**Temporary Employment and Segmentation in the
Spanish Labour Market: An Empirical Analysis
through the Study of Wage Differentials***

by

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Abstract

We intend to add empirical evidence to the already studied field of wage differentials between temporary and permanent workers in Spain. Our aim is to find out which determinants of wage differentials are relevant when explaining such differences. Besides, the endogeneity of such feature (the type of contract) is controlled for. The same exercise is done with two data sets: the ECHP and the Structure of Earnings Survey. Results show that wage differentials between temporary and permanent workers are explained by the differences in the distribution of personal and job characteristics in both groups, but not by differences in the rewards to those characteristics.

Key words: temporary employment, wage differentials, Oaxaca-Blinder decomposition and switching endogenous model.

JEL codes: J31, J41

Resumen

La evidencia empírica disponible para el mercado de trabajo español muestra la existencia de un diferencial salarial positivo a favor de los trabajadores indefinidos. En este trabajo se trata de explicar la fuente de estas diferencias salariales, a partir de la información disponible en la Encuesta de Estructura Salarial (EES) y en el Panel de Hogares de la Unión Europea (PHOGUE). Para ello, se estiman dos ecuaciones salariales, una por tipo de contrato, descontando la influencia de las características personales del asalariado y del puesto de trabajo y corrigiendo por el sesgo de selección de asignar a los trabajadores a cada una de estas dos ecuaciones. Posteriormente, se descomponen estas diferencias utilizando el método de Oaxaca-Blinder. Los resultados obtenidos indican que son las diferencias en las características individuales y del puesto de trabajo las que explican estas diferencias salariales.

1. Introduction

The focus of this piece of work is the study of wage differentials between two broad types of workers, classified according to the nature of the employment contract they hold: either temporary¹ or permanent. We intend to find out whether wage differentials between these two groups of workers are related to the distribution of employment contracts between different kinds of jobs or they register different returns for the same features. Although temporary and permanent workers are supposed to be equally paid for the same tasks, labour laws defending the former against discrimination, there is a wide empirical evidence on permanent workers earning more than temporary ones (Castillo and Toharia 1993, Jimeno and Toharia, (1993, 1996), de la Rica and Felgueroso (1999), Pérez and Hidalgo (1999)).

The data-sets used here to explore wage differentials are the European Community Household Panel (hereafter ECHP), and the Structure of Earnings Survey (SES). Both of them have got interesting features but also shortages. The former has a small sample size but provides information on family, job and personal features that allows for the design of a switching model to control for the usual selection bias in this kind of studies. The latter was launched on a much larger sample but lacks information on non-employed and public sector workers. They are not strictly comparable then, but complementary. Wage differentials obtained with each data-set are decomposed using the well known Oaxaca-Blinder method, and the relevance of the different elements of such decomposition constitute the main conclusive results.

The sample will be split into two groups: on the one hand, young workers (under 30 years of age) , the group most affected by the temporary employment recent boost. In fact, temporary employment is, for most of them, the only available way of entering the labour market. On the other hand, adult workers (30 to 64 year olds) for whom temporary employment has a different incidence and nature.

Our first intuition is that temporary and permanent contracts are used to cover different kinds of jobs, and this will be the main factor that will explain wage differentials between temporary and permanent workers. Besides, since temporary work does not affect people homogeneously through their working

¹ The "temporary" work is a general expression which refers to any kind of contract which is not unlimited duration, even through its precise limits may not be known (this occurs when the contract is signed for the duration of a certain task, which may be uncertain). Temporary contracts may be of two kinds: proper temporary and fixed-term (the employment promotion contracts which duration is known from the moment of the hiring), but here we will treat them all with the same label: "temporary". Nevertheless, since in 1994 the fixed-term employment promotion contracts were radically restricted to hard-to-place workers, in 1995 the number of these contracts had been considerably reduced.

lives (being a common feature during the first years of the working life), differences in wage differentials should also be found among young and adult workers.

Summarising, the aim is to study whether temporary status implies lower wages regardless of personal and job-related characteristics or whether temporary contracts are used in Spain to fill a particular segment of the labour demand and that is the main cause of wage differentials. These aspects will be separately studied for young and adult workers and the analysis is done twice, using two complementary data-sets.

The main empirical findings show that permanent workers are better paid than temporary ones regardless of the age group, the main reasons for this being both the differences in the composition of employment and the distribution of job and personal characteristics between both kinds of workers. Besides, there are features that influence the probability of being hired under a (temporary) permanent contract and push wages (down) up. Wage differentials between temporary and permanent workers are explained by the differences in the characteristics of jobs and workers. Indeed, should two workers be exactly the same but have different types of contracts, temporary workers would register higher earnings than permanent ones. This result differs from previous evidence on the topic, but on the one hand it is achieved through a slightly different econometric specification (since we control for the endogeneity of the type of contract) and on the other hand it is coherent using two different data-sets. Results would agree with the initial intuition: there is a demand-based segmentation in the Spanish labour market.

The paper goes as follows: After these introductory paragraphs, Section 2 briefly surveys the empirical literature for the Spanish Labour Market on this same topic. Next, Section 3 describes the institutional set-up and the evolution of temporary employment in Spain. Section 4 presents the data sets and describes the employment distribution and main observed wage differentials from both samples. As for the main estimations, the econometric model is displayed in Section 5. Section 6 compares the results from both data sets and Section 7 concludes.

2. Former evidence on wage differentials in Spain.

For classical economists wage differentials are due, essentially, to differences in the tasks developed or other working conditions (Becker, 1957). Thus, since temporality implies uncertainty about future income and a welfare loss, temporary workers should earn more than permanent ones in order to be compensated for the higher degree of instability they assume. According to neo-classical theorist earnings differentials are the result of differences in productive effort, ability or education, all of which determine productivity and, therefore, wages, since labour is paid according to its marginal productivity. Were the various types of contracts related to different productivity indicators, wage differentials would immediately appear.

The initial empirical research on this topic focused on wage differences between male and female workers (Oaxaca, 1973) and the same methodology has been afterwards applied to public and private sectors (in Spain, Ugidos (1997) and Albert and Moreno, (1998)) and to temporary and permanent workers (Castillo and Toharia (1993), Jimeno and Toharia (1993, 1996), Bentolila and Dolado (1994), de la Rica and Felgueroso (1999)). Here we present a switching regression model parallel to the one in Albert and Moreno (1998) and Ugidos (1997), but applied to temporary and permanent workers, and comparing two different data sets (the ECHP and the SES). In addition, we consider separately young and adult employees, which are affected by temporary employment in very different ways (see Section 3).

