University of Naples "Federico II"
Wage Gap and Wage Equity in Italy's Non-Profit Sector

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Abstract[#]. In this paper, we provide up to date and detailed evidence on the wage level and degree of wage equity in non-profit sector in Italy, compared to the for-profit sector. We find two results that are rather surprising when compared to the experience of other countries. Firstly, the wage level of workers employed in non-profit organisations (NPOs) is not lower than that of their colleagues in for-profit organisations (FPOs). Secondly, NPOs have a higher degree of wage dispersion than their for-profit counterparts. Competing explanations are tested using the Survey on Employment in the Social Care and Educational Services (SESCES) conducted in 15 Italian provinces in 1998. Workers in NPOs have higher levels of education and tenure. Besides, the share of women is higher in FPOs. Decomposition analysis of wage determinants within the context of mincerian type' equations confirms these factors have a substantial impact. Similar factors explain also the low degree of wage equity of NPOs.

JEL classification: I00, J31, L31 and L84
Keywords: wage determination, non-profit organisations, efficiency wages

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[#] Acknowledgements. This paper has been presented in various scientific meetings, at the Department of Economic Theory and Applications, University of Naples "Federico II", 11th April 2001, at the Department of Economics, University of Trento, 2nd June 2001. We thank all the seminar participants, in particular Carlo Borzaga, Domenico Marino, Luigi Mittone, Marina Shenkel and Marco Musella for useful comments. We are also grateful to Carlo Borzaga for providing the data and to Sara Depedri for providing help with the data.

Introduction

A first strand of theoretical models of wage determination based on the efficiency wage approach suggests productivity be positively dependent on the wage level. Not only wages are affected by productivity, but also the latter positively depends on the former (Shapiro and Stiglitz, 1984). Another strand of literature assumes non-wage compensations, usually identified as the degree of fairness existing within (and across) the organisation(s), could combine or add to wage compensations to increase the productivity level of workers (Akerlof and Yellen, 1984). Fairness includes various components, such as wage equity, cohesiveness among workers and with managers, workers participation to the firm's decisions and sharing the firm's ends (Akerlof and Yellen, 1990).

Moreover, the literature on non-profit organisations (NPOs) assumes these are characterised by a higher degree of fairness than for-profit organisations (FPOs); see, for instance, Rose-Ackerman, 1996, and the surveyed literature; for Italy, Borzaga (2000) and Mosca and Musella (2001). Also motivation and satisfaction are commonly supposed to be higher in NPOs, as their employees and managers are intrinsically more keen on helping the disadvantaged than their colleagues in private organisations are. The very existence of NPOs is sometimes justified within this theoretical framework by the ability of workers to accept the values of stakeholders as their own values and the values of the organisation. An apparent and common argument to support the hypothesis of a higher degree of motivation and satisfaction among workers and managers in NPOs is the high share of this type of organisations that employ voluntary work. In Italy, 62.5 and 94.1 percent of lay and religious NPOs respectively use unpaid work.

Essentially, efficiency wage models applied to the analysis of compensation in the non-profit sector assume the existence of a non-profit wage gap in favour of FPOs and against NPOs and of a higher degree of wage equity in the latter as opposed to the former. In fact, NPOs would provide their workers and managers with non-monetary compensations able to substitute for a lower wage level. In other words, workers in NPOs would accept lower than average wages because they enjoy more their work and because they feel to be treated fairly within the organisation. This is expected to raise the degree of motivation and satisfaction, increasing in turn the productivity level. On a policy ground this has often been considered an argument against the diffusion of NPOs as NPOs would reduce the wage level (see Cofferati, 1999).

We provide evidence that is not supportive of these theoretical predictions and policy worries. In the Italian case, there was not any statistically significant difference in average wage levels between FPOs and NPOs in 1998. Besides, this lines towards what has been reported for other countries. In her study of the wage distribution relative to firms operating in all sectors in the US, based on 1990 Census data, Leete (2000) finds there is not any wage gap between non-profit and for-profit organisations. Again for the US, Ruhm and Borkoski (2000) find the

same applies also using the 1994-'98 Current Population Survey Outgoing Rotation Group (CPS-ORG) data[1].

Moreover, contrary to expectations based on theory and, in this case, also on other countries experiences, wage equity, proxied by the degree of dispersion of the wage distribution, seems to be higher in FPOs than in NPOs, with a gap of 1.7 points in the variance of the natural logarithm of hourly wages in favour of the latter. The comparable figure for the US is different and points to a differential of 9.3 points in the for-profit as opposed to the non-profit sector (Leete 2000, tab. 2).

