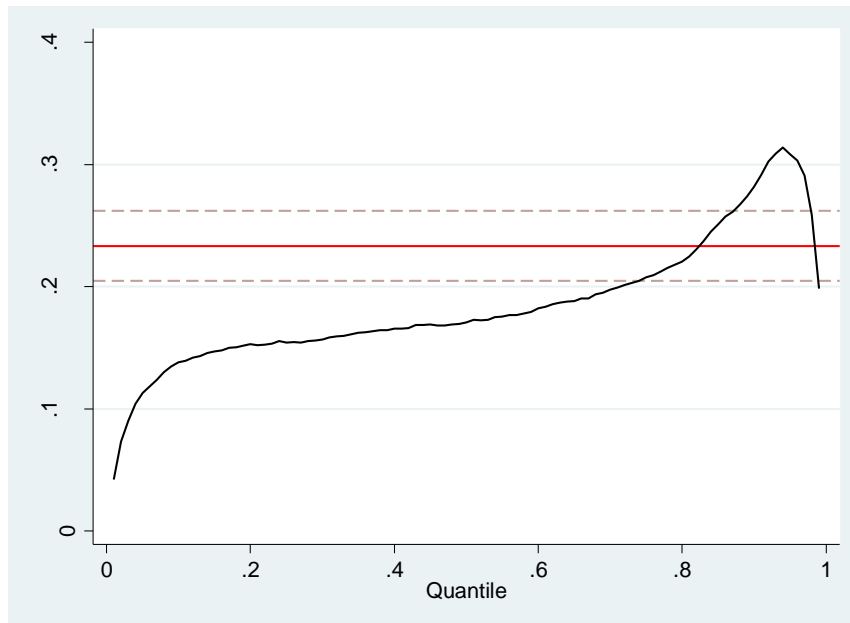
Figure 1 Distribution of hourly wage by gender



Source: ECMOSS 1992 author's calculations

Figure 2 shows the quintile distribution of gender wage differential. The gender wage gap becomes greater at the top end of the log distribution of wages. The red line shows average gender wage gap. The gender wage gap reaches at top for 90th to 95th percentile. This is glass ceiling effect or may be the sample at the extreme end is unusual.

Figure 2 Log gender wage differential



Source: Ecmoss 1992 author's calculations

In the table 1 below, the results of B-O decomposition, based on the methodology described in section two, are reported. Table 1 shows gender wage decomposition in large and small size establishments. First column show the mean prediction by group and their difference. The second column shows geometric means of wage of both groups and their difference.⁹The detailed table of decomposition and share of each variable in the entire component can be seen in Table 9 in Appendix.

Table-1 Threefold decomposition of Gender wage differential by establishment size

| | Large | | | Small | | |
|-------------------|----------------------|--------|--------|----------------------|--------|--------|
| | Mean log hourly wage | Exp(b) | % | Mean hourly log wage | Exp(b) | % |
| Males | 4.362*** (0.003) | 78.41 | | 4.181*** (0.003) | 65.43 | |
| Females | 4.160*** (0.003) | 64.06 | | 4.036*** (0.003) | 56.62 | |
| Difference | 0.202*** (0.004) | 1.22 | 18.31% | 0.145*** (0.004) | 1.15 | 13.46% |
| Endowments | 0.029*** (0.004) | 1.02 | 13.72% | -0.010*** (0.003) | 0.99 | -6.64% |
| Coefficients | 0.126*** (0.003) | 1.13 | 63.36% | 0.112*** (0.003) | 1.11 | 78.26% |
| Interaction | 0.047*** (0.003) | 1.04 | 22.91% | 0.042*** (0.003) | 1.04 | 28.38% |
| Total N. Obs | 29,896 | | | 44,800 | | |
| Males | 19,758 | | | 24,896 | | |
| Females | 10,138 | | | 19,904 | | |

Results correspond to OLS regression Appendix-D Table D-2. Results are computed using stata command 'Oaxaca'. exp (b) column is obtained through stata command 'oaxaca eform'. The % wage difference is calculated as (hourly male wage - hourly female wage)/ hourly male wage.

The decomposition output shows the mean wage prediction by gender and their difference. Two wage equations are estimated separately for male and female in one size group. The mean gross hourly wage for males is 4.36 in large size establishments (with 200 and more workers). The mean gross hourly log wage is 4.16 for women, yielding a wage difference of 0.20. The wage gap is divided into three components. The endowment part reflects the mean

⁹ Exp(b) coefficients are obtained though 'Oaxaca eform' option

increase in women's wage if they had the same characteristics as men. The second component quantifies the change in women's wage when applying the men's coefficients to the women's characteristics. The third term measures the simultaneous effect of difference in endowments and coefficients. The second column shows that in the large size establishments the raw geometric mean of men's wage is 78.4 French francs while that of women is equal to 64 French francs which amounts to a difference of 18.31%. The difference is calculated as the ratio of the wage difference of both groups and men's average wage. The wage difference is coming through three components as explained above. The difference in endowment accounts for 13.7% of the total gender wage gap. The endowment component is 1.029 which reflects that women's wage would increase by 2.9% if they had the same characteristics as men. The coefficients component comes to 1.134. It amounts an increase of 13.4% of the women wage if we apply men's coefficients to the women characteristics. The difference in coefficients explains 63% of the gender wage gap. The interaction component explains 22% of the wage gap. It reflects the simultaneous effect of differences in endowments and coefficients. Among the endowments if women had the same experience as men, they would earn 3.6% more and if they had same tenure as men they would earn 2.5% more. For the educational variables, if women had the same BAC+2 educational levels as men they would earn 0.8% less. If they had the same highest educational level BAC+3 and more, they would earn 0.9% more. Among coefficients, if we apply men's coefficient of experience to experience of women then the later would earn 10.5% more. For tenure, women would earn 7% more. Similarly, by applying men's coefficients to the educational levels of women the difference remains less than 1%. The difference in the type of contract amounts to 11% of the wage difference. This means that if women had the similar type of employment contract as men, they would earn wages 11% higher. Overall, experience, tenure and type of employment contract show larger difference in mean log wage of male and female.

On the other hand the total gender wage gap in small size establishments (establishments with less than 200 employees) is 13% compare to 18% in large. This shows that gender wage differential is greater in large compared to small size establishments. The endowment amounts to 0.99 which reflects that if women had the same characteristics as men, they would earn 1% less. This amounts to a decrease of 6% in the total gender gap in small size establishments. On the other hand women's wage would increase 11.9% by applying men's coefficients to women

characteristics. The difference in coefficients explains 78% of the total gender wage gap in small establishments. The remaining interaction component explains 28% of the total wage gap. In the small size establishments, if women had the same experience as men, they would earn 0.9% more and if they had the same tenure as men they would earn 0.5% more. For the educational variables, if women had the same BAC+2 educational levels as men they would earn 0.4% less. If they had the same highest educational level BAC+3 and more, they would earn 0.3% more. Similarly, in small size establishments if we apply men's coefficient of experience to women's experience, the wage of the latter would increase by 15%. For tenure, it would increase by 1.8%.

It is found that the gender wage gap is greater in large size compared to small size. This gender wage gap is explained less by the characteristics even after controlling for a wide range of individual characteristics, experience, tenure, education, profession, type of contract etc. Over four times as much of the wage gap is explained by difference in coefficients as in difference in endowments. This shows that the discrimination against women is higher compared to the difference in human capital. Men get unfair advantage against women. The total gender wage gap is more in large size establishments but the unfair advantage is more in small size establishments.

Alternatively, the twofold decomposition is computed from a pooled model over both samples to be used as reference coefficients (see for details Oaxaca and Ransom 1994). The conclusion from this model is similar to the threefold decomposition: namely that the discrimination component or the unexplained accounts for more than a half of the gender wage gap. Results are reported in Table 2 and detail decomposition table can be seen in Table 10 in Appendix. In large size establishments, the unexplained component accounts for 73% of the total gender wage gap compared to 26% of the explained component. In small size establishments, more than 90% of the wage difference is unexplained.

Table-2 Twofold decomposition of Gender wage differential by establishment size

| | Large | | | Small | | |
|-------------------|----------------------|--------|--------------|----------------------|--------|--------------|
| | Mean log hourly wage | Exp(b) | % | Mean log hourly wage | Exp(b) | % |
| Males | 4.362*** (0.003) | 78.41 | | 4.181*** (0.003) | 65.43 | |
| Females | 4.160*** (0.003) | 64.06 | | 4.036*** (0.003) | 56.62 | |
| Difference | 0.202*** (0.004) | 1.22 | 18.31 | 0.145*** (0.004) | 1.15 | 13.46 |
| Explained | 0.055*** (0.004) | 1.05 | 26.14 | 0.011*** (0.003) | 1.01 | 7.49 |
| Unexplained | 0.147*** (0.003) | 1.15 | 73.86 | 0.133*** (0.003) | 1.14 | 92.51 |
| Observations | 29,896 | | | 44,800 | | |
| Males | 19,758 | | | 24,896 | | |
| Females | 10,138 | | | 19,904 | | |

Results are computed using stata command 'Oaxaca pooled'. exp (b) column is obtained through stata command 'oaxaca pooled eform'. The % wage difference is calculated as (hourly male wage - hourly female wage)/ hourly male wage.

In the presence of nonrandom selection, the OLS estimates are biased. Therefore, table-3 below presents the decomposition results when we adjust for self-selection. The selection effect is deducted from overall differential and the standard decomposition is applied to the adjusted differential following Reimers (1983) and Neuman and Oaxaca (2004).¹⁰ The Stata command 'Oaxaca' is compatible with Heckman two step selection models. Simultaneous selection model for male and female for $Y_{ij}^* > 0$ and for $Y_{ij}^* < 0$ are computed.¹¹ The results are reported in table 3 and detail decomposition results can be seen in Table 11 in Appendix.

¹⁰The same exclusion restrictions are used as in the previous paper. The interaction variable of region size and industry type is used in the first step (probit model) and the IMR is used in the wage equation in the second step.

¹¹Computation of 'heckman' with 'oaxaca' is not straight forward. Although it incorporates the selection of both groups (two probit models) but it can bias the standard errors (Jan 2008). Second way is to compute the selection model outside Oaxaca and then performing 'oaxaca' command with the option of 'adjust' but this option does not allow to take into account the selection of both male and female together.

Table-3 Decomposition of adjusted wage differential

| | Large | | | Small | | |
|-------------------|----------------------|--------|--------------|----------------------|--------|--------------|
| | Mean log hourly wage | Exp(b) | % | Mean log hourly wage | Exp(b) | % |
| Males | 4.479*** (0.012) | 88,126 | | 4.177*** (0.008) | 65,172 | |
| Females | 4.156*** (0.014) | 63,833 | | 4.037*** (0.007) | 56,644 | |
| Difference | 0.322*** (0.018) | 1,381 | 27,57 | 0.140*** (0.011) | 1,151 | 13,09 |
| Endowments | 0.029*** (0.005) | 1,030 | 8,19 | -0.010*** (0.004) | 0,990 | -6,75 |
| Coefficients | 0.268*** (0.020) | 1,307 | 84,79 | 0.108*** (0.010) | 1,114 | 77,26 |
| Interaction | 0.025*** (0.005) | 1,025 | 7,02 | 0.043*** (0.003) | 1,043 | 29,49 |
| λ_m | -0.166*** (0.017) | | | 0.004 (0.014) | | |
| λ_f | 0.004 (0.014) | | | -0.006 (0.014) | | |
| Observations | 29,896 | | | 44,800 | | |

Notes: Similar as in the tables above

Comparing the adjusted wage differentials to unadjusted (Table 5.1), it seems that the uncorrected wages of women are slightly biased upward, (4.160 versus selectivity corrected 4.15) and the wage gap is under estimated (0.20 versus selectivity corrected 0.32). The adjusted wage gap is similar to the unadjusted one in the small size establishments: 13%. The results are conditional to the choice of instruments and to the choice of selection model to take into account selection effect. The results are also conditional to the decomposition method as this methods takes out selection effect from total effect and decomposes the remaining wage difference while other methods make selection as additional component of the wage gap (see Neuman and Oaxaca (2004)).

It is observed that the gender wage gap increases if selection bias is taken into account. The share of endowment in the total wage gap decreases to 8% and share of coefficients increases to 84%. Among small size establishment, the share of each component in the adjusted gender wage gap remains similar to the unadjusted wage gap. Only the selection coefficient for male in large size establishments is significant. Negative selection into large implies that in large

size establishments the less able men are likely to enter and get higher wages or if men are selected to work in large size establishments then they would get lower wages compare to random draw of men with a comparable set of characteristics.

After observing the adjusted and unadjusted wage gaps, we saw that more than a half of the wage gap remains unexplained and shows the dominating discrimination effect that determines gender wage gap. One thing is evident: gender wage gap exists in all size groups but is larger in large size employers. On the one hand, we see segregation of women into low wage workplaces where opportunities of promotion are low while, on the other hand, there is unequal access to high-paying jobs for women. There may be a barrier to entry for women in large size establishments. Even if pay is equal, there is unequal access to high-paying jobs. In that case, discriminatory barriers in jobs become important component of gender wage gap. Moulin (2004) found for France that discriminatory barriers affect both segregation and discrimination. He found that a portion of the occupational segregation is related to a discriminatory barriers effect.