Former empirical research on wage differences between temporary and permanent workers coincide in finding a positive earnings differential in favour of permanent workers. Thus, Jimeno and Toharia (1993) find a 10.8% wage gap in 1991 and 8.5% for 1993 using different samples provided by the Spanish Statistical Office). As for Bentolila and Dolado (1994), they estimate average wages in manufacturing private firms² for 1985-1988 and they obtain that a one percent increase in the proportion of temporary workers among the whole payroll decreases by 0.64% the average wage costs. In a more recent piece of work, De la Rica and Felgueroso (1999) find a 15% wage gap for manufacturing and services³ male permanent workers and 7% for their female counterparts, although these differences are higher the higher the level of education of the employee.

² Data in that piece of work were drawn from the Spanish Central Bank register (*Central de Balances del Banco de España*)

³ They use the SES as well, but they restrict their sample to permanent workers with a tenure up to 3 years so that they are essentially comparable to temporary ones. That is probably why we find a wider wage gap than they do.

3. Institutional set-up: temporary employment in the Spanish Labour Market.

The institutional aspects of the Spanish labour market have clearly been targeted towards a marked *flexibility at the margin*. The next paragraphs are aimed at explaining this process.

In order to follow the evolution of temporary and fixed-term employment in Spain it is necessary to start from the late seventies and early eighties. They were the first years of our recent democracy, particularly complicated due to the sharp economic turmoil and an incipient economic downturn (Cebrián *et alli* 2001). After a very long period of paternalistic labour laws and rigid employment regulations the 1980 Workers' Statute, which created the main labour market regulations currently existing, clearly established a preference for the open-ended contract as the "normal" labour contract. Some exceptions were nevertheless established for clearly temporary activities, for which temporary contracts were allowed, as well as for initial contracts for youngsters. In addition, the law allowed the government to introduce further instances for the use of temporary contracts, even for undertaking the normal activities of firms (which would break the so-called "causality principle"⁴ for temporary hiring), as an "employment promotion measure". When the Workers' Statute was reformed in 1984 the possibilities of resorting to temporary contracts were expanded⁵. Besides, the non-causal fixed-term contract was maintained as a measure of employment promotion. In principle, thus, the 1984 reform established two types of contracts: temporary contracts, to be used for temporary tasks, and fixed-term contracts, which could also be used to perform the "normal" activities of firms.

Temporary and fixed-term contracts were attractive to workers those days, since they entitled their holders to three months of unemployment benefit for six months of work no matter whether the six months had been worked in a row or with unemployment spells in between (Güell, 2001). All these circumstances enhanced the use of these contracts during the upward trend of the economic cycle in the late eighties (Figures 1 and 2). The use of temporary contracts helps to explain the increase in employment creation [GDP elasticity] (Figure 2). This amendment to the Workers' Statute, which also included other measures such as the regulation of part-time work, has been the cornerstone of labour market reform in Spain in the last twenty years (see, e.g. Toharia and Malo, 1999).

The proportion of temporary workers among all the employees has been more or less constant since 1992, at a 30% rate (Figure 1), the highest

⁴ This principle meant that temporary contracts could only be used for temporary activities.

⁵ mostly through the so-called "new line of business" contract.

temporality rate in the EU⁶. The relevance of temporary employment did hardly decrease with the subsequent labour market reforms aimed at the reduction of temporality in 1992, when the Government approved some changes in the unemployment benefits system and the tax exemptions on contracts for young workers. These changes were not effective enough and in 1994 the government drastically restricted the use of temporary contracts and the employment promotion fixed-term contracts were re-targeted only towards certain hard-to-place workers. In 1997, during the last Labour Reform, employment promotion fixed-term contracts were abolished, and a new permanent employment contract has been set⁷. The observation period in this piece of work is 1995, a year after the second reform of temporary contracts, which was aimed at reducing employment turnover and achieved just the opposite.

Toharia and Malo (1999) describe with further detail the structure of employment derived from the duality of contract statuses. Since the composition of temporary employment has not changed during the nineties, they conclude that the use of temporary contracts for certain jobs or tasks responds to specific product market conditions that require a more flexible labour market. The profile of temporary workers seems to be somehow stable over time, which means that some temporary workers could end up finding stable employment (if not exiting the labour force). According to Toharia and Malo, the Spanish labour market is strongly characterised by a dual demand-based structure: once the secondary segment was settled with the regulation and fostering of temporary employment, it grew up to a stable size that seems to be optimal or necessary (according to figure 2 it could be around 30%, although some authors consider it to be excessive (Toharia, 1999)) for our labour market, since subsequent regulation changes⁸ have not achieved a reduction in the use of temporary employment.

In this piece of work young (under 30) and adult workers will be treated separately. The main reason for doing this is that temporality affects in a different way young and adult workers: it is a very common way of entering the labour market. Figure 3 shows the evolution of permanent and temporary young employees, distinguishing between those who held a training contract of any type and those with another type of temporary contract. The right axis displays

⁶ Table A.1. in the Annex shows the evolution of temporality rates in most EU members. Spain persistently registers the highest temporarily rate. Anyway, the figures in the table are not strictly comparable due to the differences in the definitions of temporary contracts in the EU.

⁷ This new type of contract entitles to a lower severance payment in case of unfair dismissal and is restricted to workers under 30 or over 45, long-term unemployed and disabled workers. It seems to have been successful since it came to force but assessments should be done with a longer time perspective. The use of temporary contracts has not significantly declined since the new permanent employment contract is in force.

⁸ When the employment promotion fixed-term contracts were constrained in 1992 and 1994 they were substituted with other types of temporary contracts that are not used for the exact aims they were initially programmed for. That is the case of the contract "per task or service" and the contract for launching new activities.

the temporality rate and the relevance training contracts had in all the temporary statuses. The boost of temporary employment for the young implied an extraordinary increase of temporality rates for this age group that has not declined until the recent economic recovery (1998-1999). Regarding the year of our analysis, 1995, it registered the highest temporality rate in the whole period in the Figure and it was the first year of employment recovery after the 1992-1994 crisis.

4. The data bases: The European Community Household Panel (ECHP) and the *Encuesta de Estructura Salarial* (EES) and the composition of the samples

The ECHP is an international panel survey designed to provide information on the economic and life conditions of the European population. The survey is targeted at private households, and it collects information on several family issues, and personal interviews cover a wide range of topics. Seven waves have been already launched (1994 to 2000) in fourteen European countries by EUROSTAT. In Spain there are only three available waves at the moment of writing (June 2001), but in this version attention is paid only to the second one in order to consider only the same period as the SES⁹.