We find various explanations for this surprising finding. A general explanation of the higher than expected compensation level of workers in NPOs as opposed to those in FPOs lies in the data we use. Our estimates are based on the Survey on Employment in the Social Care and Educational Services (SESCES)[2] in Italy. This is an *ad hoc* survey of state, private, for-profit and non-profit organisations operating in the supply of social services, such as cultural services, education, health care and assistance to the elderly and the disadvantaged. However, these sectors almost coincide with those (hospitals, nursing/personal care facilities, social services, education) where Ruhm and Borkoski (2000) find on average non-profit workers earn as much or more than their for-profit counterparts.

In addition to the sector, also workers' heterogeneity concurs to explain the relatively high wage level in NPOs. These last employ a higher (and lower) share of workers with characteristics that have a high (low) payoff than their for-profit counterparts. In particular, the level of education and tenure is higher among workers in NPOs. Moreover, women represent a lower share of employment in NPOs compared to FPOs. In order to control for environmental and workers' heterogeneity, we model and estimate mincerian wage equations in the non-profit and for-profit sector. Decomposition analysis confirms that differences in the characteristics of workers in the two sectors are a convincing explanation for the relatively high wage level in NPOs. In turn, this suggests the average wage level be a poor measure of wage compensation of workers in the unconditional supply of social services, as worker and sector heterogeneity are not considered.

A suggested explanation for the higher degree of wage dispersion in NPOs has strong theoretical underpinnings. In fact, it could be either that workers in the non-profit sector have significantly different tastes (and, say, technologies) from workers in the for-profit sector (and then imply that they provide the same effort than comparable workers in the for-profit sector) or simply that the non-profit sector is less efficient compared to the for-profit sector, according to the Lazear's, (1991) argument. In the former case, it could be that non-monetary compensation mechanisms other than wage equity be at work. In fact, motivation is higher in NPOs and other components of fairness, such as cohesiveness and participation to

[1] The CPS is nationally representative survey of about 50.000 households. These are interviewed for four months, exit the sample for eight, and then return for four final months. The ORG includes persons in the last of each of the four months segments (Ruhm and Borkowski, 2000, p. 7).

[2] In Italian, the name of the survey spells out *Indagine sull'occupazione nel settore dei servizi socio-assistenziali ed educativi*.

management and so on, could explain why motivation is high also when the degree of wage equity is low. An alternative explanation would lie in the Lazear's (1991) argument. According to the author, the effect of wage inequity needs not necessarily be a net loss of motivation or productivity. The loss of status to those at the bottom of the wage distribution is (by definition) equal to the gain to those at the top. While there may be an efficiency gain from harmony in the work place, there can also be efficiency gains spawned by competition between workers to win tournaments.

The reminder of the paper is as follow. Section 1 discusses the relevant theoretical literature on non-monetary wage compensations. Section 2 describes the wage determination in NPOs. In section 3, we provide a description of the data utilised. Section 4 reports the statistical evidence on the non-profit wage gap and the degree of wage dispersion by firms' ownership in Italy. Section 5 outlines the modelling strategy adopted to estimate the determinants of the wage gap and dispersion. Section 6 contains the definition of variables utilised in the analysis. In the final section, we report the results of the estimates. Some concluding remarks follow.

1 – The institutional framework

1.1 – The world-wide surge in NPOs

The non-profit sector has attracted much attention among economists in the last decade. This increased interest in NPOs reflects their growing size both in terms of income and employment. According to Barbetta (1996), 1.1% of the Italian GDP is originated by the non-profit sector, which attracts 416.000 workers representing 1.8% of paid work in 1991. Confirming a trend existing in many countries, a survey conducted by Isfol (1998) shows the GDP and employment shares of the non-profit sector had relevantly increased thereafter, reaching 3% and more than half million of paid workers by 1998.

Despite the recent surge of NPOs in Italy, their weight is much lower than in other EU countries and in the US. Salomon and Anheier (1994) report, for instance, non-profit workers represented 1.8% of total employment in Italy, 3.7% in Germany, 4.0% in UK, 4.2% in France and 6.8% in the US in 1990. Notwithstanding the relevance of such differences, the non-profit sector is particularly important in Italy as it contributes to alleviate the pressure existing in the labour market due to persistent excess of labour supply.

A strand of the literature is investigating advantages and disadvantages of the non-profit sector growth. The advantages are supposed to lie above all in the ability of the non-profit sector to satisfy a demand for social services that state organisations are unable to satisfy. Secondly, long-term unemployed women in the South constitute the bulk of the country's unemployment. The expansion of social services could provide demand especially for women's labour. Moreover, according to Musella and Pastore (2001), due to their ability to attract long-term unemployed in voluntary work, NPOs contribute to the process of human capital accumulation reducing the scarring effect especially in areas characterised by mass-unemployment and persistent excess of labour supply [3]. One of the main disadvantages of the non-profit sector as opposed to the for-profit and state sector is the supposed lower wage level. We are going to investigate this issue in the following sections.