Based on human capital theory as employers anticipate that female would spend less time in labor market; they will anticipate getting less return on training and, as a consequence, they may hire less female workers or give them lower opportunities for promotion. The structural elements of the labor market in France may be less responsible for the gender pay gap as the law of minimum wage and collective bargaining agreements apply to all agents of labor market. The interruptions to work and working timings are very important elements that reduce the positive effect of higher labor force participation and educational attainment.

Further, the gender pay gap by age cohorts and by occupation can explain the type of segregation (vertical or horizontal) in explaining the gender wage gap. Table 4 shows that women are concentrated in the low skilled white collar occupations. The ‘female occupations’ are often referred to as the ‘five c’s’: cleaning, catering, caring, cashiering and clerical work.

Table 4 Distribution of professions among male and female across employer size

| Profession | Large | | | Small | | |
|--|------------------------|------------------|---------------|-------------------------|------------------|---------------|
| | Female | Male | Total | Female | Male | Total |
| Management and High Intellectual professionals | 824 21.11% | 3,080 78.89% | 3,904 100 | 1,608 29.69% | 3,808 70.31% | 5,416 100 |
| High Skilled White Collar | 3,159 34.26% | 6,062 65.74% | 9,221 100 | 5,308 45.46% | 6,369 54.54% | 11,677 100 |
| Low Skilled White Collar | 3,911 71.99% | 1,522 28.01% | 5,433 100 | 10,002 79.38% | 2,598 20.62% | 12,600 100 |
| Blue collar | 2,244 19.79% | 9,094 80.21% | 11,338 100 | 2,986 19.77% | 12,121 80.23% | 15,107 100 |
| Total | 10,138 33.91% | 19,758 66.09% | 29,896 100 | 19,904 44.43% | 24,896 55.57% | 44,800 100 |

Table 5 shows that the gender wage gap across professions is higher in lower level professions and remains largely unexplained. The higher educational levels of women are offset by the coefficients component as women are underpaid against men for similar characteristics. The higher wage difference in lower level profession indicate the higher labor supplied by women in these professions which depress wages. There is predominantly horizontal segregation in our sample where females are employed in low-paid occupations from males. This results into persistent low wages because of over female labor supply into these occupations.¹² On the other hand, to some extent there is vertical segregation because women are under present in high paying occupations. There are entry barriers or men are getting unfair advantage. Detail decomposition can be seen in Table 12 in Appendix.

¹²Blau and Kahn, 2000. *Gender Differences in Pay* Francine D. Blau, Lawrence M. Kahn, NBER Working Paper No. 7732 Issued in June 2000

Table 5 Adjusted gender wage difference by profession in large size establishments

| Mean log hourly wage and difference | Prof1 | Prof2 | Prof3 | Prof4 |
|-------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Males | 4.910*** (0.025) | 4.498*** (0.017) | 4.190*** (0.030) | 4.284*** (0.015) |
| Females | 4.675*** (0.058) | 4.373*** (0.021) | 3.978*** (0.025) | 3.803*** (0.017) |
| Difference | 0.235*** (0.063) | 0.125*** (0.026) | 0.213*** (0.039) | 0.481*** (0.023) |
| Endowments | 0.052*** (0.011) | -0.023*** (0.006) | 0.008 (0.005) | 0.026*** (0.005) |
| Coefficients | 0.168*** (0.064) | 0.139*** (0.031) | 0.203*** (0.039) | 0.441*** (0.024) |
| Interaction | 0.015 (0.010) | 0.010 (0.009) | 0.002 (0.004) | 0.013** (0.006) |
| Δm | -0.023 (0.035) | -0.095*** (0.027) | -0.068** (0.036) | -0.161*** (0.020) |
| Δf | 0.065 (0.070) | -0.046** (0.241) | 0.069*** (0.023) | 0.139*** (0.024) |
| Observations | 3,904 | 9,221 | 5,433 | 11,338 |

Prof1= Management and High Intellectual professionals, prof2=High Skilled White Collar, prof3=Low Skilled White Collar, prof4=Blue Collar. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Further results are computed using the basic hourly wage. Results are presented in Table 6 and detailed results are presented in Table 13 in Appendix. It is observed that the gender wage difference in large size establishments increases with the difference of gross and basic hourly wage, i.e. allowances, bonus and overtime payments. For the basic contractual wage the unadjusted wage gap is 14% compared to 18% and for the adjusted the wage gap is 16% compared to 27%. Again the share of discrimination is highest in the basic wage. The larger part of the wage gap remains unexplained.

Table 6 Threefold decomposition of gender wage differential in large establishments

| Basic hourly log wage | Unadjusted | | | Adjusted | | |
|-----------------------|---------------------------|-------------|--------------|---------------------------|-------------|--------------|
| | Mean log hourly wage | Exp(b) | % | Mean log hourly wage | Exp(b) | % |
| Males | 4.108*** -0.003 | 60.80 | | 4.117*** -0.011 | 61.37 | |
| Females | 3.954*** -0.003 | 52.16 | | 3.942*** -0.013 | 51.51 | |
| Difference | 0.153*** -0.004 | 1.17 | 14.21 | 0.175*** -0.017 | 1.19 | 16.07 |
| Endowments | 0.030*** -0.004 | 1.03 | 18.99 | 0.032*** -0.005 | 1.03 | 17.62 |
| Coefficients | 0.089*** -0.003 | 1.09 | 58.81 | 0.113*** -0.019 | 1.12 | 65.25 |
| Interaction | 0.035*** -0.003 | 1.04 | 22.21 | 0.031*** -0.004 | 1.03 | 17.13 |
| Am | | | | -0.013 (0.015) | | |
| Af | | | | 0.013 (0.014) | | |
| Observations | 29,851 | | | 29,851 | | |
| Male | 19,741 | | | 19,741 | | |
| Female | 10,110 | | | 10,110 | | |

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0

6 Conclusion

Decomposition of wage differentials has been studied by many authors in the context of gender, race, ethnicity etc. But decomposing wage differentials by employer size has not been explored in detail. The Heckman two step estimation procedure is used for identifying parameters and later standards Oaxaca (1973) Blinder (1973) wage decomposition is applied to the regression equations. The objective is to decompose the gender wage difference across employer size in order to compare the patterns of gender wage gap in different sizes of employers. The work-place segregation is considered and the effect of differences in personal characteristics on the gender wage gap is disentangled with the effect of selection into different establishments of women and men.

The gender wage gap is greater in large compared to small size establishments but among all the cases the larger part of the gender wage gap remains unexplained. The adjusted regressions for selection increases gender wage gap in large size but the evidence of nonrandom selection is only found among male workers and no selection term is significant for women. The wage gap exists in both measures of wage, gross and basic, the wage gap increases as the difference of gross and basic wage increases.

A prominent conclusion from this analysis is the women segregation into low paying workplaces. There is stereotype in women allocation into particular jobs that results into low wages compared to men. Employers' behavior is discriminatory against women and they offer men an unfair advantage in the same job. Two factors are important in explaining the employer size gender wage gap, first is the women segregation into low paying workplaces; stereotype selection of jobs hinder women career development. Secondly, employer's behavior is discriminatory against women. Women are disproportionately represented in the low paid occupations, there is prevalence of horizontal segregation that results into low wages and increases gender wage gap. To some extent there is also vertical segregation as only women are underrepresented in high paying occupations.

Decomposition by age cohorts and by working hours of both groups is the next step. Further work should examine the different decomposition method, quintile decomposition and with

different adjustments of selection correction as 'Oaxaca' option did not enable us to use many types of decompositions. Large part of gender wage gap remains unexplained. Further work can also be done to simultaneously take into account occupational segregation, work-place segregation and decompose gender wage differentials

Appendix

A. Construction and Definition of Variables

Below, the main variables used in the estimations are described. Wherever possible, some variables have been constructed and some are modified as required. Table 1 shows the definition of the continuous and categorical variables. This is followed by summary statistics of all variables used for estimation.

Table 1 Description of variables

| Variable | Description | Categories |
|-------------------------------|---|---|
| Wage/ salary/ remuneration | In each survey, two measures of wages are available; the gross wage and the net wage. The net wage is the standard contractual wage to which complements are added. The difference may include individual bonuses, bonuses related to group performance and those related to establishment or firm performance, such as mandatory French profit-sharing schemes (<i>participation</i>). We thus expect gross earnings to be more affected by profits than basic wages. Distinguishing the two measures of wages can tell us how the wage components are related to size. Therefore, in each chapter all the estimations are performed twice one for each measure of size and results are compared to analyze how the compensations and allowances vary across | Hourly wage is computed from total number of working hours in a year. ^{vi} |

| | | |
|--------------------|--|--|
| | different size categories of employers. This plays an important role in measuring sources and magnitude of the size wage premium for France in the reference years. | |
| Working Hours | Total number of working hours in one year is available in the data through which we can form monthly, annual or hourly wage. ^{vii} | |
| Establishment Size | Establishment size or the number of employees working in the establishment at all locations is categorized in three groups (small, medium and large) for simplicity. The robustness of the threshold is verified in each estimation method employed. ^{viii} | Small = 1-49 employees Medium = 50-199 employees Large = 200 and more employees |
| Industry | Industries have been classified into three main groups: manufacturing, trade and services. Three categories were formed out of 12 categories. Industries are classified by INSEE based on NAP level 15A. ^{ix} | Indus=1 if Trade Indus=2 if Manufacturing Indus=3 if Services |
| Region | France is divided into 27 Regions, 21 regions are in Metropolitan France, and remaining regions are overseas. Each region is further classified into department with different size and number depending on geographical location. ^x | Names of 21 regions are: Limousin, Franche-Comté, Auvergne, Champagne- Ardenne, Basse-Normandie, Bourgogne, Poitou-Charentes, Alsace, Haute-Normandie, Picardie, Languedoc |

| | | |
|---------------------|---|--|
| | | Roussillon, Lorraine, Centre, Midi-Pyrénées, Bretagne, Aquitaine, Pays de la Loire, Nord-Pas-de-Calais, Provence-Alpes-Côte d'Azur, Rhône-Alpes, Île-de-France |
| Employment contract | There are two main types of employment contracts in France, the permanent (CDI) and fixed term (CDD) contracts. All other types of contracts are grouped in 'other contracts'. | CDI=1 CDD=0 |
| Gender | Gender: a dummy variable for male or female is created. Base category is female. | Male = 1 Female = 0 |
| Age | Individual between working age 25-60 are included in the sample. Four dummy variables for age have also been used for descriptive statistics. (25-30, 31-40, 41-50, 51-60). In the last chapter (chapter-6) birth years of employees are created from age variable for making cohorts. | |
| Education | For the French data, the educational variables are based exclusively on degree attainment. We used classification of CEREQ ^{xi} . Since education; the information on education is available as categorical variables which further reclassified based on CEREQ classifications. The observations with non-declared education are | Edu=1 No degree Edu=2 Before Bac without degree Edu=3 CAP/BEP Edu=4 Bac professional and technical Edu=5 Bac general |

| | | |
|------------------|---|---|
| | dropped from the sample. | Edu=6 Bac +2 Edu=7 Bac+3 and plus |
| Experience | Experience represents the total working experience in the labor market in years. It is the total experience with the current employer and outside the current employer ^{xii} . This is continuous experience and does not give information on the interruptions. | |
| Tenure | Tenure is defined in terms of the length, in years, of the current employment relationship. | |
| Family Situation | Three dummy variables are created, married, single and others (widowed, divorced). This variable is available in 1992 survey only. | Single=1 Married=2 Other (widowed, divorced)=3 |
| Profession | The French occupations are a recode of the 'Profession et Categories Socio-professionnelle (PCS)' codes common to all INSEE surveys. For professions PCS 1992 level-4 was used. But all of the categories are similar to the PCS 2003 level 4. ^{xiii} | Management and high intellectual professionals=1 High skilled white collar=2 Low skilled white collar=3 Blue collar =4 |

The information related to workers' and employers' characteristics that is used for this dissertation is the size of the establishment, gross and basic hourly wage, annual working hours, educational level, professional level, sector, experience, tenure, family situation, employment

contract, region, nationality, age and number of dependent children. The variables have been cleaned up by various changes. Outliers in the formation of individual's hourly wage are dropped. Weekly hours are limited to 43 hours per week. Missing values in the education, family situation, contract, experience and tenure are dropped. Population with working age between 25-60 years of age is included and the rest of the observations are dropped. The final cleaned number of observations is 74,696. Number of dependent children is important information for the employees as it can influence many decisions. This variable is used for instrumentation but not included in the descriptive statistics.^{xiv} Summary statistics of all variables is presented below.