The total size of the ECHP sample is 12662 subjects, 4819 of which are employees, 1797 being temporary workers. Table 1 shows the distribution of the sample by age groups across different labour market statuses. A very important shortage of this data-set is that it does not provide information on gross income. This hinders the estimation of wage differentials¹⁰. Instead, a “proxy” gross wage variable that has been constructed¹¹ with the information on the composition of the family and the progressive tax rates in force in the Spanish fiscal system in 1995.

As for the Structure of Earnings Survey (*Encuesta de Estructura Salarial*, ESS), it was carried out by all EU members in 1995. Being launched at working centre or firm level, its main objective is to obtain detailed information about wage levels and its components. The survey covers not only wages but also

⁹ Besides, the first wave does not include the question about the type of contract, and doing a panel analysis with just two waves (the second and third ones) will not imply a large improvement of the results compared to this cross-sectional analysis.

¹⁰ There is an open debate on whether gross or net wages should be used to estimate wage equations. On the one hand, gross wages include the tax an individual pays to compensate the State for the previous help in financing her investment in human capital, and therefore both private and public returns to education can be found here. Should we need to isolate private returns, we would use net wages instead. On the other hand, gross wages are the ones the employer finally pays, regardless how they will be split between the State and the worker. It therefore represents labour costs and the value for the market of certain characteristics of the worker or the job. Finally gross wages have been used, because the dual labour market theory focuses on the demand side and the employers strategy to reduce labour costs and cope with undercainty.

¹¹ The authors are very grateful to Florentino Felgueroso for sharing this variable he had constructed.

personal and job characteristics of each employee. A very important advantage of the SES is its large sample size (around 160.000 individuals).

The SES distinguishes among more types of contract¹² and more education level categories than the ECHP. Being launched at firm level, public administration workers are excluded from the sample design, whereas they are included in the ECHP. Taking the public sector into account does make a difference in any analysis about job features and wages, since the composition of employment and the wage determination processes are different in both sectors. Finally, the SES is able to distinguish between quite a lot of components of the monthly wage in the moment of the interview (October 1995) whereas the ECHP provides quite aggregated information on current wage. In this study, the “base wage” provided in the SES has been used as dependent variable in the wage equations, so that the effect of bonuses for length of service and the like are excluded and do not bias the estimators. The same refining has not been possible in the estimations using the ECHP. All these distinguishing features may explain some differences in the final results of the paper between both data-sets.

Summarising, both data-sets are complementary: the ECHP has a small sample size but in the near future will allow to construct proper panel data analyses. The SES is quite reliable since it is not only a large survey but also launched on firms, which ensures reliability in the information on wages and labour costs; the interviewed firms take the payslip of the whole payroll and offer first-hand truthful information, whereas in the ECHP workers may be tempted to not being sincere when being asked questions about income.

In order to look for the main components and reasons for wage inequalities, some indicators have been calculated: employment rates, the profiles of temporary and permanent employees and temporality rates for different personal and job characteristics, always distinguishing between young and adult workers.

Table 1 shows the profiles of employees versus other labour market statuses. Employment follows a more strongly gender pattern among adults than among the young. The level of education of adult employees is higher than that for non employed and self-employed. The trend is different for the young: employment concentrates in low and highly qualified, whereas youth with secondary education tend to be studying at the University and, probably

¹² This is especially important in the case of apprentices, whose statutory wage is, by law, lower than the agreed statutory wages for the rest of workers. Here apprentices have been excluded from the SES sample; anyway they hardly represent one percent of the sample. But in the case of the ECHP this distinction was not possible since apprenticeship contracts are not distinguishable in the “type on contract” variable and the apprenticeship status is self-defined.

therefore, non-employed. These differences in the profiles of employment and non-employment between young and adult workers lead to estimate separately the probability of being a wage earner for each age group.

Regarding the profiles of temporary and permanent workers, (Table 2) the most relevant figures are temporality rates among young and adult workers: in average 27.12% of adult employees hold a temporary employment contract, while 68.34% of the young are employed on temporary basis¹³. This illustrates the strategy of “flexibility at the margin” mentioned in Section 3; Additional information from the same table is, for example, referred to a higher temporality rate among women, although distance between genders is wider for adults than for young workers. The higher the education level the lower the probability of holding a temporary employment contract. Temporality is related to both short and very long working weeks. Needless to say, the distribution of tenure is very related to the kind of contract¹⁴. The distribution of workers among occupations is related to the one of skill levels: highly qualified workers (professionals and technicians) tend to register lower temporality than unskilled workers and labourers. And last but not least, temporary employment is quite unequally spread across industries and sectors. Thus, it is very common in building and agriculture for both young and adults, and it is also very used for hiring youths in “sales and hostels”. On the opposite extreme public services and those who are equivalent to public but supplied by private firms (such as education and health services) are the ones that register the highest portion of permanent positions.

Table 3 shows the average “gross” wages for the different personal and job categories used in the wage equations. Just to give an idea of the effect of computing gross wages from the fiscal system rules and the net wages distribution as well as the purchase power of both of them, both the average net and “gross” wages and the equivalence in euros are displayed. Computed gross earnings are 25% and 34% higher than net earnings for temporary young and adult workers respectively and the difference is higher for permanent workers (38% and 49% respectively). And the average gross wage gaps between

¹³ The fostering of temporary employment in order to promote job creation affected specially to the new entrants, and already stable posts were not touched by the 1984 and 1994 changes. Therefore the process of labour market flexibility changed essentially working conditions for youth. Garrido and Requena (1997) interpret this phenomenon in terms of an “inter-generations non written pact”: Spanish youth bear high non-employment and temporality rates, and their higher level of formal qualifications does not threaten the working conditions of adults. Adults preserve their working conditions despite their obsolete qualifications, and “pay for this privilege” through providing housing and education to younger generations. In fact, Spanish youth remain in the parental homes until late twenties in many cases and the level of University demand is the highest if the European Union.

¹⁴ Most of the temporary employment contracts may not be extended after 3 years (although changing the nature of the job for hiring the same worker under subsequent temporary contracts has been a common practice among Spanish employers). This and the fact that “per task or service” contracts are easily extended may explain the high tenures of some temporary employees.

permanent and temporary workers is 50% for youth and 80% for adult employees.

As for the average hourly wages for different categories, Table 4 shows that the higher wages correspond to men, highly qualified, professionals who work 30-39 weekly hours, in the public sector or in large (private) firms. Of course, the longer the relation with the employer (tenure) the higher the average wage, other features being constant.