1.2 – The different nature of NPOs and FPOs

The theoretical literature has focused on the differences existing between NPOs and FPOs. Large agreement exists on the idea NPOs have different nature from FPOs. The differences concern the reasons of existence, the goods and services produced, the organisational aims and methods adopted.

[3] Nonetheless, Musella and Pastore (2001) find past experience of voluntary work does not increase the job finding rate among young unemployed workers in Northern and Southern Italy.

NPOs find their reason of existence in case of market *and* public failures. In his seminal work, Weisbrod (1977) suggests NPOs constitute an efficient organisational solution for the production of public goods and services. The existence of NPOs is justified because in an economy with the public and private sector the former is interested in the production of goods asked for by the median voters. Such a situation determines a considerable demand of public good is not produced and a large number of consumers are not satisfied whenever they ask a quantity of public goods larger than the median voters require. NPOs are formed to bridge such a gap. They can satisfy the demand of public goods that the public sector is not interested in. Following this approach, NPOs constitute private suppliers of public goods and their 'mission' is to integrate the public sector because insufficient. Weisbrod (1977) stresses also the point that the free rider problem, typical of the production of public goods, mitigates in case of the simultaneous presence of different sectors. These, in fact, give to the social pressure the possibility to reduce the 'incentive' to act as a free rider. A further hypothesis put forward by the Author is the more heterogeneous are consumers' preferences, the bigger is the number of NPOs in the sector.

Hansman (1980) represents another cornerstone of the nonprofit literature. His approach is based on the idea the existence of NPOs relates to the impossibility to distribute net earnings. This is not an obstacle but it guarantees the overcoming of market failure. Following Hansman's ideas there are situations that do not allow the market to achieve an optimum equilibrium. In such circumstances, FPOs are not capable to produce goods and services in quantities and prices that are compatible with the social welfare. In other words, the optimum allocation is not obtained as consumers and producers have not access to full information about the object of their bargaining. It emerges then the problem linked to asymmetric information. To solve this problem the consumers should have the possibility to compare the quality and the price of goods and services before buying them; or to achieve an agreement with the producer on the quantity of goods or services produced and the price asked; or, finally, he should have the possibility to check whether the producer performs the agreed 'contract' and to obtain the reimbursement. When these conditions do not hold, the consumer can not judge the good or service's price and quality and FPOs have the incentive to reduce the quality or simultaneously increase the price for augmenting their profitability. The elements reported so far represent the causes of the 'contract failure' and this inefficiency gives room to the presence of NPOs and to the possibility to solve the problem of misallocation of resources. Around this approach there is large agreement. In fact, it is recognised that because of the impossibility to share the net earnings there are not incentives for the NPOs to reduce the good and service's quality or to increase the price. That is it reduces the possibility for the management to benefit from the firm's profit.

The presence of NPOs is strongly supported not only for the production of goods and services for which the consumer has difficulty to judge the quality and the price but also for the production of public goods. The 'contract theory failure' explains that in presence of the public good the contract fails not because of the free rider problem but for the impossibility for the consumer to verify the destination of his contribution and the quality of the services produced. Following

this approach it is possible to explain the presence of NPOs in different sectors: material goods, services and public goods.

Another issue regards the possibility for NPOs to employ workers intrinsically motivated that share the firm's projects and methods. This is supposed to make NPOs able to achieve an efficient production level and be as competitive as their private counterparts.

1.3 – The legal framework in Italy

The Italian legislation regarding NPOs is characterised by numerous norms formulated during '80 and '90 that do not follow a homogeneous co-ordination. It emerges then an incomplete legal framework that has raised different difficulties. The first regards the fact that there is not a standard definition for the organisation operating in the non-profit sector. The lack of a standard regulation has given room to a multitude of subjects to join the sector and in many cases intertwining their activities without focusing the strengths on their field of action. Furthermore, the multitude of organisations has created a great heterogeneity among them generating at the same time the impossibility for achieving a general definition and regulation of the sector. Actually, it results a mixture of norms that do not take into the account the financial and economic needs of NPOs with the risk to extend and apply to this sector norms and rules typical of organisations that carry on their activities in the traditional economic profit-seeking sector. The needs for a standard definition in Italy raises the question of the issue regarding the possibility for NPOs to enjoy taxes relieves. In fact, in the literature it is sometimes outlined NPOs differ from FPOs as the former receive particular preferential treatment by the government. (Frank and Salkeven, 1994). The preferential treatment, common to many countries, is justified by the fact that NPOs can not distribute their net earnings. This prohibition does not create an incentive to raise prices or reduce the quality of the goods and services they produce because the management cannot benefit from the increased profitability. Hansman (1980) stresses this point. He also claims NPOs may be economically efficient when consumers can not accurately judge the price, the quantity and quality of the goods and services produced. For these reasons, NPOs are relatively more frequent in markets characterised by asymmetric information, i.e. in market in which the consumer trust problem is particularly severe (Hansman, 1980; Easley and O'Hara, 1983; Handy and Katz, 1998). This point stressed in the international literature can not be fully supported for the Italian case because the data survey does not report clear information about this idea and the Italian law for Nonprofit Organisation for Social Utility (*Organizzazioni Non-lucrative di Utilità Sociale*, ONLUS) was voted in 1997. In fact, the 1997 ONLUS law extends a favourable tax regime to the Italian NPOs[4].