Table 2 Summary statistics

| Variable | All | | Small establishment | | Medium establishment | | Large establishment | |
|--|-------|-----------|---------------------|-----------|----------------------|-----------|---------------------|-----------|
| | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. | Mean | Std. Dev. |
| Hourly Gross wage | 71,57 | 32,76 | 66,80 | 32,45 | 66,95 | 30,56 | 78,64 | 32,83 |
| Establishment Size | | | | | | | | |
| Small establishment | 0,41 | 0,49 | | | | | | |
| Medium establishment | 0,19 | 0,40 | | | | | | |
| Large establishment | 0,40 | 0,49 | | | | | | |
| Gender | 0,60 | 0,49 | 0,54 | 0,50 | 0,58 | 0,49 | 0,66 | 0,47 |
| Experience | 20,48 | 9,48 | 19,63 | 9,52 | 20,25 | 9,49 | 21,46 | 9,35 |
| Tenure | 11,25 | 8,94 | 8,46 | 7,74 | 10,27 | 8,61 | 14,55 | 9,16 |
| Industry | | | | | | | | |
| Trade | 0,10 | 0,30 | 0,17 | 0,38 | 0,08 | 0,28 | 0,04 | 0,20 |
| Manufacturing | 0,38 | 0,49 | 0,25 | 0,43 | 0,26 | 0,44 | 0,57 | 0,49 |
| Services | 0,52 | 0,50 | 0,57 | 0,49 | 0,66 | 0,47 | 0,39 | 0,49 |
| Education | | | | | | | | |
| No degree | 0,18 | 0,39 | 0,20 | 0,40 | 0,21 | 0,41 | 0,15 | 0,36 |
| Before Bac without degree | 0,17 | 0,38 | 0,14 | 0,35 | 0,17 | 0,38 | 0,20 | 0,40 |
| CAP/BEP | 0,34 | 0,47 | 0,34 | 0,47 | 0,34 | 0,47 | 0,35 | 0,48 |
| Bac professional and technical | 0,07 | 0,25 | 0,07 | 0,26 | 0,06 | 0,23 | 0,07 | 0,26 |
| Bac general | 0,05 | 0,22 | 0,06 | 0,25 | 0,05 | 0,22 | 0,04 | 0,20 |
| Bac +2 | 0,13 | 0,34 | 0,13 | 0,34 | 0,14 | 0,35 | 0,13 | 0,34 |
| Bac+3 and plus | 0,05 | 0,22 | 0,05 | 0,21 | 0,04 | 0,19 | 0,06 | 0,24 |
| Marital Status | | | | | | | | |
| Single | 0,23 | 0,42 | 0,26 | 0,44 | 0,24 | 0,43 | 0,20 | 0,40 |
| Married | 0,69 | 0,46 | 0,66 | 0,47 | 0,67 | 0,47 | 0,73 | 0,44 |
| Other family status (divorced, widowed etc) | 0,08 | 0,27 | 0,08 | 0,27 | 0,09 | 0,28 | 0,07 | 0,25 |
| Profession | | | | | | | | |
| Management and High Intellectual professionals | 0,12 | 0,33 | 0,13 | 0,33 | 0,11 | 0,31 | 0,13 | 0,34 |
| High Skilled White Collar | 0,28 | 0,45 | 0,26 | 0,44 | 0,25 | 0,44 | 0,31 | 0,46 |
| Low Skilled White Collar | 0,24 | 0,43 | 0,30 | 0,46 | 0,25 | 0,43 | 0,18 | 0,39 |
| Blue collar | 0,35 | 0,48 | 0,31 | 0,46 | 0,39 | 0,49 | 0,38 | 0,49 |
| Contract | 0,95 | 0,22 | 0,94 | 0,24 | 0,92 | 0,27 | 0,97 | 0,17 |
| Region | | | | | | | | |
| Limousin | 0,02 | 0,13 | 0,02 | 0,13 | 0,02 | 0,13 | 0,02 | 0,13 |
| Franche-Comté | 0,02 | 0,14 | 0,02 | 0,15 | 0,02 | 0,15 | 0,01 | 0,12 |
| Auvergne | 0,02 | 0,14 | 0,02 | 0,14 | 0,01 | 0,11 | 0,02 | 0,14 |
| Champagne-Ardenne | 0,02 | 0,14 | 0,02 | 0,14 | 0,02 | 0,14 | 0,02 | 0,15 |

| | | | | | | | | |
|-------------------------------|-------|------|-------|------|-------|------|-------|------|
| Basse-Normandie | 0,02 | 0,14 | 0,02 | 0,15 | 0,02 | 0,13 | 0,02 | 0,14 |
| Bourgogne | 0,04 | 0,18 | 0,03 | 0,18 | 0,04 | 0,20 | 0,03 | 0,18 |
| Poitou-Charentes | 0,03 | 0,16 | 0,03 | 0,16 | 0,03 | 0,17 | 0,03 | 0,16 |
| Alsace | 0,05 | 0,22 | 0,04 | 0,20 | 0,07 | 0,26 | 0,05 | 0,22 |
| Haute-Normandie | 0,04 | 0,19 | 0,04 | 0,18 | 0,03 | 0,18 | 0,04 | 0,19 |
| Picardie | 0,03 | 0,18 | 0,03 | 0,17 | 0,04 | 0,20 | 0,04 | 0,19 |
| Languedoc-Roussillon | 0,02 | 0,13 | 0,02 | 0,15 | 0,01 | 0,12 | 0,01 | 0,12 |
| Lorraine | 0,05 | 0,21 | 0,03 | 0,18 | 0,04 | 0,20 | 0,06 | 0,24 |
| Centre | 0,04 | 0,20 | 0,04 | 0,19 | 0,04 | 0,19 | 0,05 | 0,21 |
| Midi-Pyrénées | 0,04 | 0,20 | 0,05 | 0,22 | 0,03 | 0,18 | 0,04 | 0,19 |
| Bretagne | 0,04 | 0,20 | 0,04 | 0,21 | 0,05 | 0,21 | 0,04 | 0,19 |
| Aquitaine | 0,05 | 0,23 | 0,06 | 0,24 | 0,06 | 0,24 | 0,05 | 0,21 |
| Pays de la Loire | 0,05 | 0,22 | 0,05 | 0,22 | 0,05 | 0,23 | 0,05 | 0,23 |
| Nord-Pas-de-Calais | 0,07 | 0,25 | 0,06 | 0,23 | 0,06 | 0,25 | 0,08 | 0,27 |
| Provence-Alpes-Côte d'Azur | 0,07 | 0,25 | 0,08 | 0,27 | 0,08 | 0,27 | 0,04 | 0,20 |
| Rhône-Alpes | 0,11 | 0,31 | 0,11 | 0,31 | 0,13 | 0,33 | 0,10 | 0,30 |
| Île-de-France | 0,18 | 0,38 | 0,18 | 0,39 | 0,13 | 0,34 | 0,20 | 0,40 |
| No. of Obs. | 74696 | | 30286 | | 14514 | | 29896 | |

Table 3 Ranking of regions by characteristics

| Serial No. | By urban population | By surface area | By pop density (hab./km²) | By GDP rank | By Rate of Urbanization |
|-------------------|----------------------------|----------------------------|---|----------------------------|--------------------------------|
| 1 | Limousin | Alsace | Limousin | Limousin | Limousin |
| 2 | Franche-Comté | Île-de-France | Auvergne | Franche-Comté | Basse-Normandie |
| 3 | Auvergne | Haute-Normandie | Bourgogne | Auvergne | Poitou-Charentes |
| 4 | Champagne-Ardenne | Nord-Pas-de-Calais | Champagne-Ardenne | Basse-Normandie | Midi-Pyrenees |
| 5 | Basse-Normandie | Franche-Comté | Midi-Pyrénées | Champagne-Ardenne | Auvergne |
| 6 | Bourgogne | Limousin | Centre | Poitou-Charentes | Bourgogne |
| 7 | Poitou-Charentes | Basse-Normandie | Poitou-Charentes | Bourgogne | Franche-comte |
| 8 | Alsace | Picardie | Franche-Comté | Picardie | Champagne-Ardenne |
| 9 | Haute-Normandie | Lorraine | Aquitaine | Haute-Normandie | Picardie |
| 10 | Picardie | Champagne-Ardenne | Basse-Normandie | Alsace | Pays de la Loire |
| 11 | Languedoc-Roussillon | Poitou-Charentes | Languedoc-Roussillon | Languedoc-Roussillon | Centre |
| 12 | Lorraine | Auvergne | Picardie | Lorraine | Bretagne |
| 13 | Centre | Bretagne | Lorraine | Centre | Aquitaine |
| 14 | Midi-Pyrénées | Languedoc-Roussillon | Pays de la Loire | Midi-Pyrénées | Haute-Normandie |
| 15 | Bretagne | Provence-Alpes-Côte d'Azur | Bretagne | Bretagne | Languedoc-Roussillon |
| 16 | Aquitaine | Bourgogne | Rhône-Alpes | Aquitaine | Lorraine |
| 17 | Pays de la Loire | Pays de la Loire | Provence-Alpes-Côte d'Azur | Pays de la Loire | Rhone-Alpes |
| 18 | Nord-Pas-de-Calais | Centre | Haute-Normandie | Nord-Pas-de-Calais | Alsace |
| 19 | Provence-Alpes-Côte d'Azur | Aquitaine | Alsace | Provence-Alpes-Côte d'Azur | Provence-Alpes-Cote d'Azur |

| | | | | | |
|----|---------------|---------------|--------------------|---------------|---------------|
| 20 | Rhône-Alpes | Rhône-Alpes | Nord-Pas-de-Calais | Rhône-Alpes | Nord |
| 21 | Île-de-France | Midi-Pyrénées | Île-de-France | Île-de-France | Ile de France |

Source, ranking is based on the population census 1999. Source INSEE

Table 4 Distribution of type of sectors in a region

| Region | Type of Sector | | | Total |
|----------------------------|-----------------------|----------------------|-----------------|--------------|
| | Trade | Manufacturing | Services | |
| Limousin | 111 | 484 | 658 | 1,253 |
| | 8.86% | 38.63% | 52.51% | 100.00 |
| Franche-Comté | 192 | 517 | 730 | 1,439 |
| | 13.34% | 35.93% | 50.73% | 100.00 |
| Auvergne | 142 | 638 | 612 | 1,392 |
| | 10.20% | 45.83% | 43.97% | 100.00 |
| Champagne-Ardenne | 107 | 626 | 859 | 1,592 |
| | 6.72% | 39.32% | 53.96% | 100.00 |
| Basse-Normandie | 221 | 661 | 715 | 1,597 |
| | 13.84% | 41.39% | 44.77% | 100.00 |
| Bourgogne | 260 | 946 | 1,434 | 2,640 |
| | 9.85% | 35.83% | 54.32% | 100.00 |
| Poitou-Charentes | 160 | 548 | 1,319 | 2,027 |
| | 7.89% | 27.04% | 65.07% | 100.00 |
| Alsace | 316 | 1,288 | 2,244 | 3,848 |
| | 8.21% | 33.47% | 58.32% | 100.00 |
| Haute-Normandie | 222 | 1,126 | 1,318 | 2,666 |
| | 8.33% | 42.24% | 49.44% | 100.00 |
| Picardie | 187 | 1,286 | 1,037 | 2,510 |
| | 7.45% | 51.24% | 41.31% | 100.00 |
| Languedoc-Roussillon | 149 | 275 | 902 | 1,326 |
| | 11.24% | 20.74% | 68.02% | 100.00 |
| Lorraine | 221 | 1,643 | 1,560 | 3,424 |
| | 6.45% | 47.98% | 45.56% | 100.00 |
| Centre | 290 | 1,456 | 1,403 | 3,149 |
| | 9.21% | 46.24% | 44.55% | 100.00 |
| Midi-Pyrénées | 308 | 1,041 | 1,772 | 3,121 |
| | 9.87% | 33.35% | 56.78% | 100.00 |
| Bretagne | 287 | 921 | 1,990 | 3,198 |
| | 8.97% | 28.80% | 62.23% | 100.00 |
| Aquitaine | 414 | 1,300 | 2,322 | 4,036 |
| | 10.26% | 32.21% | 57.53% | 100.00 |
| Pays de la Loire | 458 | 1,964 | 1,502 | 3,924 |
| | 11.67% | 50.05% | 38.28% | 100.00 |
| Nord-Pas-de-Calais | 545 | 1,991 | 2,531 | 5,067 |
| | 10.76% | 39.29% | 49.95% | 100.00 |
| Provence-Alpes-Côte d'Azur | 579 | 1,226 | 3,098 | 4,903 |
| | 11.81% | 25.01% | 63.19% | 100.00 |
| Rhône-Alpes | 751 | 3,385 | 4,101 | 8,237 |

| | | | | |
|---------------|--------|--------|--------|--------|
| | 9.12% | 41.10% | 49.79% | 100.00 |
| Île-de-France | 1,721 | 5,214 | 6,412 | 13,347 |
| | 12.89% | 39.06% | 48.04% | 100.00 |
| Total | 7,641 | 28,536 | 38,519 | 74,696 |
| | 10.23 | 38.20 | 51.57 | 100.00 |

Note: For each region the frequency distribution and row percentage of type of industry is given which shows how the three sectors are distributed in one region.