As for the SES sample, the main features of the composition of employment that can be inferred from this data set are displayed in Table 5. The structure is similar to the one obtained from the ECHP: men are majority in the sample, especially among adult workers, temporality being much higher among the young. Permanent workers register higher education attainment than temporary ones, although the education differential is wider among adults. There are also differences in the distribution of young and adult temporary workers across industries: adults register the highest temporality rates in the building sector and youth do so in sales and hostel.

Regarding the wage structure, Table 6 shows the percentage the base wage (the one used in this exercise) represents in the whole monthly earnings for different age groups. Pérez and Hidalgo (1999) describe very deeply both the employment composition and the wage structure using the SES. In their research they point out that the base wage weight decreases along with experience and tenure. Should this wage structure not be taken into account, wage differentials for young and adults would be underestimated.

5. The econometric model

The econometric specification of the models developed here consists on two wage OLS equations (one for temporary and another for permanent employees) for each age group where the selection bias of being a wage earner and holding either a temporary or a permanent contract are taken into account. The next step is an Oaxaca-Blinder decomposition of the wage differentials, which breaks up these differentials in order to distinguish those due to the selection bias, the ones due to the distribution of jobs and employees characteristics and the differences in returns between both types of employment contracts.

Wage gaps between temporary and permanent workers may be computed in three different ways. The simplest way consist just on including the type of contract as a dummy variable in a OLS wage equation; the sign and value of the coefficient corresponding to this variable accounts for the average wage

differential between the two groups. This first specification has been tried out in order to test the size and relevance of the type of contract variable¹⁵. This method has two important shortages: one is the existence of omitted variables and the other is the problem of self-selection: the information on wages is only observable for wage earners, and being a wage earner is a characteristic distributed neither randomly nor equally across the population (as Table 1 illustrated).

The second method consists on estimating different OLS wage equations for the two groups. This not only does not solve the self-selection problem, but also generates a second one: if the decision of working under a temporary or a permanent contract is not exogenous and the individuals do not have the same probability of being hired under each type of contract, there is a second selection bias due to the non random distribution of employment contracts.

The method used in this piece of work is a switching endogenous model where we use Heckman's (1979) specification for taking into account the two selectivity bias mentioned above. Therefore, for each age group a system of four equations is estimated: two heterokedasticity robust¹⁶ probit models and two parallel wage equations. The prepositions the model upholds are the existence of three possible statuses and two labour markets. On the one hand, individuals can either be wage earners, or have other labour market status (self-employment and non-employment). On the other hand, labour markets consist on permanent and temporary statuses. The model is targeted at studying two binary choices. Firstly, individuals are classified as wage-earners (either permanent or temporary) or the residual category formerly indicated. Then, wage earners are split into permanent and temporary employees. Thus, following the specification of Lachaud (1995) the model can be displayed as follows:

$$[1] \quad Ln(W_p) = L_p\beta_p + u_p$$

$$[2] \quad Ln(W_t) = L_t\beta_t + u_t$$

$$[3] \quad I^*_1 = Z_1\alpha_0 + \varepsilon_1$$

$$[4] \quad I^*_2 = Z_2\alpha_1 + \varepsilon_2$$

Equations [1] and [2] express the potential wage of permanent and temporary workers respectively, L_p and L_t are the wage determining attributes, β_p and β_t represent the vectors of coefficients associated with L_p and L_t , W_p and

¹⁵ Results are available from the authors but not shown for the sake of brevity.

¹⁶ White (1984) proposes a coefficient for correcting the heteroskedasticity due to the presence of non-independent explanatory variables in a equation (for a brief and clear explanation, see Greene, (1993)).

W_t are the wages and the disturbance terms are indicated by u_p and u_t . Z_i are vectors of exogenous variables that can contain some of all of the variables linked to L_i ; Z_1 and Z_2 represent the variables that determine the probability of being a wage earner and a permanent wage earner respectively. Equation [3] is the selection of wage earners compared to the residual status (non wage earner) and equation [4] is related to the selection of the permanent wage earners compared to temporary ones. I_1^* and I_2^* are unobserved variables associated to observable indicator variables that take the value 1 if the unobserved values are greater than or equal to 0, and 0 if they are negative. In this case, I_1 is observed for the whole population; $I_2^* \geq 0$ if the individual is a wage earner. On the other hand, I_2 is observed if $I_1 \geq 0$.

The model has been developed as follows: firstly, the probit estimation of the equation [3] allows the estimation of the inverse Mills-ratio (λ_0 in equations 5 and 6). This coefficient captures the probability of being included in the sample as a wage earner (either permanent or temporary). Thus, the dependent variable of this probit takes the value 1 if the individual is a wage earner and 0 otherwise¹⁷. The explanatory variables here are gender, age, level of education of the head of the household, caring responsibilities (presence of dependent children in the household), relation to the head of the household and region. Secondly, equation [4] implies a second probit model. In this case the dependent variable takes value 1 if the wage earner holds a permanent contract and 0 if she holds a temporary contract. The independent variables here are gender, age, level of education, industry, public or private employer, firm size and region and working day duration (and occupation on the case of the estimation of the SES sample). The coefficients λ_1 and λ_2 , capturing the probability of being a permanent and a temporary worker respectively have been also determined. Thirdly, the following equations were estimated by OLS method.

$$[5] \quad \text{Ln}(W_p) = \phi_p L_p + \sigma_p \lambda_0 + \Omega_p \lambda_1 + \pi_p$$

$$[6] \quad \text{Ln}(W_t) = \phi_t L_t + \sigma_t \lambda_0 + \Omega_t \lambda_2 + \pi_t$$

Finally, wage differentials between permanent and temporary workers can be decomposed into three sources:

- a. A gap due to differences of the characteristics of workers and jobs (L).
- b. A gap due to the pay structure (ϕ) and
- c. The selectivity bias (σ, Ω).

The decomposition, generally evaluated at the sample means, is :

¹⁷ This first probit has only been estimated for the ECHP sample since, as mentioned above, the SES sample does not allow such a sample selection.

$$[7] \quad \hat{Y}_p - \hat{Y}_t = \underbrace{\phi_p(\bar{L}_p - \bar{L}_t)}_{(1)} + \underbrace{\bar{L}_t(\phi_p - \phi_t)}_{(2)} + \underbrace{\lambda_0(\sigma_p - \sigma_t) + \Omega_p\lambda_p - \Omega_t\lambda_t}_{(3)}$$

Where Y_p and Y_t refer to the mean of the logarithm of wages, and λ_p the mean of λ .