[4] Voluntary organisations, social co-operatives and non-governmental organisations (NGO, regulated by the law 49/1987 on international co-operation) are automatically classified as ONLUS and enjoy the same tax regime. Other organisation classifiable as ONLUS are associations, committees, foundations, private corporations when they carry out their activities in one of the following sectors: 1 – social and sanitary assistance; 2 – sanitary assistance; 3 – charity; 4 – education; 5 – training; 6 – amateur sport; 7 – safeguard, promotion and valorisation of artistic

The fundamental conditions to be respected by the NPOs in order to receive the special treatment envisaged by the law are: a non-profit aim; an exclusive purpose of social solidarity; a regulation insuring participation and democracy.

and historical places; 8 – safeguard and valorisation of environment; 9 – promotion of culture and art; 10 – defence of civil rights; 11 – scientific research having a relevant social interest. Religious associations are considered ONLUS only if their activities are carried out in charity.

2 – Wage determination in NPOs

2.1 – Theoretical aspects: the efficiency wage approach

A first strand of theoretical models of wage determination based on the efficiency wage approach suggests productivity be positively dependent on the wage level. Not only wages are affected by productivity, but also the latter positively depends on the former (Shapiro and Stiglitz, 1984). Another strand of literature assumes non-wage compensations, usually identified as the degree of fairness existing within (and across) the organisation(s), could combine or add to wage compensations to increase the productivity level of workers (Akerlof and Yellen, 1984). Fairness includes various components, such as wage equity, cohesiveness among workers and with managers, workers participation to the firm's decisions and sharing the firm's ends (Akerlof and Yellen, 1990).

There is a common belief in Italy and also in other countries on the issue that NPOs pay lower wages providing lower quality low pay jobs. To explain why this should be true efficiency wages models have been brought into focus. The basic assumption of these models is based on the idea that the employee effort that influences his productivity is a variable not fully checkable and measurable by the employer. Because the productivity is linked to the employee effort it is possible by increasing the effort to increase also the productivity. In other words efficiency wages models suggest that by paying workers with higher wages it is possible to act on the effort and then increase through it the productivity level (Shapiro and Stiglitz, 1984).

Another approach based on efficiency wages models assumes that in particular sectors non-wage compensations, usually identified as the degree of fairness that exists within (and across) the organisation(s), could combine or add to wage compensations in order to increase the productivity level of workers (Akerlof and Yellen, 1984). Fairness includes various components, such as wage equity, cohesiveness among workers and with managers, workers participation to the firm's decisions and sharing the firm's ends (Akerlof and Yellen, 1990).

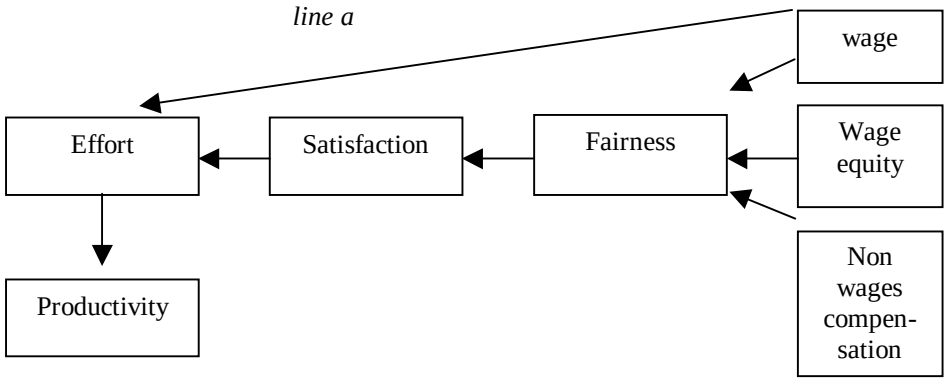
With reference to Homans (1954), Akerlof (1982) hypothesise wage increases do not affect the effort and hence the productivity of 'Cash Posters' workers. Homans (1954) founds the productivity of 'Cash Posters' exceed on average the minimum level required by the contract by almost 15 percent without workers claiming wage increase or promotions to better jobs. From an economic point of view, the importance of this study lies on the fact it envisages the individual behaviour contradicts the optimisation principle stressed by the traditional theory. On the one hand, more productive workers do not reduce their effort to the minimum standard level required by the contract and, on the other hand, firms do not increase the minimum standard level required to the one realised by the more productive workers. This result suggests that the increase in the productivity level is not strictly linked to that in the wage level and increasing the degree of wage dispersion does not augment the productivity level, when non-monetary compensation factors, linked to the nature of the job, are at work. In Homans's example, cohesiveness seems to be a substitute for higher wages. More