Table 5 Distribution of size of establishment with respect to size of region

| Region | Establishment Size | | | Total |
|----------------------------|--------------------|--------|--------|--------|
| | Small | Medium | Large | |
| Limousin | 521 | 243 | 489 | 1,253 |
| | 41.58% | 19.39% | 39.03% | 100.00 |
| Franche-Comté | 666 | 343 | 430 | 1,439 |
| | 46.28% | 23.84% | 29.88% | 100.00 |
| Auvergne | 591 | 186 | 615 | 1,392 |
| | 42.46% | 13.36% | 44.18% | 100.00 |
| Champagne-Ardenne | 585 | 310 | 697 | 1,592 |
| | 36.75% | 19.47% | 43.78% | 100.00 |
| Basse-Normandie | 741 | 240 | 616 | 1,597 |
| | 46.40% | 15.03% | 38.57% | 100.00 |
| Bourgogne | 1,003 | 637 | 1000 | 2,640 |
| | 37.99% | 24.13% | 37.88% | 100.00 |
| Poitou-Charentes | 818 | 445 | 764 | 2,027 |
| | 40.36% | 21.95% | 37.69% | 100.00 |
| Alsace | 1,247 | 1,025 | 1,576 | 3,848 |
| | 32.41% | 26.64% | 40.96% | 100.00 |
| Haute-Normandie | 1,066 | 481 | 1,119 | 2,666 |
| | 39.98% | 18.04% | 41.97% | 100.00 |
| Picardie | 853 | 582 | 1,075 | 2,510 |
| | 33.98% | 23.19% | 42.83% | 100.00 |
| Languedoc-Roussillon | 709 | 199 | 418 | 1,326 |
| | 53.47% | 15.01% | 31.52% | 100.00 |
| Lorraine | 1,020 | 632 | 1,772 | 3,424 |
| | 29.79% | 18.46% | 51.75% | 100.00 |
| Centre | 1,180 | 544 | 1,425 | 3,149 |
| | 37.47% | 17.28% | 45.25% | 100.00 |
| Midi-Pyrénées | 1,570 | 474 | 1,077 | 3,121 |
| | 50.30% | 15.19% | 34.51% | 100.00 |
| Bretagne | 1,359 | 702 | 1,137 | 3,198 |
| | 42.50% | 21.95% | 35.55% | 100.00 |
| Aquitaine | 1,804 | 874 | 1,358 | 4,036 |
| | 44.70% | 21.66% | 33.65% | 100.00 |
| Pays de la Loire | 1,531 | 793 | 1,600 | 3,924 |
| | 39.02% | 20.21% | 40.77% | 100.00 |
| Nord-Pas-de-Calais | 1,709 | 932 | 2,426 | 5,067 |
| | 33.73% | 18.39% | 47.88% | 100.00 |
| Provence-Alpes-Côte d'Azur | 2,461 | 1,136 | 1,306 | 4,903 |
| | 50.19% | 23.17% | 26.64% | 100.00 |

| | | | | |
|---------------|--------|--------|--------|--------|
| Rhône-Alpes | 3,365 | 1,865 | 3,007 | 8,237 |
| | 40.85% | 22.64% | 36.51% | 100.00 |
| Île-de-France | 5,487 | 1,871 | 5,989 | 13,347 |
| | 41.11% | 14.02% | 44.87% | 100.00 |
| Total | 30,286 | 14,514 | 29,896 | 74,696 |
| | 40.55 | 19.43 | 40.02 | 100.00 |

Note: For each region the frequency distribution and row percentage of establishments by size is given which shows how the three size groups are distributed in one region.

Table 6 Correlation of establishment size with Large region by industry and number of dependent children ^a

| | Model-1 | Model-2 | Model-3 |
|---|---|--|--|
| | <i>Cross-Industry Effects of living in a Large region on Choosing to Work in a Large establishment.^b</i> | <i>Effect of having more dependent children on choosing to work in large establishment</i> | <i>Combined effects of Model1 and Model 2 on choosing to work in large establishment</i> |
| <i>Number of Dependent Children</i> | | 0.035*** (0.007) | 0.034*** (0.007) |
| <i>Industry type *Region Size</i> (Base Industry Trade and Base region Limousin with lowest population) | | | |
| Franche-Comté * Manufacturing | -0.787*** (0.182) | | -1.051*** (0.236) |
| Franche-Comté * Services | -1.748*** (0.178) | | -1.980*** (0.232) |
| Auvergne* Manufacturing | 0.510*** (0.189) | | 0.536** (0.245) |
| Auvergne* Services | -0.480*** (0.186) | | -0.538** (0.242) |
| Champagne-Ardenne* Manufacturing | 1.219*** (0.253) | | 1.090*** (0.332) |
| Champagne-Ardenne* Services | 0.661*** (0.249) | | 0.613* (0.328) |
| Basse-Normandie* Manufacturing | 0.270 (0.186) | | 0.219 (0.242) |
| Basse-Normandie* Services | -0.245 (0.184) | | -0.306 (0.241) |
| Bourgogne* Manufacturing | 0.768*** (0.175) | | 0.803*** (0.230) |
| Bourgogne* Services | 0.070 (0.170) | | 0.110 (0.225) |
| Poitou-Charentes* Manufacturing | 0.237 (0.198) | | 0.187 (0.259) |
| Poitou-Charentes* Services | 0.004 (0.191) | | -0.013 (0.252) |
| Alsace* Manufacturing | 0.448*** (0.167) | | 0.459** (0.219) |
| Alsace* Services | 0.076 (0.163) | | 0.038 (0.215) |

| | | |
|---|----------------------|----------------------|
| Haute-Normandie* Manufacturing | 0.654*** (0.175) | 0.613*** (0.227) |
| Haute-Normandie* Services | -0.091 (0.172) | -0.132 (0.225) |
| Picardie* Manufacturing | 0.881*** (0.189) | 0.882*** (0.244) |
| Picardie* Services | 0.040 (0.186) | 0.056 (0.243) |
| Languedoc-Roussillon* Manufacturing | 0.353* (0.194) | 0.348 (0.253) |
| Languedoc-Roussillon* Services | -0.136 (0.181) | -0.193 (0.239) |
| Lorraine* Manufacturing | 1.087*** (0.176) | 1.105*** (0.229) |
| Lorraine* Services | 0.143 (0.173) | 0.205 (0.226) |
| Centre* Manufacturing | 0.952*** (0.177) | 0.981*** (0.233) |
| Centre* Services | 0.100 (0.174) | 0.136 (0.231) |
| Midi-Pyrénées* Manufacturing | 0.140 (0.177) | 0.243 (0.233) |
| Midi-Pyrénées* Services | -0.223 (0.173) | -0.241 (0.229) |
| Bretagne* Manufacturing | 0.230 (0.175) | 0.324 (0.234) |
| Bretagne* Services | 0.188 (0.171) | 0.400* (0.230) |
| Aquitaine* Manufacturing | 0.341** (0.167) | 0.399* (0.217) |
| Aquitaine* Services | -0.076 (0.163) | -0.091 (0.214) |
| Pays de la Loire* Manufacturing | 0.349** (0.164) | 0.428** (0.214) |
| Pays de la Loire* Services | -0.353** (0.163) | -0.290 (0.213) |
| Nord-Pas-de-Calais* Manufacturing | -0.088 (0.162) | -0.152 (0.211) |
| Nord-Pas-de-Calais* Services | -0.768*** (0.158) | -0.857*** (0.208) |
| Provence-Alpes-Côte d'Azur* Manufacturing | -0.361** | -0.250 |

| | | | |
|---|-----------|----------|-----------|
| | (0.162) | | (0.213) |
| Provence-Alpes-Côte d'Azur* Services | -0.771*** | | -0.724*** |
| | (0.158) | | (0.209) |
| Rhône-Alpes* Manufacturing | 0.289* | | 0.256 |
| | (0.158) | | (0.208) |
| Rhône-Alpes* Services | -0.229 | | -0.284 |
| | (0.156) | | (0.206) |
| Île-de-France* Manufacturing | 0.040 | | 0.029 |
| | (0.154) | | (0.203) |
| Île-de-France* Services | -0.499*** | | -0.519*** |
| | (0.152) | | (0.201) |
| cut1 | 0.704*** | 0.778*** | 0.854*** |
| | (0.147) | (0.096) | (0.203) |
| cut2 | 1.284*** | 1.349*** | 1.432*** |
| | (0.147) | (0.096) | (0.203) |
| Number of Observations | 74,696 | 44,902 | 44,902 |
| Test of joint significance | | | |
| chi2 | 15647.89 | 9297.83 | 9850.27 |
| Prob > chi2 | 0.000 | 0.000 | 0.000 |

Note: Robust standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

- a. Dependent variable is size of establishment; it includes all the workers characteristics (gender, experience, tenure, family status, education, profession), and employer characteristics (industry, type of contract, region).
- b. Regions are ranked (low to high) with respect to urban population (based on population census 1999) Source INSEE. Establishment size is defined as small (1-49 workers), Medium (50-199 workers) and Large (more than 200 workers).

Table 7 Probit model of choice of employer size

| Dependent variable size dummy | Males | Females |
|---|----------------------|----------------------|
| Experience | -0.068*** (0.010) | -0.040*** (0.011) |
| Exp. Squared | 0.002*** (0.000) | 0.001** (0.001) |
| Exp. Cube | -0.000*** (0.000) | -0.000** (0.000) |
| Tenure | 0.097*** (0.003) | 0.069*** (0.003) |
| Tenure. Squared | -0.001*** (0.000) | -0.001*** (0.000) |
| Married (base single) | 0.043** (0.018) | 0.037* (0.021) |
| Other family status (divorced, widowed etc) | -0.015 (0.034) | 0.079** (0.031) |
| Before Bac without degree (base no degree) | 0.353*** (0.023) | 0.181*** (0.028) |
| CAP/BEP | 0.213*** (0.020) | 0.042 (0.027) |
| Bac professional and technical | 0.407*** (0.033) | 0.077** (0.039) |
| Bac general | 0.287*** (0.039) | -0.020 (0.040) |
| Bac +2 | 0.457*** (0.031) | 0.335*** (0.034) |
| Bac+3 and plus | 0.828*** (0.040) | 0.531*** (0.057) |
| Management and High Intellectual professionals (base blue collar) | -0.162*** (0.027) | -0.308*** (0.043) |
| High Skilled White Collar | 0.021 (0.018) | -0.081*** (0.031) |
| Low Skilled White Collar | 0.229*** (0.025) | -0.116*** (0.027) |
| Type of Contract | -0.019 (0.039) | -0.223*** (0.037) |
| Manufacturing (base trade) | 1.086*** (0.258) | 0.278 (0.253) |
| Services | 1.008*** (0.257) | 0.515** (0.234) |
| Franche-Comté (Base region Limousin) | 1.259*** (0.280) | 1.059*** (0.259) |

| | | |
|--|----------------------|----------------------|
| Auvergne | -0.028 (0.348) | -0.387 (0.309) |
| Champagne-Ardenne | -4.571*** (0.263) | -0.575 (0.360) |
| Basse-Normandie | 0.638** (0.285) | -0.306 (0.285) |
| Bourgogne | -0.372 (0.339) | -1.480*** (0.435) |
| Poitou-Charentes | 0.173 (0.314) | -0.008 (0.277) |
| Alsace | -0.932** (0.388) | -1.219*** (0.364) |
| Haute-Normandie | -0.135 (0.305) | -1.282*** (0.458) |
| Picardie | -0.111 (0.326) | -0.335 (0.294) |
| Languedoc-Roussillon | -1.011** (0.469) | -4.806*** (0.228) |
| Lorraine | -4.408*** (0.254) | -4.696*** (0.222) |
| Centre | -0.110 (0.300) | -0.523* (0.275) |
| Midi-Pyrénées | 0.453* (0.275) | 0.045 (0.254) |
| Bretagne | -0.325 (0.311) | -0.593** (0.284) |
| Aquitaine | -0.424 (0.303) | -0.659** (0.270) |
| Pays de la Loire | -0.107 (0.278) | 0.076 (0.243) |
| Nord-Pas-de-Calais | 0.519* (0.266) | 0.804*** (0.233) |
| Provence-Alpes-Côte d'Azur | 0.490* (0.267) | 0.362 (0.235) |
| Rhône-Alpes | 0.197 (0.264) | -0.403* (0.243) |
| Île-de-France | 0.820*** (0.254) | 0.354 (0.225) |
| Industry type *Region Size (Base Industry Trade and Base region Limousin with lowest population) | | |
| Franche-Comté * Manufacturing | -0.850*** (0.297) | -0.618** (0.304) |
| Franche-Comté * Services | -2.482*** (0.308) | -1.951*** (0.287) |
| Auvergne* Manufacturing | 0.759** (0.360) | 1.269*** (0.348) |
| Auvergne* Services | -0.242 (0.364) | -0.069 (0.331) |
| Champagne-Ardenne* Manufacturing | 5.114*** (0.279) | 1.571*** (0.396) |
| Champagne-Ardenne* Services | 4.616*** | 0.244 |