This is one of the three specifications of Oaxaca-Blinder decomposition. It implies working on a strong assumption: the non-discriminatory wage structure is the one for permanent employees, whose wages are supposed to be correctly related to their productivity¹⁸. The first element of the right hand-side of the expression refers to the differences in the distribution of personal and job characteristics for the wage structure that is taken as non discriminatory. Since our preposition is that temporary workers will be worse paid than permanent ones and they are “atypical workers” we think than taking them as the discriminated group is a somehow realistic assumption. Besides, this enables us to obtain comparable results to prior empirical pieces of work such as de la Rica and Felgueroso (1999). The second element on the right side of the expression refers to the differences in the returns to the same characteristics given the wage structure of temporary workers (the group taken here as “discriminated”). The third element refers to the effect of the selection bias estimates. Hereafter the first element will be referred to as “characteristics” or “endowments”, the second one will be “returns” or “discrimination” and the last one as “selection bias” or “selectivity”.

6. The main results

Results for the ECHP sample will be presented first. The probit models for estimating the probability of being an employee and a permanent employee respectively have been designed for every gender and age group. The results are available from the authors but not included in the text for the sake of brevity. They are on line with the information in Tables 1 and 2: being married, middle aged, male, having no caring responsibilities and being head of the household (HOH) increase the chance of being an employee. The higher education attainment of the head of the household, the lower the probability of being an employee for young individuals and the higher for adults. Regarding permanent employees, also highly qualified middle aged males who work in the public

¹⁸ Neuman and Oaxaca (1999) explain the different possibilities for choosing on reference group for wage decomposition and consider all the possibilities, but they point that the normal decision is taking the dominant group or the “standard” group. In our case the dominant group is the permanent contract, but the standard group changes between young and adults: the standard contract for adults is the permanent one whereas the standard contract for young workers is the temporary one. In order to get comparable results, however, we use here permanent employees as the reference category for both young and adults.

sector for 30 to 49 weekly hours are more prone to be permanent whereas those who work in the building industry or as labourers are the ones most prone to be temporary against any other industry.

Table 7 presents the wage equations for young and adult workers separately. These results confirm what was expected from the information in Table 4: Wages are (for both types of contracts) higher among the more experienced (the negative sign in the squared age coefficient showing the well known trend of decreasing marginal returns of experience) and more (formally) skilled workers, professionals, public sector and large firm employees, tenure seeming to be significant just for adults. The longer the working week the higher the hourly wage¹⁹.

The last terms of the wage equations refer to the effect of both selection biases: being an employee and being a permanent or temporary employee. The first one is positive when significant. This can be interpreted as the fact that the features that make an individual more prone to be an employee are paid through wages together with job characteristics. A parallel meaning can be found in the (positive) sign and significance of the second selection bias coefficient: there are certain characteristics non directly observed in the wage determination process that have a positive effect on wages and, at the same time, a positive influence on the probability of being a permanent worker. The opposite holds true for temporary workers. Therefore the features influencing a worker to hold a permanent contract and the characteristics of the permanent jobs are better paid than the average, while the opposite holds true for temporary workers.

Table 8 shows the main figures for the three elements that conform the Oaxaca-Blinder decomposition, distinguishing between young and adult workers. It can be seen that both young and adult permanent employees register higher hourly earnings than their temporary counterparts. These differences have different magnitudes but similar compositions.

For both young and adult workers the wage gap is due to the three factors: the characteristics employment structures, the distribution of personal characteristics and the unobserved heterogeneity between temporary and permanent workers that make them more prone to become either permanent or temporary. Permanent workers register a high concentration on the personal and job best paid features. The unobserved heterogeneity between temporary and permanent workers (selection bias) contributes to this distance, showing that the personal characteristics enhancing the probability of being an employee and

¹⁹ This result is not compatible with the one in Cebrián and Moreno (1997), who find some evidence on the relative better pay of certain part-timers (professionals who work 35 weekly hours in the public sector) regarding full-timers. This difference may be due to the fact that here a computed measure of gross wages is being used, whereas the former above mentioned authors use the net wages provided by Eursotat in their estimations.

particularly being a permanent employee also contribute to the achievement of higher wages. On the other hand the “returns” or discrimination term is negative, which could be interpreted as follows: once an individual is hired under a temporary contract, after controlling for the personal and job characteristics that differentiate permanent and temporary workers, there are certain characteristics that are better paid to temporary than to permanent workers. Therefore, it seems that there are some kinds of compensation differentials between permanent and temporary workers. They work in different types of jobs (Table 2 showed how they tend to concentrate in sectors such as building and agriculture) and under different conditions. Permanent workers and temporary workers have very different profiles but if ever they coincided, temporality seems to be somehow partially compensated.

As for the SES sample, Table 9 displays the main results for the wage equations from the SES sample. The signs of the coefficients obtained are parallel to the ones from the ECHP sample. Wages are positively related to tenure, experience and education attainment²⁰. They are also related to the ownership of the enterprise (public-owned enterprises seem to offer higher wages) and to the firm size. Finally, the selection bias of being a temporary or a permanent employee influences the wage in the expected direction.

Table 10 shows the main results for the Oaxaca-Blinder decomposition using the SES. As expected, both young and adult permanent workers obtain higher wages than temporary ones. This wage gap is due mainly to two elements: on the one hand, the positive effect on wages of the features that characterise to permanent workers and differentiates them from temporary ones (that is, the effect of the selection bias). On the other hand, the composition of employment also widens wage differences, being permanent jobs the ones that tend to concentrate the best-paid (workers and jobs) characteristics. The sign of the returns component is negative for both young and adults, and parallel to the results for the ECHP. This is, the decomposition displayed in Table 10 shows that the wage gap studied has, essentially, an employment composition effect, that is even higher than the partially compensating returns effect (the negative sign of the “returns” term). This “compensating” returns effect, which defines the main difference between our piece of work and former pieces of evidence, can be interpreted as “should two workers be the equal to each other but with different contracts, the temporary worker would get a higher hourly wage than her permanent counterpart”. The clue points are therefore the differences in the uses (types of jobs) of permanent and temporary contracts and the profiles of the

²⁰ We are aware that including dummies for different levels of achieved educational attainment does not apply to the original idea of Mincer (1964) for measuring the returns of education (he would use years of schooling instead) but to a more recent concept of education as a screening device (Spence (1973)) and a signal (Arrow (1973)). This piece of work does not aim at adding anything to this discussion and we have just used the information about skill level the way it is supplied by the ECHP (which is, by the way, very aggregated).

workers hired under each type of contract. Returns to the same characteristics are not higher for permanent positions.