generally, it could be that, in some cases, fairness more than compensate for insufficient monetary compensation.

Wage equity is considered as equity within groups homogeneous for level of education, qualification etc.

However, sometimes, wage equity across organisations is also considered an important parameter that can influence the fairness perceived by workers and trough it increase the level of satisfaction, the effort and then the productivity.

We briefly report this interpretation using a simple scheme.



This scheme contains different ways of reading efficiency wages models. In fact, *line a* links the wage level to the effort and than to the worker productivity. The other lines instead are built on the idea that in some sectors the worker satisfaction assumes an important role in determining the productivity. At the same time the fairness perceived by worker could influence and increase the productivity. In fact, workers in NPOs have higher degree of motivation and they perceive higher fairness that influences the satisfaction level and then the productivity. The idea stressed in the literature is based on the fact that workers employed in this sector possess a different kind of utility function. In fact, the wage and the cost of working do not represent the exclusively variables influencing worker utility. The consumption on the job and out of the job could combine to those variable and affect workers utility. The results of investigation we are going to present in the following sections are based on the idea we aspect workers employed in the non-profit sector are more willing to accept a lower wage.

2.2 –Evidence on wage and equity level across organisations

On an empirical ground, one unresolved issue is whether workers in NPOs receive a lower wage then their colleagues in FPOs[5]. The available evidence on this issue is neither unequivocal nor definitive. It is possible to group the results

[5] Note the state sector generally pays higher wages than the private sector. As shown in a later section, this applies also to Italy. The higher wage of workers in state organisations depends substantially on institutional factors. The issue will be the object of future research.

into three categories. A first larger strand of literature suggests the existence of a relevant and stable wage gap in favour of FPOs. A second strand of literature finds a moderate wage differential. A third limited strand of literature finds wage differentials in favour of NPOs operating in particular sectors.

Many data surveys indicate NPOs pay their managers and professionals lower wages compared to FPOs and state organisations. Weisbrod (1983) uses the nationally representative surveys of private and non-profit, so-called public interest lawyers (PIL) relative to the years 1973-'74. He finds for-profit law firms pay their graduates higher wages (by almost 20%) compared to their counterparts belonging to the non-profit (and public) sector. Goddeeris (1988) using the same data survey finds that PIL earn 37% less than those in private sector and such a difference is fully attributed to the workers characteristics. Conversely, Preston (1989) uses 1979 census data and analyses the determinants of US employees wage differentials between NPOs and FPOs. After controlling for the occupation, demographic structure, workers characteristics, he notices a wage differential of almost 20% for managers and professionals, but not any for clerical workers. In a study regarding the Cornell University graduates, after controlling for gender, qualifications, academic performances, Frank (1996) finds graduates employed in the for-profit sector earn about 59% more than those in the non-profit sector do.

Another strand of literature does not find any substantial wage differential. Using several control variables, Leete (1994) does not notice any wage differential in favour of the for-profit, but rather a contained wage differential against FPOs in some industries. Using the 1994-'95 CPR-ORG data, DuMond (1997) finds a restrained wage gap fluctuating between 6 and 11 percent points.

Borjas, Frech III and Ginsburg (1983) use 1973-'74 National Nursing Home Survey and notice that non-profit nursing homes pay higher wages than the for-profit sector. Using the same data survey for the 1985, Holtmann and Idson (1993) notice NPOs employ workers with higher quality and find a 3 percent hourly wage premium for registered nurses in NPOs. Ruhm and Borkoski (2000, p. 13) use the ORG 1994-'98 data and find 'within many narrow industries, there is a non-profit premium 10 percent higher in education, 11 percent in hospitals, 14 percent in nursing/personal care facilities and 18 percent in social services'.