| | | |
|-------------------------------------|-----------|----------|
| | (0.277) | (0.377) |
| Basse-Normandie* Manufacturing | -0.455 | 1.248*** |
| | (0.298) | (0.322) |
| Basse-Normandie* Services | -0.925*** | 0.294 |
| | (0.302) | (0.303) |
| Bourgogne* Manufacturing | 0.890** | 2.408*** |
| | (0.350) | (0.459) |
| Bourgogne* Services | 0.335 | 0.768* |
| | (0.349) | (0.446) |
| Poitou-Charentes* Manufacturing | 0.042 | 0.412 |
| | (0.328) | (0.320) |
| Poitou-Charentes* Services | -0.416 | 0.071 |
| | (0.325) | (0.293) |
| Alsace* Manufacturing | 1.443*** | 1.846*** |
| | (0.397) | (0.391) |
| Alsace* Services | 0.657* | 1.399*** |
| | (0.396) | (0.375) |
| Haute-Normandie* Manufacturing | 0.632** | 2.430*** |
| | (0.316) | (0.481) |
| Haute-Normandie* Services | -0.022 | 1.027** |
| | (0.317) | (0.468) |
| Picardie* Manufacturing | 0.697** | 1.366*** |
| | (0.336) | (0.329) |
| Picardie* Services | -0.253 | -0.162 |
| | (0.338) | (0.312) |
| Languedoc-Roussillon* Manufacturing | 1.299*** | 5.415*** |
| | (0.482) | (0.303) |
| Languedoc-Roussillon* Services | 0.659 | 4.684*** |
| | (0.479) | (0.249) |
| Lorraine* Manufacturing | 5.343*** | 5.948*** |
| | (0.266) | (0.266) |
| Lorraine* Services | 4.275*** | 4.544*** |
| | (0.266) | (0.242) |
| Centre* Manufacturing | 0.831*** | 1.663*** |
| | (0.310) | (0.309) |
| Centre* Services | 0.025 | -0.030 |
| | (0.310) | (0.293) |
| Midi-Pyrénées* Manufacturing | -0.198 | 0.599** |
| | (0.287) | (0.293) |
| Midi-Pyrénées* Services | -0.843*** | -0.075 |
| | (0.288) | (0.270) |
| Bretagne* Manufacturing | 0.298 | 1.186*** |
| | (0.322) | (0.320) |
| Bretagne* Services | 0.134 | 0.754** |
| | (0.321) | (0.298) |
| Aquitaine* Manufacturing | 0.706** | 1.080*** |
| | (0.314) | (0.308) |
| Aquitaine* Services | 0.019 | 0.479* |
| | (0.314) | (0.284) |
| Pays de la Loire* Manufacturing | 0.466 | 0.625** |
| | (0.288) | (0.279) |

| | | |
|---|----------------------|----------------------|
| Pays de la Loire* Services | -0.178 (0.290) | -0.376 (0.260) |
| Nord-Pas-de-Calais* Manufacturing | 0.141 (0.277) | 0.110 (0.273) |
| Nord-Pas-de-Calais* Services | -0.745*** (0.276) | -0.787*** (0.250) |
| Provence-Alpes-Côte d'Azur* Manufacturing | -0.307 (0.278) | 0.089 (0.278) |
| Provence-Alpes-Côte d'Azur* Services | -0.955*** (0.277) | -0.796*** (0.251) |
| Rhône-Alpes* Manufacturing | 0.182 (0.274) | 0.995*** (0.277) |
| Rhône-Alpes* Services | -0.473* (0.274) | 0.048 (0.258) |
| Île-de-France* Manufacturing | -0.293 (0.264) | 0.650** (0.259) |
| Île-de-France* Services | -0.715*** (0.263) | -0.280 (0.240) |
| Constant | -1.766*** (0.261) | -0.939*** (0.234) |
| Observations | 44,654 | 30,042 |

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Table- 8 Adjusted and unadjusted wage estimates across gender

| Dependent variable: log of gross hourly wage | Large Establishments | | | | Small Establishments | | | |
|--|----------------------|---------------------|-----------------------------------|---------------------|----------------------|---------------------|----------------------------------|---------------------|
| | Unadjusted (OLS) | | Adjusted (Heckman second-step) | | Unadjusted (OLS) | | Adjusted Heckman second-step) | |
| | Large Size | | | | Small Size | | | |
| | Male | Female | Male | Female | Male | Female | Male | Female |
| Experience | 0.037*** (0.003) | 0.027*** (0.003) | 0.045*** (0.003) | 0.027*** (0.003) | 0.028*** (0.002) | 0.019*** (0.002) | 0.028*** (0.002) | 0.019*** (0.002) |
| Tenure | 0.010*** (0.001) | 0.012*** (0.001) | -0.001 (0.001) | 0.012*** (0.001) | 0.013*** (0.001) | 0.013*** (0.001) | 0.013*** (0.001) | 0.013*** (0.001) |
| Married (base single) | 0.049*** (0.005) | -0.008 (0.005) | 0.044*** (0.005) | -0.008 (0.005) | 0.052*** (0.004) | 0.004 (0.004) | 0.052*** (0.004) | 0.004 (0.004) |
| Other family status (divorced, widowed etc) | 0.026*** (0.008) | 0.005 (0.008) | 0.027*** (0.009) | 0.005 (0.008) | 0.023*** (0.007) | 0.014** (0.006) | 0.023*** (0.007) | 0.014** (0.006) |
| Before Bac without degree (base no degree) | 0.082*** (0.006) | 0.057*** (0.007) | 0.048*** (0.007) | 0.057*** (0.007) | 0.054*** (0.005) | 0.046*** (0.006) | 0.053*** (0.006) | 0.047*** (0.006) |
| CAP/BEP | 0.102*** (0.005) | 0.101*** (0.007) | 0.082*** (0.006) | 0.101*** (0.007) | 0.070*** (0.004) | 0.066*** (0.005) | 0.069*** (0.005) | 0.066*** (0.005) |
| Bac professional and technical | 0.177*** (0.008) | 0.178*** (0.010) | 0.139*** (0.009) | 0.178*** (0.010) | 0.149*** (0.008) | 0.136*** (0.007) | 0.148*** (0.008) | 0.136*** (0.007) |
| Bac general | 0.189*** (0.010) | 0.198*** (0.011) | 0.164*** (0.011) | 0.198*** (0.011) | 0.148*** (0.009) | 0.155*** (0.007) | 0.148*** (0.009) | 0.155*** (0.007) |
| Bac +2 | 0.231*** (0.008) | 0.267*** (0.009) | 0.188*** (0.009) | 0.267*** (0.010) | 0.187*** (0.007) | 0.203*** (0.007) | 0.186*** (0.008) | 0.203*** (0.007) |
| Bac+3 and plus | 0.359*** (0.008) | 0.428*** (0.009) | 0.281*** (0.009) | 0.429*** (0.010) | 0.304*** (0.007) | 0.332*** (0.007) | 0.303*** (0.008) | 0.333*** (0.007) |

| | | | | | | | | |
|---|----------------------|---------------------|-----------------------------|-------------------------|---------------------|---------------------|-------------------------|--------------------------|
| Management and High Intellectual professionals (base blue collar) | (0.010) 0.562*** | (0.015) 0.592*** | (0.013) 0.577*** | (0.016) 0.591*** | (0.009) 0.689*** | (0.011) 0.719*** | (0.011) 0.689*** | (0.012) 0.718*** |
| High Skilled White Collar | (0.007) 0.195*** | (0.011) 0.299*** | (0.007) 0.194*** | (0.011) 0.299*** | (0.006) 0.299*** | (0.008) 0.358*** | (0.006) 0.299*** | (0.009) 0.358*** |
| Low Skilled White Collar | (0.004) -0.031*** | (0.007) 0.125*** | (0.005) -0.053*** | (0.007) 0.125*** | (0.004) 0.029*** | (0.006) 0.133*** | (0.004) 0.029*** | (0.006) 0.133*** |
| Type of Contract | (0.006) 0.200*** | (0.006) 0.076*** | (0.007) 0.196*** | (0.006) 0.075*** | (0.006) 0.008 | (0.005) -0.006 | (0.006) 0.008 | (0.005) -0.006 |
| Manufacturing (base trade) | (0.012) 0.054*** | (0.010) 0.088*** | (0.012) -0.058*** | (0.010) 0.090*** | (0.007) 0.028*** | (0.006) 0.060*** | (0.007) 0.026*** | (0.006) 0.063*** |
| Services | (0.010) 0.062*** | (0.009) 0.054*** | (0.015) 0.021** | (0.012) 0.055*** | (0.005) 0.020*** | (0.006) 0.047*** | (0.010) 0.019*** | (0.010) 0.048*** |
| λ | (0.010) | (0.009) | (0.011) -0.166*** | (0.009) 0.004 | (0.005) | (0.004) | (0.006) 0.004 | (0.005) -0.006 |
| Region | Yes | Yes | (0.017) Yes | (0.014) Yes | Yes | Yes | (0.014) Yes | (0.014) Yes |
| Constant | 3.273*** (0.025) | 3.216*** (0.028) | 3.553*** (0.039) | 3.211*** (0.033) | 3.384*** (0.020) | 3.343*** (0.020) | 3.384*** (0.020) | 3.345*** (0.020) |
| Observations | 19,758 | 10,138 | 44,654 | 30,042 | 24,896 | 19,904 | 44,654 | 30,042 |
| R-squared | 0.63 | 0.64 | | | 0.65 | 0.61 | | |
| Adj. R-squared | 0.63 | 0.64 | | | 0.65 | 0.61 | | |

Notes: Experience includes square and cubic term. Tenure includes squared term. Region includes 21 dummies (Region size indicates population size ranked from low to high, base category is region with lowest urban population). Robust standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 9 Detail threefold decomposition

| | Large establishment | | | Small Establishment | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|
| | Endowments | Coefficients | Interaction | Endowments | Coefficients | Interaction |
| Experience | 0.036*** (0.005) | 0.101 (0.084) | 0.007 (0.005) | 0.009*** (0.002) | 0.148** (0.065) | 0.004** (0.002) |
| Exp. squared | -0.047*** (0.009) | -0.056 (0.101) | -0.006 (0.010) | -0.008*** (0.003) | -0.110 (0.076) | -0.004 (0.003) |
| Exp. cube | 0.016*** (0.004) | 0.015 (0.042) | 0.002 (0.005) | 0.002 (0.001) | 0.031 (0.031) | 0.001 (0.001) |
| Tenure | 0.025*** (0.004) | 0.068** (0.032) | 0.011** (0.005) | 0.005*** (0.001) | 0.018 (0.016) | 0.001 (0.001) |
| Tenure. squared | -0.004 (0.009) | -0.132*** (0.041) | -0.035*** (0.011) | -0.006*** (0.002) | -0.035* (0.019) | -0.003* (0.002) |
| Tenure cube | -0.000 (0.005) | 0.055*** (0.018) | 0.019*** (0.006) | 0.003*** (0.001) | 0.012 (0.008) | 0.002 (0.001) |
| Single | -0.000 (0.000) | -0.006*** (0.001) | 0.001*** (0.000) | 0.000 (0.000) | -0.005*** (0.001) | 0.000 (0.000) |
| Married | -0.001** (0.000) | 0.020*** (0.003) | 0.003*** (0.000) | -0.000 (0.000) | 0.018*** (0.002) | 0.002*** (0.000) |
| Other family status (divorced, widowed etc) | -0.000 (0.000) | -0.001 (0.001) | 0.000 (0.000) | -0.000** (0.000) | -0.001* (0.001) | 0.001* (0.000) |
| No degree | 0.000 (0.001) | 0.002 (0.001) | -0.000 (0.000) | -0.004*** (0.001) | 0.001 (0.001) | 0.000 (0.000) |
| Before Bac without degree | 0.004*** (0.001) | 0.008*** (0.002) | -0.001*** (0.000) | 0.002*** (0.000) | 0.002* (0.001) | -0.000* (0.000) |
| CAP/BEP | -0.009*** (0.001) | 0.004** (0.002) | 0.002** (0.001) | -0.005*** (0.000) | 0.002 (0.001) | 0.001 (0.000) |
| Bac professional and technical | -0.000 (0.000) | 0.001 (0.001) | -0.000 (0.000) | -0.000 (0.000) | 0.001** (0.001) | -0.000** (0.000) |

| | | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| Bac general | -0.000*** | 0.000 | -0.000 | -0.001*** | -0.000 | 0.000 |
| | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| Bac +2 | -0.008*** | -0.004*** | 0.002*** | -0.004*** | -0.002* | 0.001* |
| | (0.001) | (0.001) | (0.001) | (0.000) | (0.001) | (0.000) |
| Bac+3 and plus | 0.009*** | -0.002*** | -0.002*** | 0.004*** | -0.001** | -0.000** |
| | (0.001) | (0.001) | (0.000) | (0.000) | (0.000) | (0.000) |
| Management and High Intellectual professionals | 0.025*** | 0.003*** | 0.003*** | 0.030*** | 0.001*** | 0.001*** |
| | (0.001) | (0.001) | (0.001) | (0.001) | (0.001) | (0.000) |
| High Skilled White Collar | -0.000 | -0.010*** | 0.000 | -0.001** | -0.003** | 0.000* |
| | (0.000) | (0.002) | (0.000) | (0.000) | (0.001) | (0.000) |
| Low Skilled White Collar | 0.040*** | -0.032*** | 0.026*** | 0.068*** | -0.028*** | 0.022*** |
| | (0.001) | (0.002) | (0.002) | (0.001) | (0.003) | (0.002) |
| Blue collar | -0.061*** | 0.016*** | 0.017*** | -0.102*** | 0.007*** | 0.016*** |
| | (0.002) | (0.001) | (0.002) | (0.002) | (0.001) | (0.002) |
| Trade | 0.001*** | 0.001 | -0.000 | 0.001*** | 0.003*** | -0.000*** |
| | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| Manufacturing | 0.010*** | -0.011*** | -0.006*** | 0.004*** | -0.002*** | -0.002*** |
| | (0.001) | (0.002) | (0.001) | (0.001) | (0.001) | (0.001) |
| Services | -0.001* | 0.009*** | -0.004*** | -0.002*** | -0.005** | 0.001** |
| | (0.001) | (0.003) | (0.001) | (0.000) | (0.002) | (0.001) |
| Base region Limousin | -0.000** | 0.000 | 0.000 | -0.000 | -0.001*** | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Franche-Comté | 0.000 | -0.000 | 0.000 | 0.000 | -0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Auvergne | 0.000 | -0.001*** | -0.000** | 0.000** | -0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Champagne-Ardenne | -0.000*** | 0.001*** | 0.000** | 0.000 | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Basse-Normandie | -0.000 | -0.001** | 0.000** | -0.000 | -0.000 | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Bourgogne | -0.001*** | 0.001** | 0.000** | 0.000* | -0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |

| | | | | | | |
|----------------------------|----------------------|----------------------|---------------------|----------------------|----------------------|---------------------|
| Poitou-Charentes | -0.000** (0.000) | -0.002*** (0.000) | 0.000** (0.000) | -0.000 (0.000) | -0.001** (0.000) | -0.000* (0.000) |
| Alsace | -0.001*** (0.000) | 0.002** (0.001) | -0.000** (0.000) | 0.000 (0.000) | 0.002*** (0.000) | 0.000 (0.000) |
| Haute-Normandie | 0.000 (0.000) | 0.002*** (0.001) | -0.000 (0.000) | -0.000 (0.000) | 0.000 (0.000) | -0.000 (0.000) |
| Picardie | 0.001*** (0.000) | -0.001* (0.000) | -0.000 (0.000) | -0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Languedoc-Roussillon | 0.000*** (0.000) | 0.001** (0.000) | -0.000** (0.000) | 0.000* (0.000) | 0.000 (0.000) | -0.000 (0.000) |
| Lorraine | 0.001* (0.000) | 0.001 (0.000) | 0.000 (0.000) | 0.000 (0.000) | 0.001*** (0.000) | 0.000** (0.000) |
| Centre | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | 0.001 (0.000) | 0.000 (0.000) |
| Midi-Pyrénées | 0.000*** (0.000) | 0.002*** (0.001) | -0.001** (0.000) | 0.000 (0.000) | -0.000 (0.000) | 0.000 (0.000) |
| Bretagne | 0.000 (0.000) | -0.004*** (0.001) | 0.002*** (0.000) | -0.000** (0.000) | -0.000 (0.000) | -0.000 (0.000) |
| Aquitaine | 0.000 (0.000) | 0.004*** (0.001) | -0.000 (0.000) | 0.000* (0.000) | -0.000 (0.001) | 0.000 (0.000) |
| Pays de la Loire | -0.000* (0.000) | -0.001 (0.001) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) |
| Nord-Pas-de-Calais | -0.000** (0.000) | -0.001 (0.001) | -0.000 (0.000) | -0.000*** (0.000) | -0.000 (0.000) | -0.000 (0.000) |
| Provence-Alpes-Côte d'Azur | -0.000 (0.000) | 0.000 (0.001) | -0.000 (0.000) | -0.000 (0.000) | 0.002*** (0.001) | -0.000 (0.000) |
| Rhône-Alpes | 0.001*** (0.000) | 0.001 (0.001) | 0.000 (0.000) | 0.000 (0.000) | 0.002** (0.001) | 0.000 (0.000) |
| Île-de-France | -0.007*** (0.001) | -0.017*** (0.002) | 0.004*** (0.000) | -0.003*** (0.001) | -0.004*** (0.001) | 0.000*** (0.000) |
| Type of Contract | 0.002*** (0.000) | 0.108*** (0.016) | 0.003*** (0.001) | -0.000 (0.000) | 0.010 (0.009) | 0.000 (0.000) |
| Constant | | -0.016 (0.028) | | | 0.050** (0.022) | |
| Observations | 29,896 | 29,896 | 29,896 | 44,800 | 44,800 | 44,800 |

Notes: all categories of categorical variables are included so that the transformed coefficients do not depend on the choice of the omitted (base) category. Robust standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 10 Detail twofold decomposition

| | Large establishment | | Small Establishment | |
|---|----------------------|----------------------|----------------------|----------------------|
| | Explained | Unexplained | Explained | Unexplained |
| Experience | 0.038*** (0.004) | 0.105 (0.096) | 0.011*** (0.002) | 0.150** (0.072) |
| Exp. squared | -0.047*** (0.007) | -0.062 (0.116) | -0.010*** (0.003) | -0.113 (0.083) |
| Exp. cube | 0.016*** (0.003) | 0.017 (0.049) | 0.002** (0.001) | 0.032 (0.034) |
| Tenure | 0.035*** (0.003) | 0.068* (0.038) | 0.006*** (0.002) | 0.018 (0.017) |
| Tenure. squared | -0.032*** (0.006) | -0.139*** (0.049) | -0.008*** (0.002) | -0.036* (0.022) |
| Tenure cube | 0.015*** (0.003) | 0.059*** (0.021) | 0.004*** (0.001) | 0.012 (0.009) |
| Single | 0.001*** (0.000) | -0.005*** (0.001) | 0.000 (0.000) | -0.005*** (0.001) |
| Married | 0.001*** (0.000) | 0.022*** (0.003) | 0.001*** (0.000) | 0.019*** (0.002) |
| Other family status (divorced, widowed etc) | -0.000 (0.000) | -0.000 (0.001) | -0.000 (0.000) | -0.001 (0.000) |
| No degree | 0.000 (0.001) | 0.002 (0.001) | -0.005*** (0.001) | 0.001 (0.001) |
| Before Bac without degree | 0.004*** (0.000) | 0.008*** (0.002) | 0.001*** (0.000) | 0.002* (0.001) |
| CAP/BEP | -0.007*** (0.000) | 0.004** (0.002) | -0.005*** (0.000) | 0.002 (0.002) |
| Bac professional and technical | -0.000 (0.000) | 0.001 (0.001) | -0.000*** (0.000) | 0.001** (0.001) |
| Bac general | -0.001*** (0.000) | 0.000 (0.001) | -0.001*** (0.000) | -0.000 (0.001) |
| Bac +2 | -0.008*** (0.001) | -0.003** (0.001) | -0.004*** (0.000) | -0.001 (0.001) |
| Bac+3 and plus | 0.007*** (0.001) | -0.003*** (0.001) | 0.003*** (0.000) | -0.001 (0.001) |
| Management and High Intellectual professionals | 0.027*** (0.001) | 0.005*** (0.001) | 0.030*** (0.001) | 0.002*** (0.001) |
| High Skilled White Collar | -0.000 (0.000) | -0.010*** (0.002) | -0.000** (0.000) | -0.003** (0.001) |
| Low Skilled White Collar | 0.053*** | -0.020*** | 0.077*** | -0.015*** |

| | | | | |
|----------------------------|-----------|-----------|-----------|-----------|
| | (0.001) | (0.002) | (0.001) | (0.001) |
| Blue collar | -0.048*** | 0.020*** | -0.091*** | 0.012*** |
| | (0.001) | (0.002) | (0.001) | (0.001) |
| Trade | 0.001*** | 0.000 | 0.001*** | 0.003*** |
| | (0.000) | (0.000) | (0.000) | (0.001) |
| Manufacturing | 0.005*** | -0.012*** | 0.003*** | -0.003*** |
| | (0.001) | (0.003) | (0.000) | (0.001) |
| Services | -0.004*** | 0.008*** | -0.001*** | -0.005** |
| | (0.001) | (0.002) | (0.000) | (0.002) |
| Base region Limousin | -0.000** | 0.000 | -0.000 | -0.001*** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Franche-Comté | 0.000 | -0.000 | 0.000 | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Auvergne | -0.000*** | -0.001*** | 0.000** | -0.000* |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Champagne-Ardenne | -0.000 | 0.001*** | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Basse-Normandie | 0.000* | -0.001** | -0.000 | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Bourgogne | -0.000*** | 0.001** | 0.000*** | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Poitou-Charentes | -0.000** | -0.002*** | -0.000** | -0.001** |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Alsace | -0.001*** | 0.001** | 0.000 | 0.002*** |
| | (0.000) | (0.001) | (0.000) | (0.000) |
| Haute-Normandie | -0.000 | 0.002*** | -0.000 | 0.000 |
| | (0.000) | (0.001) | (0.000) | (0.000) |
| Picardie | 0.000*** | -0.001* | 0.000 | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Languedoc-Roussillon | 0.000** | 0.001** | 0.000* | 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Lorraine | 0.001*** | 0.001 | 0.000*** | 0.001*** |
| | (0.000) | (0.001) | (0.000) | (0.000) |
| Centre | -0.000* | 0.000 | 0.000 | 0.001 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Midi-Pyrénées | 0.000*** | 0.001*** | 0.000* | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Bretagne | 0.001*** | -0.004*** | -0.000*** | -0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) |
| Aquitaine | -0.000 | 0.004*** | 0.000** | -0.000 |
| | (0.000) | (0.001) | (0.000) | (0.001) |
| Pays de la Loire | -0.000* | -0.001 | -0.000 | -0.000 |
| | (0.000) | (0.001) | (0.000) | (0.000) |
| Nord-Pas-de-Calais | -0.001*** | -0.001* | -0.000*** | -0.000 |
| | (0.000) | (0.001) | (0.000) | (0.000) |
| Provence-Alpes-Côte d'Azur | -0.000 | 0.000 | -0.000 | 0.002*** |
| | (0.000) | (0.001) | (0.000) | (0.001) |
| Rhône-Alpes | 0.001*** | 0.001 | 0.000 | 0.002** |
| | (0.000) | (0.001) | (0.000) | (0.001) |
| Île-de-France | -0.005*** | -0.015*** | -0.003*** | -0.003*** |
| | (0.001) | (0.001) | (0.001) | (0.001) |

| | | | | |
|------------------|---------------------|---------------------|-------------------|--------------------|
| Type of Contract | 0.004*** (0.000) | 0.110*** (0.021) | -0.000 (0.000) | 0.010 (0.010) |
| Constant | | -0.016 (0.033) | | 0.050** (0.024) |
| Observations | 29,896 | 29,896 | 44,800 | 44,800 |

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.

Table 11 Detail threefold decomposition after adjusting for selection

| | Large establishment | | | Small Establishment | | |
|---|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| | Endowments | Coefficients | Endowments | Coefficients | Endowments | Coefficients |
| Experience | 0.035*** (0.005) | 0.376*** (0.085) | 0.024*** (0.006) | 0.010*** (0.002) | 0.183*** (0.065) | 0.005** (0.002) |
| Exp. squared | -0.046*** (0.009) | -0.338*** (0.098) | -0.034*** (0.011) | -0.009*** (0.003) | -0.153** (0.075) | -0.006* (0.003) |
| Exp. cube | 0.016*** (0.004) | 0.130*** (0.040) | 0.016*** (0.005) | 0.002** (0.001) | 0.049 (0.030) | 0.002 (0.001) |
| Tenure | 0.026*** (0.003) | -0.170*** (0.023) | -0.027*** (0.004) | 0.004*** (0.001) | -0.007 (0.010) | -0.000 (0.000) |
| Tenure. squared | -0.005*** (0.002) | 0.036*** (0.010) | 0.010*** (0.003) | -0.001*** (0.000) | -0.006 (0.004) | -0.001 (0.000) |
| Married (base single) | -0.001 (0.001) | 0.034*** (0.005) | 0.006*** (0.001) | 0.000 (0.000) | 0.030*** (0.004) | 0.003*** (0.000) |
| Other family status (divorced, widowed etc) | -0.000 (0.001) | 0.003* (0.001) | -0.001* (0.001) | -0.001** (0.000) | 0.001 (0.001) | -0.001 (0.001) |
| Before Bac without degree (base no degree) | -0.002*** (0.000) | -0.002 (0.002) | 0.000 (0.000) | -0.001*** (0.000) | 0.001 (0.001) | -0.000 (0.000) |
| CAP/BEP | 0.012*** (0.001) | -0.005** (0.002) | -0.002** (0.001) | 0.005*** (0.001) | 0.001 (0.002) | 0.000 (0.001) |
| Bac professional and technical | -0.000 (0.001) | -0.003*** (0.001) | 0.000 (0.000) | -0.003*** (0.000) | 0.001 (0.001) | -0.000 (0.000) |
| Bac general | -0.004*** (0.001) | -0.002** (0.001) | 0.001** (0.000) | -0.005*** (0.000) | -0.001 (0.001) | 0.000 (0.000) |