7. Conclusions

Both data sets allow to find a clear wage gap in favour of permanent workers. In both cases the employment composition seems to play an important role in this gap, supporting our initial hypothesis. The selection biases signs also confirm the assumption that permanent and temporary jobs are different.

The differences in the wage gaps size for young and adults workers between both data-sets may be caused by differences between the data-bases (design, sample size, meaning of the dependant variable, among others). Besides, the estimation method has not been completely parallel for both of them, since the first selection bias for being an employee may not be controlled for in the estimations for the SES sample. Could we differentiate between base wage and complements, the results would somehow change for the ECHP. On the other hand, if public sector workers were included in the SES results could experience further change as well.

But the most worth mentioning result achieved here is that wage differentials among temporary and permanent workers have a strong composition effect: permanent and temporary workers are different and work on different tasks. But if two workers and jobs were identical except for the kind of contract, certain features such as human capital and experience seem to be better paid for temporary workers, showing non-discriminatory wage differences. These results are different from former empirical evidence on the topic (up to now the main empirical works have found a positive discrimination term in favour of permanent workers) although neither the econometric specification nor the data sets are completely parallel to previous pieces of work. The econometric specification of the model has intended to control for unobserved heterogeneity and selection bias problems, which is something previous pieces of evidence did not do. On the one hand, the fact that results do not coincide with prior evidence suggests further research and putting both sets of results into a proper perspective, but on the other hand, the fact that the results essentially coincide for both data-sets is also encouraging. Besides, results are in line with former pieces of evidence that although do not develop any econometric model do present the duality in the Spanish labour market between temporary and permanent workers as demand based (Toharia and Malo 1999 and 2000).

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ANNEX

Table A.1: Evolution of temporality rates in the EU						
	1985	1990	1993	1996	N.contracts*	Months
Spain	15,6	29,8	32,2	33,6	3	36
Finland	10,5	11,5	12,7	17,3	1.5	
France	4,7	10,5	10,9	12,6	2	18
The Netherlands	7,5	7,6	10	12	3	
Sweden	11,9	10	11,5	11,8	2.5	12
Denmark	12,3	10,8	10,7	11,2	3	
Greece	21,1	16,5	10,4	11	2.5	
Portugal	14,4	18,3	9,8	10,6	3	30
Germany			8,9	9,6	4	24
Ireland	7,3	8,5	9,4	9,2		
Austria				8	1.5	
Italy	4,8	5,2	6	7,5	2	15
UK	7	5,2	5,9	7,1		
Belgium	6,9	5,3	5,1	5,9	4	30
Luxembourg	4,7	3,4	3	2,6		
Source: OCDE Employment outlook 1997-1999						
* Most of the countries do not determine restrictions to the use of temporary contracts when they respond to objective reasons. In Austria, Finland, Denmark and Sweden workers can appeal against employers after several renovations of the same temporary contract in order to revise the validity of the reasons for the temporary status.						

Table 2.A. shows the results for the ECHP sample: holding a permanent contract does significantly increase wages, temporary adult workers being not significantly better paid than their young counterparts. This may be reflecting what mentioned in Section 5: temporary adults, despite their potential experience in the labour market, are not better paid than those who are just beginning their working lives. It seems therefore that (potential) experience in the labour market does not pay in temporary jobs, which may encounter for the lack of specific human capital accumulation in those kinds of jobs, which reinforces our initial argument of differences in employment composition as the main reason for wage inequalities among temporary and permanent workers.

The same exercise was done with the SES sample: a joint OLS wage equation was designed using dummy variables for age groups and type of contract. The results are in table A.3. Focusing on the effect of the type of contract and once different personal and job features are controlled for, young workers hired through apprenticeships or practice contracts are the ones who receive the lowest wages, followed by youth under ordinary temporary contracts. As for permanent young workers, their wages are not significantly different from those temporary workers aged 30 to 44 or older than 55. If we had taken all the components of gross wages instead of only the base wage, probably differences would be noteworthy, since the older the worker the more important personal complements are in his/her wage (table 6).

Table A 2. OLS wage equations for ECHP			Table A.3. OLS wage estimations for all workers , SES					
	Coeff.	sig.		Coeff.	sig.		coeff.	Sig.
Intercept	10,133	**	Tenure > 1 year	0,0086	**	Baleares	-0,0725	**
Male	0,253	**	Tenure	-0,3465	**	Canarias	-0,856	**
Age	0,227	**	Female	-0,2713	**	Cantabria	-0,0699	**
Age2	-0,018		Blue collar	-0,1113	**	Castilla y León	-0,0715	**
University	0,280	**	Primary	0,0732	**	Castilla-La Mancha	-0,0346	**
Secondary	0,090	**	Compulsory	0,121	**	Cataluña	0,11	**
30-39	0,443	**	Higher general education	0,3278	**	Comunidad Valenciana	-0,0198	**
40-49	0,576	**	Vocational level, initial cycle	0,2313	**	Extremadura	-0,1359	**
50+	0,661	**	Vocational level, 2nd cycle	0,2997	**	Galicia	-0,1521	**
public sector	0,221	**	University, first cycle	0,5507	**	Madrid	0,1041	**
size + 99	0,283	**	University, second cycle	0,7496	**	Murcia	-0,1867	**
proffesionals technicals, directives	0,474	**	Manufacturing	-0,2063	**	Navarra	0,084	**
sales, hostel, personal service	0,134	**	Energy	-0,0069		País Vasco	0,1024	**
craft and related	0,084	**	Building	-0,1222	**	La Rioja	-0,0534	**
Tenure	0,015	**	Sales and repairs	-0,2862	**	Ceuta y Melilla	0,1694	**
selection bias of being employee	0,071	*	Hostel	-0,2747	**	Permanent 30-44	0,1756	**
permanent young	0,125	**	Transport, communications	-0,1194	**	Permanent 45-54	0,2483	**
temporary adult	0,000		Financial services	0,0721	**	Permanent 55+	0,2392	**
permanent adult	0,210	**	Real state, serv. to enterprises	-0,2427	**	Temporary < 29	-0,1653	**
Adjusted R ²	0,615		20-199 workers	0,0977	**	Temporary 30-44	0,0101	
N	4392		200+ workers	0,2041	**	Temporary 45-54	0,0969	**
* p value = 0,95 ** p value = 0,99			Privately owned	-0,0035		Temporary 55 +	0,1767	
Source: ECHP, (1995) INE.			Collective agreement superior to firms	0,0112	**	Training/practice < 30	-0,4398	**
			Firm or working centre	0,1473	**	intercept	6,9405	**
			Other type of colective agreement	0,0334				
			Aragón	0,017	*	N	1339898	
			Asturias	-0,0348	**	Adjusted R2	0,5903	
			Source: SES (1995); * p-value = .95** p-value = ,099