The difficulties to find a concordance between the numerous data surveys could be attributed to the differentiation existing between the distribution of jobs and workers characteristics by country and sector. The difficulty emerges because of the impossibility 'to determinate whether the wage disparities reflect some type of compensating differential or worker heterogeneity not accounted for in standard earnings regressions' (Ruhm and Borkoski, 2000 p.1).

The evidence is not unambiguous also on wage equity. Leete (2000), using the variance of wages as a proxy of wage equity finds that the variance in the non-profit sector is lower than the for-profit sector in US. This implies wages are less dispersed and wage equity higher in non-profit sector. Different findings are reported in Ruhm and Borkoski (2000, p. 35). They find for US a higher variance for the non-profit sector. The value of the variance becomes higher when the analysis focus on the sectors in which NPOs are more diffused. This result shows, in contrast to Leete (2000), that wages are more dispersed and that the wage equity lower.

3 – Data description

Before presenting the results of the econometric analysis, it is useful to describe the main features of the data used, the Survey on Employment in the Social Care and Educational Services (SESCES). This is an *ad hoc* survey conducted by the *Istituto di Studi di Sviluppo Aziende Nonprofit* (ISSAN) on 228 state, private and non-profit organisations operating in the supply of social services, such as cultural services, education, health care and assistance to the elderly and the disadvantaged[6]. This means NPOs operating in the bouncing sector, traditionally sizeable in the country, non-governamental organisations providing aid to less-developed countries and so on are not considered Organisations with different legal nature are considered[7]. Moreover, organisations younger than three years, employing less than three paid workers and with discontinuous activity are excluded from the universe. When an organisation has more headquarters, only one headquarter has been considered if only (less than or) ten paid or unpaid workers were employed. Organisations of big size have been registered as having more headquarters. Overall 268 headquarters are considered.

The SESCES considers only a limited bench of sectors. Therefore, the results cannot be generalised to NPOs in all sectors. In fact, the supply of social services, rather than the non-profit sector, is the subject of the enquiry. Nonetheless, it is worth mentioning the country's non-profit sector tends to concentrate in the aforementioned sectors.

The survey was carried out in the first semester of 1998 in fifteen Italian provinces[8], with a more relevant presence in the North, where non-profit organisations are more diffused. Only Florence represents the Centre. Therefore, the survey is not nationally representative. Nonetheless, the authors claim it is representative of the underlying population of organisations in the provinces considered.

The questionnaires have been carried out on four different subjects: voluntary and paid workers, organisations and managers. They are very rich and allow the generation of 400 variables for organisations and 240 variables for workers. Overall, 2066 paid workers out of 9226 sampled interviewees returned the questionnaire completed in all the sections. This means the data is limited. However, the sample represents 20% of the 'universe' and, according to Borzaga

[6] More in detail, the nine sectors considered are: assistance to the elderly; assistance to people with a handicap; assistance to drug and alcohol addicted; assistance to mentally ill persons; day-care and primary centres and baby sitting; other services to minors or young people; school or work guidance; job-search assistance; and health services.

[7] Private FPOs include one-man companies, *de facto* corporations, limited liability companies, public companies; private NPOs include: cooperatives, social cooperatives, recognised and not recognised associations, foundations, privatised IPAB (*Istituto Pubblico di Assistenza e Beneficenza*), consortia, religious institutions, moral institutions; state organisations include also Public IPAB.

[8] From the North to the South, they include: Trento, Gorizia, Pordenone, Trieste, Udine, Venezia, Cuneo, Torino, Brescia, Firenze, Napoli, Salerno, Catanzaro, Reggio Calabria and Messina.

(2000, pp. 361-366), it is representative by the statistical sample normal size. 266 managers and 724 unpaid workers complete the sample.

The aim of the survey was to provide information on: a – the supply of social services in Italy; b – the differences between types of organisations, especially differences in wage and work conditions, the degree of satisfaction and motivation, the degree of trust in the organisation; c – the presence of competitive advantages in each type of organisation; d – the nature and motivation of voluntary work in the sector. One of the main reasons of interest in the survey is specific questions have been asked especially on the degree of motivation at work. This information is particularly important in a study of the wage distribution of organisations with a different nature.

Borzaga (2000, p. 366) outlines two limitations of the data. Firstly, the questionnaires are so rich that some refusals to answer and some missing answers have been registered. The missing observations are not so big to reduce the degree of representativeness of the sample, though. Secondly, in the case of bigger organisations, the interviewers had to choose a selection of workers. The risk exists that especially among NPOs the newest services have been selected, where motivation is generally higher. The consequence could be an overestimation of the degree of motivation in NPOs compared to other organisational types.