| | | | | | | |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Bac +2 | -0.025*** (0.001) | -0.015*** (0.003) | 0.007*** (0.001) | -0.013*** (0.001) | -0.003* (0.002) | 0.001* (0.001) |
| Bac+3 and plus | 0.015*** (0.001) | -0.006*** (0.001) | -0.005*** (0.001) | 0.006*** (0.001) | -0.001* (0.001) | -0.001* (0.000) |
| Management and High Intellectual professionals (base blue collar) | 0.044*** (0.002) | -0.001 (0.001) | -0.001 (0.001) | 0.052*** (0.002) | -0.002*** (0.001) | -0.002*** (0.001) |
| High Skilled White Collar | -0.001 (0.002) | -0.033*** (0.003) | 0.001 (0.001) | -0.004*** (0.001) | -0.016*** (0.002) | 0.001** (0.000) |
| Low Skilled White Collar | -0.038*** (0.002) | -0.068*** (0.004) | 0.055*** (0.003) | -0.053*** (0.002) | -0.053*** (0.004) | 0.042*** (0.003) |
| Type of Contract | 0.002*** (0.000) | 0.115*** (0.015) | 0.003*** (0.001) | -0.000 (0.000) | 0.013 (0.009) | 0.000 (0.000) |
| Manufacturing (base trade) | 0.022*** (0.003) | -0.061*** (0.008) | -0.036*** (0.005) | 0.011*** (0.002) | -0.005*** (0.002) | -0.007*** (0.003) |
| Services | -0.012*** (0.002) | -0.018** (0.007) | 0.007** (0.003) | -0.008*** (0.001) | -0.020*** (0.005) | 0.005*** (0.001) |
| Franche-Comté (Base region Limousin) | -0.000 (0.000) | -0.001 (0.000) | 0.000 (0.000) | -0.000 (0.000) | 0.001** (0.001) | -0.000 (0.000) |
| Auvergne | 0.001*** (0.000) | -0.002*** (0.000) | -0.001*** (0.000) | 0.000 (0.000) | 0.001 (0.000) | -0.000 (0.000) |
| Champagne-Ardenne | 0.000* (0.000) | -0.000 (0.000) | -0.000 (0.000) | 0.000* (0.000) | 0.001*** (0.000) | 0.000* (0.000) |
| Basse-Normandie | -0.001*** (0.000) | -0.001* (0.001) | 0.001* (0.000) | 0.000 (0.000) | 0.001** (0.000) | 0.000 (0.000) |
| Bourgogne | 0.001** (0.000) | -0.000 (0.001) | -0.000 (0.000) | -0.000 (0.000) | 0.002** (0.001) | -0.000** (0.000) |
| Poitou-Charentes | -0.001** (0.000) | -0.002*** (0.001) | 0.000* (0.000) | 0.000 (0.000) | 0.001 (0.001) | 0.000 (0.000) |

| | | | | | | |
|----------------------------|-----------|-----------|----------|-----------|----------|----------|
| Alsace | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | -0.002*** | -0.001 | 0.000 | 0.000 | 0.005*** | 0.000 |
| Haute-Normandie | (0.000) | (0.002) | (0.000) | (0.000) | (0.001) | (0.000) |
| | -0.000 | 0.001 | -0.000 | -0.000 | 0.002*** | -0.000 |
| Picardie | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | 0.002*** | -0.002** | -0.001** | 0.000 | 0.002*** | 0.000 |
| Languedoc-Roussillon | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | -0.000 | 0.001 | -0.000 | 0.000 | 0.002*** | -0.000* |
| Lorraine | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | 0.003*** | -0.002** | -0.001* | 0.000** | 0.003*** | 0.001*** |
| Centre | (0.001) | (0.001) | (0.001) | (0.000) | (0.001) | (0.000) |
| | 0.001*** | -0.002** | -0.001** | 0.000 | 0.003*** | 0.000 |
| Midi-Pyrénées | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | -0.001*** | 0.001 | -0.000 | -0.000 | 0.003*** | -0.000 |
| Bretagne | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | -0.002*** | -0.005*** | 0.002*** | 0.000 | 0.002*** | 0.000** |
| Aquitaine | (0.000) | (0.001) | (0.001) | (0.000) | (0.001) | (0.000) |
| | -0.000 | 0.003*** | -0.000 | -0.000 | 0.003*** | -0.000** |
| Pays de la Loire | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | 0.000* | -0.002 | -0.000 | 0.000 | 0.002** | 0.000 |
| Nord-Pas-de-Calais | (0.000) | (0.001) | (0.000) | (0.000) | (0.001) | (0.000) |
| | 0.001*** | -0.004** | -0.001** | 0.000 | 0.003** | 0.001** |
| Provence-Alpes-Côte d'Azur | (0.000) | (0.002) | (0.000) | (0.000) | (0.001) | (0.000) |
| | -0.000 | -0.000 | 0.000 | -0.000 | 0.006*** | -0.000 |
| Rhône-Alpes | (0.000) | (0.001) | (0.000) | (0.000) | (0.002) | (0.000) |
| | 0.003*** | -0.001 | -0.000 | 0.000 | 0.008*** | 0.000 |
| Île-de-France | (0.001) | (0.002) | (0.001) | (0.000) | (0.002) | (0.000) |
| | -0.012*** | -0.028*** | 0.006*** | -0.004*** | 0.006* | -0.001* |
| Constant | (0.001) | (0.005) | (0.001) | (0.001) | (0.003) | (0.000) |
| | | 0.342*** | | | 0.041 | |
| | | (0.051) | | | (0.029) | |
| Observations | 29,896 | 29,896 | 29,896 | 44,800 | 44,800 | 44,800 |

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

D-12 Detail threefold decomposition across professions selection adjusted in large size establishments

| | Prof1 | | Prof2 | | Prof3 | | Prof4 | |
|---|----------------------|-------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | Endowments | Coefficients | Endowments | Coefficients | Endowments | Coefficients | Endowments | Coefficients |
| Experience | 0.167*** (0.040) | 0.215 (0.206) | 0.038*** (0.014) | 0.403*** (0.125) | 0.014** (0.007) | -0.425** (0.215) | 0.009 (0.011) | 0.563** (0.240) |
| Exp. squared | -0.191*** (0.068) | -0.182 (0.253) | -0.003 (0.030) | -0.388*** (0.143) | -0.023* (0.013) | 0.358 (0.244) | -0.021 (0.023) | -0.623** (0.282) |
| Exp. cube | 0.072** (0.033) | 0.068 (0.111) | -0.017 (0.016) | 0.157*** (0.057) | 0.009 (0.006) | -0.096 (0.097) | 0.014 (0.012) | 0.249** (0.113) |
| Tenure | -0.007 (0.012) | 0.015 (0.058) | 0.016** (0.007) | -0.117*** (0.041) | 0.020*** (0.006) | 0.042 (0.052) | 0.026*** (0.005) | -0.228*** (0.037) |
| Tenure. squared | 0.013 (0.008) | -0.037 (0.030) | 0.003 (0.005) | 0.017 (0.017) | -0.005** (0.002) | -0.046** (0.023) | -0.011*** (0.003) | 0.091*** (0.018) |
| Married (base single) | 0.008* (0.004) | 0.010 (0.014) | -0.000 (0.001) | 0.029*** (0.008) | -0.000 (0.000) | 0.044*** (0.011) | -0.000 (0.000) | 0.036*** (0.010) |
| Other family status (divorced, widowed etc) | -0.001 (0.002) | -0.002 (0.004) | -0.001 (0.001) | -0.000 (0.002) | -0.000 (0.001) | 0.004 (0.004) | -0.001 (0.001) | 0.003 (0.002) |
| Before Bac without degree (base no degree) | -0.000 (0.000) | 0.001 (0.005) | 0.000 (0.000) | 0.001 (0.004) | 0.002*** (0.001) | -0.008 (0.005) | -0.008*** (0.001) | -0.002 (0.005) |
| CAP/BEP | -0.001 (0.001) | 0.002 (0.006) | 0.010** (0.004) | -0.006 (0.004) | -0.003* (0.002) | -0.034*** (0.009) | 0.023*** (0.003) | 0.004 (0.003) |
| Bac professional and technical | 0.000 (0.001) | 0.001 (0.006) | 0.004*** (0.004) | -0.003 (0.004) | -0.005*** (0.002) | -0.005** (0.009) | 0.002*** (0.003) | -0.001* (0.003) |
| Bac general | 0.000 (0.001) | -0.002 (0.006) | -0.003*** (0.001) | -0.003 (0.003) | -0.001 (0.001) | -0.006*** (0.002) | -0.000 (0.001) | -0.001** (0.001) |

| | | | | | | | | |
|--|----------------------|---------------------|----------------------|----------------------|--------------------|----------------------|----------------------|----------------------|
| Bac +2 | (0.001) -0.019*** | (0.005) -0.035* | (0.001) -0.050*** | (0.002) -0.022* | (0.001) -0.003* | (0.002) -0.006*** | (0.001) 0.001* | (0.001) 0.000 |
| Bac+3 and plus | (0.006) 0.017* | (0.021) -0.059* | (0.006) 0.001 | (0.012) -0.002*** | (0.002) 0.001 | (0.002) -0.000 | (0.000) 0.000 | (0.000) 0.000 |
| Type of Contract | (0.009) 0.006** | (0.031) 0.163*** | (0.001) 0.001** | (0.001) 0.079** | (0.001) 0.001 | (0.000) 0.084*** | (0.000) -0.000 | (0.000) 0.063** |
| Manufacturing (base trade) | (0.002) 0.008 | (0.054) -0.039 | (0.000) 0.009 | (0.034) -0.025** | (0.000) 0.003* | (0.031) -0.002 | (0.000) -0.005*** | (0.028) -0.069*** |
| Services | (0.015) 0.004 | (0.050) 0.003 | (0.010) -0.022*** | (0.012) -0.049*** | (0.002) 0.001 | (0.010) 0.033** | (0.002) -0.002 | (0.025) 0.019*** |
| Franche-Comté (Base region Limousin) | (0.012) -0.000 | (0.041) 0.001 | (0.008) 0.000 | (0.018) -0.000 | (0.001) -0.000 | (0.015) -0.001 | (0.002) -0.001* | (0.006) -0.004*** |
| Auvergne | (0.001) 0.000 | (0.001) -0.001 | (0.000) 0.001** | (0.000) -0.001* | (0.000) 0.000 | (0.001) -0.001 | (0.001) 0.002* | (0.002) -0.007*** |
| Champagne- Ardenne | (0.001) 0.001 | (0.002) -0.001 | (0.000) -0.000 | (0.001) -0.001 | (0.000) 0.000 | (0.001) 0.001 | (0.001) 0.004*** | (0.002) -0.004** |
| Basse-Normandie | (0.002) 0.001 | (0.002) -0.003 | (0.000) -0.001** | (0.001) -0.003** | (0.000) -0.000 | (0.001) -0.002 | (0.001) -0.005*** | (0.002) -0.007*** |
| Bourgogne | (0.002) 0.000 | (0.003) -0.001 | (0.001) 0.001 | (0.001) -0.000 | (0.000) 0.000 | (0.001) 0.001 | (0.002) 0.001 | (0.002) -0.009*** |
| Poitou-Charentes | (0.001) 0.000 | (0.004) -0.002 | (0.001) -0.002*** | (0.001) -0.001 | (0.000) -0.000 | (0.001) -0.003** | (0.001) 0.000 | (0.003) -0.007*** |
| Alsace | (0.001) -0.000 | (0.003) -0.004 | (0.001) -0.005*** | (0.001) -0.002 | (0.001) -0.001* | (0.002) -0.005* | (0.001) 0.003* | (0.002) -0.006** |
| Haute-Normandie | (0.001) 0.001 | (0.012) -0.001 | (0.001) 0.002*** | (0.003) 0.001 | (0.001) 0.000 | (0.003) -0.003** | (0.002) -0.009*** | (0.003) -0.008* |
| Picardie | (0.004) 0.002 | (0.004) -0.001 | (0.001) 0.002*** | (0.001) -0.001 | (0.001) 0.000 | (0.002) -0.001 | (0.002) -0.002 | (0.004) -0.016*** |
| Languedoc- | (0.003) 0.001 | (0.003) 0.002 | (0.001) -0.000 | (0.001) 0.001 | (0.000) 0.000 | (0.001) -0.001 | (0.002) 0.002** | (0.004) -0.001** |

| | | | | | | | | |
|--------------------------------|---------|---------|-----------|-----------|---------|-----------|-----------|-----------|
| Roussillon | (0.002) | (0.006) | (0.001) | (0.001) | (0.000) | (0.001) | (0.001) | (0.000) |
| Lorraine | 0.004 | -0.003 | 0.003** | 0.001 | 0.001* | -0.003 | 0.010*** | -0.011*** |
| Centre | (0.004) | (0.004) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) | (0.003) |
| Midi-Pyrénées | 0.003 | -0.002 | 0.003** | -0.001 | 0.001 | -0.003* | -0.004** | -0.017*** |
| Bretagne | (0.005) | (0.004) | (0.001) | (0.001) | (0.001) | (0.002) | (0.002) | (0.005) |
| Aquitaine | 0.001 | -0.002 | -0.000 | 0.000 | -0.000 | -0.000 | -0.007*** | -0.005 |
| Pays de la Loire | (0.003) | (0.007) | (0.000) | (0.002) | (0.000) | (0.002) | (0.002) | (0.003) |
| Nord-Pas-de-Calais | 0.001 | -0.002 | -0.003** | -0.005** | -0.001* | -0.008*** | -0.006*** | -0.012*** |
| Provence-Alpes- Côte d'Azur | (0.002) | (0.005) | (0.001) | (0.003) | (0.001) | (0.003) | (0.002) | (0.003) |
| Rhône-Alpes | 0.000 | 0.000 | 0.000 | 0.002 | -0.001* | -0.004 | 0.008*** | -0.001 |
| Île-de-France | (0.003) | (0.007) | (0.001) | (0.002) | (0.001) | (0.003) | (0.002) | (0.001) |
| Constant | 0.001 | -0.000 | 0.003*** | -0.003** | -0.000 | 0.001 | -0.003* | -0.017*** |
| Observations | (0.004) | (0.005) | (0.001) | (0.001) | (0.001) | (0.003) | (0.002) | (0.004) |
| | 0.002 | -0.004 | 0.001* | -0.004 | 0.001* | -0.008*** | 0.002 | -0.018*** |
| | (0.004) | (0.008) | (0.001) | (0.003) | (0.001) | (0.003) | (0.002) | (0.005) |
| | 0.001 | -0.002 | -0.003*** | -0.003 | 0.001* | -0.001 | 0.010*** | -0.002** |
| | (0.002) | (0.009) | (0.001) | (0.003) | (0.001) | (0.002) | (0.002) | (0.001) |
| | 0.006 | -0.004 | 0.003*** | -0.003 | 0.000 | -0.002 | 0.004* | -0.010** |
| | (0.012) | (0.017) | (0.001) | (0.004) | (0.001) | (0.003) | (0.002) | (0.005) |
| | -0.051 | -0.101 | -0.015*** | -0.031*** | -0.003 | -0.026*** | -0.006** | -0.020*** |
| | (0.050) | (0.164) | (0.003) | (0.011) | (0.003) | (0.007) | (0.003) | (0.006) |
| | | 0.176 | | 0.124 | | 0.336*** | | 0.517*** |
| | | (0.336) | | (0.094) | | (0.088) | | (0.107) |
| | 3,904 | 3,904 | 9,221 | 9,221 | 5,433 | 5,433 | 11,338 | 11,338 |

prof1 = Management and High Intellectual professionals, *prof2* = High Skilled White Collar, *prof3* = Low Skilled White Collar, *prof4* = Blue Collar Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