Table 1. Distribution of personal and family features among employees and other labour market situations ECHP

	young		adults		average	
	others	employees	others	employees	others	employees
Gender						
Men	45.82	59.67	37.86	65.29	40.54	63.69
Women	54.18	40.33	62.14	34.71	59.46	36.31
age group						
16-24	71.21	45.47	0.00	0.00	23.96	12.99
25-29	28.79	54.53	0.00	0.00	9.69	15.58
30-44	0.00	0.00	40.58	62.40	26.92	44.58
45-64	0.00	0.00	59.42	37.60	39.43	26.86
Educational attainment						
low-educ	44.31	48.41	80.63	53.10	68.41	51.76
high school	41.88	29.56	10.98	18.05	21.38	21.34
University	13.76	22.04	8.39	28.85	10.20	26.90
Relation with the head of the household						
HOH	8.05	27.36	33.26	74.33	24.77	60.91
Spouse	10.11	10.68	48.96	22.40	35.89	19.05
Child	71.46	52.12	2.97	1.33	26.02	15.84
Other	10.38	9.85	14.81	1.94	13.32	4.20
N	2712	1429	5132	3390	7844	4819
Source: ECHP, second wave. Spain. INE						

	Distribution					Incidence	
	Young			adult			Temporality rate
	temporary	Permanent		temporary	permanent		Young adults
Men	60.65	59.24		61.89	69.43		69.79 24.04
Women	39.35	40.76		38.11	30.57		66.10 31.05
Educational attainment							
Low-educ	53.57	35.09		71.13	45.54		74.73 35.6
High school	29.04	28.63		13.32	20.01		69.58 18.29
University	17.39	36.17		15.55	34.46		53.92 13.53
Working week							
15-30 hours	15.47	5.30		13.04	3.66		86.08 60.00
30-39 hours	10.07	10.99		10.39	24.72		63.95 12.59
40-49	62.68	57.00		57.73	57.88		65.91 25.71
50 +	17.84	21.05		18.05	13.78		66.40 31.80
Tenure							
< 1 year	24.51	3.16		15.49	0.32		91.60 91.90
1-5 years	64.37	45.16		53.94	9.27		66.40 58.80
5 + years	11.12	51.68		30.57	90.41		28.20 7.70
Occupation							
Direc-officials	0.32	1.42		1.33	4.59		37.50 7.10
Professionals-technical	10.00	23.92		13.67	32.69		49.10 12.00
Sales & service	35.17	36.16		21.51	24.65		64.30 21.80
Craft and related	25.81	26.13		36.12	28.23		68.50 30.30
Low qualified	28.70	12.36		27.37	9.84		82.10 45.90
Sector of activity							
Agric,hh,other	12.91	6.83		18.36	7.07		76.80 45.30
Ind,ener,min	22.38	24.47		18.29	26.16		67.00 18.20
Building	14.22	5.45		20.87	4.71		83.40 60.20
Sales&hostel	28.31	22.25		14.39	13.16		71.60 27.10
Transport,com	13.74	20.09		13.62	18.11		58.20 18.80
Public serv	8.44	20.90		14.48	30.79		45.30 14.50
Private/public							
Public	10.60	20.20		13.11	36.14		50.26 11.60
Size of (private) firm							
0-19	47.82	47.75		23.08	49.19		70.34 42.80
20-99	13.06	22.41		15.36	20.45		77.37 32.79
100-499	9.24	7.15		9.08	5.83		67.35 18.15
500+	7.62	3.79		14.97	2.39		46.38 5.22
N	926	429		871	2441		68.34 27.12
Source: ECHP, second wave. Spain. INE;							

Table 3. Hourly “gross” and net wage means for young temporary and permanent workers, 1995

	Young					Adult				
	Temporary		Permanent		Perm /temp	Temporary		Permanent		Perm /temp
Net wages (pta)	494.30	<i>227.00</i>	655.30	<i>315.00</i>	1.3	572.50	<i>341.60</i>	949.80	<i>525.20</i>	1.7
“Gross” wages (pta)	618.05	<i>297.08</i>	901.72	<i>437.18</i>	1.5	768.51	<i>490.48</i>	1411.94	<i>883.43</i>	1.8
Net wages (euro)	2.97	<i>1.36</i>	3.94	<i>1.89</i>	1.3	3.44	<i>2.05</i>	5.71	<i>3.16</i>	1.7
“Gross” wages (euro)	3.71	<i>1.79</i>	5.42	<i>2.63</i>	1.5	4.62	<i>2.95</i>	8.49	<i>5.31</i>	1.8
“Gross”/net wages	1.25	<i>1.31</i>	1.38	<i>1.39</i>		1.34	<i>1.44</i>	1.49	<i>1.68</i>	

Source: ECHP, second wave. Spain. INE;
Note: the numbers in italics refer to standard deviations

Table 4: Hourly “gross” wage means for young temporary and permanent workers, 1995 (ECHP)

	young					adult				
	Temporary		Permanent		perm/ temp	temporary		permanent		perm/ temp
Gender										
Men	639.58	286.95	918.08	406.37	1.4	801.36	469.42	1443.39	952.32	1.8
Women	582.46	310.31	879.04	476.91	1.5	713.04	520.24	1338.87	692.70	1.9
educational attainment										
Low-education	559.36	240.06	751.81	340.56	1.3	654.97	281.31	1044.24	467.21	1.6
High school	612.48	288.88	850.61	383.30	1.4	740.42	301.76	1380.38	640.46	1.9
University	803.27	380.09	1114.35	491.34	1.4	1351.88	873.52	1955.46	1142.64	1.4
Working day										
15-30 hours	648.45	331.16	1056.98	762.81	1.6	761.07	637.28	1589.13	1157.59	2.1
30-39 hours	706.37	404.68	1251.18	503.89	1.8	971.05	571.39	1649.01	663.05	1.7
40-49	640.24	276.99	886.00	355.85	1.4	775.42	446.51	1328.19	841.75	1.7
50+	484.98	218.14	695.42	375.76	1.4	645.19	442.14	1306.45	1201.71	2.0
Tenure										
< 1 year	572.70	280.10	618.85	246.97	1.1	643.59	281.95	1017.67	806.64	1.6
1-5 years	622.49	295.35	877.22	451.92	1.4	809.76	575.36	1051.90	635.57	1.3
5 + years	717.32	353.16	955.27	436.18	1.3	853.17	522.02	1451.59	883.14	1.7
Occupation										
Direc-officials	662.47	143.00	1113.79	452.77	1.7	1743.98	685.89	2235.82	1700.13	1.3
Professionals-technical	989.52	449.29	1187.32	521.76	1.2	1398.88	909.93	1955.88	1008.56	1.4
Sales & service	565.67	255.50	860.26	391.46	1.5	657.71	285.19	1188.10	526.92	1.8
Craft and related	592.44	248.27	837.63	372.96	1.4	713.81	267.01	1113.80	486.94	1.6
Low qualified	576.97	224.87	665.16	291.14	1.2	605.76	266.82	851.08	323.21	1.4
Private/public										
Public	861.65	431.57	1275.79	489.24	1.5	1067.20	623.41	1645.03	749.42	1.5
Private	588.67	261.98	797.35	358.17	1.4	716.72	444.14	1275.87	926.49	1.8
Size of firm										
0-19	534.26	224.63	720.00	326.17	1.3	659.19	373.92	951.76	553.36	1.4
20-99	660.40	286.79	832.54	377.68	1.3	800.71	580.09	1231.65	1059.77	1.5
100-499	725.35	331.10	905.34	321.45	1.2	820.04	351.34	1421.93	1039.05	1.7
500+	648.20	199.15	1056.05	386.74	1.6	1034.10	385.50	1767.51	962.68	1.7
Average	618.05	297.08	901.72	437.18	1.5	768.51	490.48	1411.94	883.43	1.8