4 – Evidence on the non-profit wage gap and on wage dispersion in Italy

4.1 – The non-profit wage gap

Table 1 below reports average net monthly wages[9], the natural logarithm of hourly wages and the degree of wage dispersion among full-time and part-time workers employed in the supply of social services by three main types of organisations: the state, private and non-profit organisations. Notice three types of NPOs are recorded, the social co-operatives, the other lay and the other religious organisations. In fact, there is little difference in the nature of these three types of NPOs. The main difference is the first group is more oriented than the others to the provision of social services are. The difference between the other lay and the other religious organisations lies essentially in the moral values followed by the organisation.

As already noted in Borzaga (2000) in a study based on the same data, the state sector pays significantly higher average wages than other organisations (Table 1 and 2). Although with slight differences by sector, the gap is generally quite substantial on average, amounting to over 15%. This finding is not surprising. In fact, as noted before, it confirms the findings relative to other countries[10]. Also the size of such a gap is not very different from that found across EU and non-EU advanced countries. In their study of the wage distribution of workers employed in the provision of social services in the US, Ruhm and Borkoski (2000, Tab. 3) find government workers are overpaid compared to their counterparts in private, for-profit and non-profit organisations. The differential in net weekly earnings equals 8.4% with respect to FPOs and 11.5% with respect to NPOs. A possible immediate explanation of such a gap is the net monthly wages in the state sector include also other sources of income. No further attempt is made in this paper to explain the wage gap between state and other organisations, as wage determination in the state sector is based on non-market factors. Moreover, the degree of unionisation in state organisations is much higher, which would lead to higher wages.

Tab. 1 – The non-profit wage gap and wage dispersion among full-time and part-time workers in Italy

		Full-time		Part-time	
Organisations		w_m	Ln (w_h)	w_m	Ln (w_h)
State organisations	Mean	1745349	9,31	1063245	9,31
	N[1]	470	458	75	74

[9] The question used is as follow: "Can you indicate your monthly average net retribution received in the last months (Excluding possible overtime retributions, back pays etc.)?" No attempt has been made to control for inflation, as the data refer only to a specific year and inflation was at about 2%.

[10] Nonetheless, evidence exists that the quality of the services produced by state organisations is lower than that of other organisations.

	St. dev.	371572	0,19	418906	0,46
FPOs	Mean	1546774	9,16	1177923	9,38
	N[1]	136	134	26	20
	St. dev.	239393	0,19	339899	0,39
NPOs, of which:	Mean	1540253	9,16	1056101	9,25
	N[1]	844	829	277	268
	St. dev.	305403	0,23	372033	0,39
Social cooperatives	Mean	1487513	9,11	972645	9,19
	N[1]	386	378	152	148
	St. dev.	309231	0,23	255589	0,34
Other lay NPOs	Mean	1658910	9,25	1203195	9,39
	N[1]	279	276	87	84
	St. dev.	307640	0,24	502119	0,47
Other religious NPOs	Mean	1469036	9,14	1053158	9,20
	N[1]	179	175	38	36
	St. dev.	232135	0,19	316765	0,22
Total	Mean	1607344	9,21	1065898	9,27
	N[1]	1450	1421	378	362
	St. dev.	336800	0,23	379963	0,40

Note: [1] The number of observations relative to Ln(w) is systematically lower than that of w, as in 56 cases the information on retribution and / or the hours worked are missing.
Source: own elaboration on the SESCES.

On average, there is no statistically significant wage gap between full-time workers in NPOs and FPOs (Table 1 and 2)[11]. This finding lines towards what Leete (2000, Tab. 1) notes for the US, but it is in sharp contrast with the main finding of a non-profit wage gap found by other authors (Borjas, Frech III and Ginsburg; 1983). On a theoretical ground, our finding is rather surprising. Within an efficiency wage framework, one would expect NPOs pay lower and more equal wages to more motivated workers. These last would accept lower wages compared to their counterparts in other sectors, as they would feel more satisfied with the type of job they do and with the higher degree of fairness with which they are considered within the organisation.

Explaining such surprising result is one of the main aims of this paper. A first explanation is a slight wage gap actually exists in favour of FPOs, if one excludes the other lay organisations, which pay significantly higher wages than their non-profit counterparts. In other words, within the non-profit sector social cooperatives and the other religious NPOs remunerate workers with a net monthly wage lower (-4.2%) than in FPOs.

Suggested explanation for the absence of a wage gap between NPOs and FPOs are as follow. Firstly, only organisations active in the supply of social services are considered in our data. These are sectors where generally NPOs are found to pay higher wages than similar organisations operating in other sectors. Ruhm and Borkoski (2000, pp. 13, 14) report generally FPOs pay higher wages than NPOs, (3%) on average. Nonetheless, NPOs operating in the education (10%), in hospitals (11%), in nursing and personal care (14%) and in social services (18%) pay higher wages then for-profit counterparts. The authors also underlie cross sectors differentials are by far the main determinant of wage differentials across organisations.