D-13 Detail threefold decomposition using basic hourly wage

| | Large establishment | | | Small Establishment | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|
| | Endowments | Coefficients | Endowments | Coefficients | Endowments | Coefficients |
| Experience | 0.033*** (0.005) | 0.107 (0.077) | 0.007 (0.005) | 0.010*** (0.002) | 0.123** (0.062) | 0.003* (0.002) |
| Exp. Squared | -0.039*** (0.008) | -0.065 (0.091) | -0.007 (0.009) | -0.010*** (0.003) | -0.099 (0.072) | -0.004 (0.003) |
| Exp. Cube | 0.012*** (0.004) | 0.012 (0.037) | 0.002 (0.005) | 0.002** (0.001) | 0.030 (0.029) | 0.002 (0.001) |
| Tenure | 0.008*** (0.002) | -0.025* (0.015) | -0.004* (0.002) | 0.002*** (0.001) | -0.014* (0.008) | -0.000 (0.000) |
| Tenure. squared | 0.005*** (0.002) | 0.009 (0.008) | 0.003 (0.002) | -0.000 (0.000) | 0.004 (0.004) | 0.000 (0.000) |
| Tenure cube | 0.000 (0.000) | -0.005*** (0.001) | 0.001*** (0.000) | -0.000 (0.000) | -0.005*** (0.001) | 0.000 (0.000) |
| Single | -0.001** (0.000) | 0.014*** (0.003) | 0.002*** (0.000) | -0.000 (0.000) | 0.015*** (0.002) | 0.001*** (0.000) |
| Married | -0.000* (0.000) | 0.000 (0.001) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.001) | 0.000 (0.000) |
| Other family status (divorced, widowed etc) | 0.000 (0.001) | -0.003*** (0.001) | 0.000 (0.000) | -0.004*** (0.000) | 0.000 (0.001) | 0.000 (0.000) |
| No degree | 0.005*** (0.001) | 0.005*** (0.001) | -0.001*** (0.000) | 0.002*** (0.000) | 0.002 (0.001) | -0.000 (0.000) |
| Before Bac without degree | -0.009*** (0.001) | 0.003* (0.001) | 0.001* (0.001) | -0.006*** (0.000) | 0.006*** (0.001) | 0.002*** (0.000) |
| CAP/BEP | -0.000 (0.000) | -0.000 (0.001) | 0.000 (0.000) | 0.000 (0.000) | 0.001 (0.001) | -0.000 (0.000) |
| Bac professional and technical | -0.000 (0.000) | 0.001* (0.001) | -0.000* (0.000) | -0.000** (0.000) | -0.001 (0.001) | 0.000 (0.000) |

| | | | | | | |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Bac general | (0.000) -0.007*** | (0.001) 0.001 | (0.000) -0.000 | (0.000) -0.005*** | (0.001) -0.002** | (0.000) 0.001** |
| Bac +2 | (0.001) 0.009*** | (0.001) -0.001** | (0.001) -0.001** | (0.000) 0.004*** | (0.001) -0.001* | (0.000) -0.000* |
| Bac+3 and plus | (0.001) 0.027*** | (0.001) 0.005*** | (0.000) 0.004*** | (0.000) 0.030*** | (0.000) 0.002*** | (0.000) 0.002*** |
| Management and High Intellectual professionals | (0.001) -0.000 | (0.001) -0.010*** | (0.001) 0.000 | (0.001) -0.001*** | (0.001) -0.001 | (0.000) 0.000 |
| High Skilled White Collar | (0.000) 0.042*** | (0.002) -0.033*** | (0.000) 0.027*** | (0.000) 0.071*** | (0.001) -0.023*** | (0.000) 0.018*** |
| Low Skilled White Collar | (0.001) -0.065*** | (0.002) 0.013*** | (0.002) 0.014*** | (0.001) -0.097*** | (0.002) 0.003*** | (0.002) 0.006*** |
| Blue collar | (0.002) 0.002*** | (0.001) 0.002*** | (0.001) -0.001*** | (0.002) 0.001*** | (0.001) 0.003*** | (0.002) -0.000*** |
| Trade | (0.000) 0.013*** | (0.000) -0.023*** | (0.000) -0.014*** | (0.000) 0.005*** | (0.001) -0.001* | (0.000) -0.001* |
| Manufacturing | (0.001) -0.000 | (0.002) 0.013*** | (0.001) -0.005*** | (0.001) -0.001*** | (0.001) -0.006*** | (0.001) 0.002*** |
| Services | (0.001) -0.000** | (0.003) 0.001*** | (0.001) 0.000* | (0.000) -0.000 | (0.002) -0.000* | (0.001) -0.000 |
| Base region Limousin | (0.000) 0.000 | (0.000) 0.000 | (0.000) -0.000 | (0.000) 0.000 | (0.000) -0.000 | (0.000) 0.000 |
| Franche-Comté | (0.000) 0.000 | (0.000) -0.001* | (0.000) -0.000* | (0.000) 0.000** | (0.000) 0.000 | (0.000) -0.000 |
| Auvergne | (0.000) -0.000*** | (0.000) 0.000 | (0.000) 0.000 | (0.000) 0.000 | (0.000) -0.000 | (0.000) -0.000 |
| Champagne-Ardenne | (0.000) -0.000* | (0.000) -0.002*** | (0.000) 0.001*** | (0.000) -0.000 | (0.000) 0.000 | (0.000) 0.000 |
| | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |

| | | | | | | |
|-------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|
| Basse-Normandie | -0.001*** (0.000) | 0.001*** (0.000) | 0.001*** (0.000) | 0.000 (0.000) | 0.000 (0.000) | -0.000 (0.000) |
| Bourgogne | -0.000** (0.000) | -0.002*** (0.000) | 0.000** (0.000) | -0.000 (0.000) | -0.001*** (0.000) | -0.000* (0.000) |
| Poitou-Charentes | -0.000*** (0.000) | 0.002*** (0.001) | -0.001*** (0.000) | 0.000 (0.000) | 0.003*** (0.000) | 0.000 (0.000) |
| Alsace | -0.000 (0.000) | 0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | 0.000 (0.000) |
| Haute-Normandie | 0.000* (0.000) | -0.000 (0.000) | -0.000 (0.000) | 0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) |
| Picardie | 0.001*** (0.000) | 0.001 (0.000) | -0.000 (0.000) | 0.000 (0.000) | -0.001* (0.000) | 0.000 (0.000) |
| Languedoc-Roussillon | 0.001*** (0.000) | -0.002*** (0.000) | -0.001*** (0.000) | -0.000 (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Lorraine | -0.000 (0.000) | 0.001** (0.000) | 0.000** (0.000) | -0.000 (0.000) | 0.001 (0.000) | 0.000 (0.000) |
| Centre | -0.000 (0.000) | 0.001** (0.001) | -0.000** (0.000) | 0.000 (0.000) | 0.001* (0.000) | -0.000 (0.000) |
| Midi-Pyrénées | 0.000** (0.000) | -0.004*** (0.001) | 0.002*** (0.000) | -0.000** (0.000) | 0.000 (0.000) | 0.000 (0.000) |
| Bretagne | 0.000 (0.000) | 0.003*** (0.001) | -0.000 (0.000) | 0.000*** (0.000) | 0.001 (0.001) | -0.000 (0.000) |
| Aquitaine | -0.000* (0.000) | 0.001** (0.001) | 0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) | -0.000 (0.000) |
| Pays de la Loire | -0.000 (0.000) | -0.002*** (0.001) | -0.000*** (0.000) | -0.000** (0.000) | -0.001** (0.000) | -0.000** (0.000) |
| Nord-Pas-de-Calais | -0.000 (0.000) | -0.000 (0.001) | 0.000 (0.000) | -0.000 (0.000) | 0.002** (0.001) | -0.000 (0.000) |
| Provence-Alpes-Côte d'Azur | 0.001*** (0.000) | 0.002*** (0.001) | 0.001** (0.000) | 0.000 (0.000) | 0.001* (0.001) | 0.000 (0.000) |
| Rhône-Alpes | -0.007*** (0.001) | -0.010*** (0.001) | 0.002*** (0.000) | -0.003*** (0.001) | -0.004*** (0.001) | 0.000*** (0.000) |
| Île-de-France | 0.003*** | 0.133*** | 0.004*** | 0.000*** | 0.011 | 0.000 |

| | | | | | | |
|--------------|---------|----------|---------|---------|---------|---------|
| Constant | (0.000) | (0.015) | (0.001) | (0.000) | (0.008) | (0.000) |
| | | -0.054** | | | 0.036* | |
| | | (0.026) | | | (0.021) | |
| Observations | 29,851 | 29,851 | 29,851 | 44,536 | 44,536 | 44,536 |

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

ⁱ No compiled data is available from 2006 until now. These surveys are provided by Réseau Quetelet, Maurice Halbwachs Centre upon official request.

ⁱⁱ See for detail: European Commission report on 'WPI – Coordination of evaluation of SF 2000-2006: Task 4'

ⁱⁱⁱ "Communes" are the first local administrative and jurisdictional level of the French urban system

^{iv} Department (Département) is one of the three levels of government below the national level between the region and the commune. There are 96 departments in metropolitan France and 5 overseas departments, which also are classified as regions. A department belongs to one and only one region.

^v In general all of the characteristics rank regions in the same order except for surface. All the information was obtained by INSEE based on population census of 1999

^{vi} There is one variable called 'ratq' in the data which is about annual gross remuneration. This is used along with annual number of hours to create hourly wage. Missing observations are excluded. First and last percentile is dropped to exclude outliers. The minimum wage varies from 29 to 236 francs (Minimum 4 euro to maximum 35 Euros per hour).

^{vii} In France, the legal length of the working week is 35 hours in all types of companies. The working day may not exceed 10 hours. The maximum working day may be extended to 12 hours under a collective agreement. In principle, no more than 48 hours a week may be worked, 44 hours per week on average over a period of 12 consecutive weeks (up to a maximum of 46 hours, under conditions). In the data, total numbers of working hours in one year are available through which one can form monthly, annual or hourly wage. Around 43 hours in one week are included for estimations. The variable for annual hours is called 'hran'. The observations with zero hours are dropped.

^{viii} In all surveys, except in 1992, we have size as categorical variable due to which it was not possible to perform different variations in size.

^{ix} The Classification of Activities and Products (NAP) was in force in France from 1973 to 1992. In 1993, the NAF (French Classification of Activities) and the CPF (French Classification of Products) replaced the "activities" version and the "products" version respectively of the NAP 73. Since 1st January 2008 a revised version of the NAF (NAF rev.2) has been in force; it supersedes the first revised NAF Rév. 1 in force from 2003 until 2007. NAF rev. 1 replaced the NAF which had been in force since 1 January 1993. In 2005 onwards, NAF revision 1 is used.

^x There are two variables corresponding to regions in the data; firstly, we have one variable related to administrative regions of France called 'Zeal' which includes eight categories; Ile de France, Bassin Parisien, North, East, West, South West, Central East and Mediterranean. This variable is available in all surveys but regions are heterogeneous and we cannot draw conclusions based on the administrative region when working with individual data as many regions

are merged into one broad geographical region. Secondly, there is another variable called 'dep' which gives information of all 95 departments where establishments can be found. This is very relevant to serve our purpose but this variable is only available in the survey of 1992.

^{xi} *Cereq (Centre d'études et de recherches sur les qualifications) is a French public administrative institution that conducts research in the areas of labor market, skills and vocational training.*

^{xii} *For French data Abowed et al. (2001) calculated potential experience as age minus school-leaving age (18) the same definition is given in Table 14 in CEREQ-DEP-INSEE 1990 [Céreq, Dep, Insee (1990), « Bilan Formation-Emploi 1986 », Insee-Résultats, n° 75, 150 p.] to calculate potential experience. We compared the available experience in the data file with the one computed this way and there was no difference.*

^{xiii} *The new version of the nomenclature of professional categories and professions (PCS-2003) is the result of renovation work done on the nomenclature in force since 1982. Chief executive officers are excluded from the data as we are estimating hourly wages and chief executive officers are earning abnormal salaries compared to blue collar workers. Therefore, they are excluded from the data. Similarly the agricultural workers are excluded for the same reason.*

^{xiv} *There are around 30thousands missing observations against this variable. Therefore to save the data this is not included in the description.*