Source: ECHP, second wave. Spain. INE:

Note: the numbers in italics refer to standard deviations

Table 6: Wage structure (in %), by age groups						
	16-17	18-25	26-35	36-45	46-55	56-55
Base wage	77	66	56	50	48	48
Personal complement	13	16	24	30	31	32
Overtime payment	1	2	1,5	1,5	2	2
Extra payments	0,5	2	2	1,5	3	2
Shift complements	8,5	14	16,5	17	16	16
Source: SES, 1995, from Pérez and Hidalgo (1999)						

Table 7: OLS “gross” wage estimations for adults and young employees (ECHP)								
	Young				Adult			
	Temporary		Permanent		Temporary		Permanent	
	Coeff	Sign	Coeff	Sign	Coeff	Sign	Coeff	Sign
Intercept	10,557	**	10,480	**	5,630	**	7,452	**
Male	0,231	**	0,204	**	0,320	**	0,218	**
Age	0,048		-0,155		3,364	**	1,937	**
Age2	0,049		0,120	**	-0,534	**	-0,285	**
University	0,088	*	0,042		0,346	**	0,257	**
Secondary	-0,004		-0,100	*	-0,059		0,079	**
30-39	0,393	**	0,403	**	0,428	**	0,386	**
40-49	0,605	**	0,518	**	0,596	**	0,494	**
50+	0,641	**	0,679	**	0,611	**	0,616	**
Public sector	0,108	*	0,361	**	0,094	*	0,183	**
Size + 99	0,123	**	0,225	**	0,242	**	0,327	**
Professionals technicals, directives	0,242	**	0,328	**	0,484	**	0,515	**
Sales, hostel, personal service	0,008		0,215	**	0,106	**	0,184	**
Craft and related	-0,039		0,131	**	0,078	*	0,124	**
Tenure	0,011		0,004		0,008	**	0,014	**
Selection bias of being employee	0,042		0,114	*	0,040		0,079	**
Selection bias permanent/temp	-0,279	**	0,227	*	-0,445	**	0,340	**
N	836		408		785		2363	
Adjusted R ²	0.418		0.477		0.507		0.497	
Source: ECHP, second wave, Spain, INE								
** p-value = 99%, * p-value = 95%								

Table 8: Oaxaca decomposition of wage differentials, ECHP		
	adults	young
Characteristics/endowments	0,412	0,245
Returns/discrimination	-0,218	-0,112
Selection bias 1 (employees)	0,016	0,022
Selection bias 2 (contract)	0,427	0,269
Total	0,637	0,424

Table 9: OLS Wage equations for young and adult temporary and temporary workers SES								
	Young				adults			
	Temporary		Permanent		Temporary		Permanent	
	coeff	Sign	Coeff	sign	Coeff	sign	Coeff	sign
Female	-0,162	**	-0,242	**	-0,254	**	-0,289	**
1 to 3 yr	0,642	**	0,583	**	0,610	**	0,533	**
3 to 5 yr	0,706	**	0,684	**	0,668	**	0,589	**
More th 5 yrs	0,812	**	0,684	**	0,623	**	0,663	**
Manufacturing	-0,231	**	-0,337	**	-0,181	**	-0,239	**
Energy	-0,159	*	-0,071		-0,041		0,004	**
Building	-0,102	*	-0,276	**	-0,024		-0,118	**
Sales and repairs	-0,318	**	-0,394	**	-0,241	**	-0,209	**
Hostel	-0,251	**	-0,297	**	-0,113	*	-0,197	**
Transport, communications	-0,177	**	-0,225	**	-0,091	*	-0,158	**
Financial services	-0,117	*	-0,208	**	-0,077		-0,003	**
real state, serv. to enterprises	-0,350	**	-0,333	**	-0,172	**	-0,162	**
Age	0,283	**	0,125	**	0,014	*	0,059	**
squared age	-0,005	**	-0,002	**	0,000		-0,001	**
Primary	0,027		0,062		0,051	*	0,062	*
Compulsory	0,002		0,023		0,056	*	0,121	*
higher general education	0,048		0,197	**	0,187	**	0,334	**
Vocational level, initial cycle	0,064		0,157	**	0,132	**	0,246	*
Vocational level, 2nd cycle	0,078	*	0,218	**	0,236	**	0,317	**
University, first cycle	0,193	**	0,340	**	0,437	**	0,541	**
University, second cycle	0,283	**	0,516	**	0,520	**	0,784	**
20-199 workers	0,090	**	0,104	**	0,069	**	0,104	**
200 + workers	0,195	**	0,261	**	0,177	**	0,237	**
Private firm	-0,237	**	-0,100	*	-0,153	*	-0,011	**
Selection bias	-0,354	**	0,763	**	-0,716	**	1,506	**
Intercept	2,955	**	4,292	**	6,286	**	3,892	**
N	19430		14826		16318		88456	
Adjusted R ²	0,4689		0,4727		0,4107		0,5232	
Source: SES 1995								

Table 10: Oaxaca-Blinder decomposition: SES sample		
	adults	young
Characteristics/endowments	0,4174	0,3409
Returns/discrimination	-1,2085	-0,4600
Selection bias (contract)	1,4632	0,3622
Total	0,6721	0,2431
Source: SES 1995		

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