Another possible explanation would lie on the institutional features of NPOs. In various countries, NPOs enjoy a regime of tax exemptions. This could

[11] Note the variance difference of Ln(w) between State and FPOs is significant, whereas the variance difference of w is not (see also Tab. 1). This could be due to the fact that for higher monthly wages the hours worked are not reported.

explain the higher wages paid within these types of organisations. However, as noted in section 1.3, this is not the case of Italy. Only recently, one year before the survey was carried out, the Government has introduced special provisions in favour of NPOs (Onlus, 1997 law).

Thirdly it could be that workers in NPOs are better educated and qualified and not willing to accept low wages. This would suggest that the average wage be an insufficient measure of compensation in the three sectors. In fact, it could be that we are measuring two different types of organisations, of which type one, for instance the NPOs, employs significantly and relevantly better workforce than the other type, FPOs. As a consequence, proving that this is the case, would mean suggesting that the actual wage in NPOs is lower than in FPOs all other things being equal. In what follow we find sufficient evidence to support this viewpoint.

Tab. 2 – T-tests[1] of the means and variance differences between Ln(w) of full time workers by organisation type

Organisations		FPOs	NPOs	NPOs (without the Other lay organisations)	NPOs (Other lay organisations)
State	Ln(w)	0.15***	0.15***	0.19***	0.03***
		(0.00)	(0.00)	(0.00)	(0.01)
	Var Ln(w)[2, 3]	0.02	0.01***	0.00	0.01
		(0.53)	(0.01)	(0.74)	(0.56)
FPOs	Ln(w)		0.00	0.04*	-0.15***
			(0.91)	(0.05)	(0.00)
	Var Ln(w) [2, 4]		0.02**	0.00	0.03*
			(0.03)	(0.45)	(0.05)

Note:
*[1] The stars represent significance levels: *, **, *** indicate a significance level of 10, 5 and 1 per cent respectively. The figures between brackets represent significance levels.*
[2] The reported value is the difference in the standard deviation.
3 The Levene test is used to test the homogeneity of variances.
Source: own elaboration on the SESCES.

The analysis becomes more complex when part-time work is considered. In this case, the for-profit sector pays higher net wages than their state and non-profit counterparts. The gap is much sizeable when social cooperatives are brought into focus, but becomes negative with respect to the other lay NPOs[12].

4.2 – Wage dispersion

The variance difference[13] is sizeable (0.02 in terms of the natural logarithm of net monthly wages), but statistically significant only at 5%. This compares with

[12] Leete (2000, tab. 7), finds FPOs, ceteris paribus, pay higher than average wages and NPOs lower than the average wages to the partime workers. We leave the analysis of this issue to further research.

[13] The Levene's test is used. The null hypothesis of homogeneity of variances is tested on the basis of assumptions that do not rely on that of normality. This is because the test is applied to each cell computing the absolute difference with respect to the cell average. Then, a univariate

a differential of 9.3 points in the degree of wage equity, measured by the variance of the wage distribution in the non-profit as opposed to the for-profit sector in the US (Leete, 2000, ab 2).

This result is even more surprising from a theoretical point of view. In fact, according to the efficiency wage approach sketched out in section 2, one would expect workers in NPOs to be more motivated (and therefore more willing to accept low wages) also because of the supposed higher degree of wage equity in these types of organisations. Here we assume wage equity is one of the ways to measure fairness.

Firstly, as noted before our data uncludes only organisations operating in the provisional of social services. It could than be that NPOs in this sector pay more dispersed wages compared NPOs in other sectrors. This result seems to be in line with Ruhm and Borkoski (2000) but not with Leete (2000). Another possibility is the same differences affecting the wage level affect also wage equity. In other words, it could be that the higher degree of wage dispersion is due to the higher degree of differentiation of workforce employed within these organisations. Moreover, the differences in characteristics could be amplified by the supposed tendency of NPOs to pay higher wage premiums to education, tenure and professional qualification.

ANOVA is applied to these differences. This type of test abstracts from heterogeneity within the sample.

5 – Modelling the non-profit wage gap

Following Leete (2000), we model the wage gap between workers in FPOs and NPOs within the framework of mincerian wage equations. This modelling strategy implies three main steps. As step one, the determinants of wages in the FPOs and NPOs are estimated. Then, the determinants of wage dispersion in the two sectors are considered. Finally, we decompose such wage dispersion, using the standard Oaxaca definition, in search for the determinants of the gap in the degree of wage dispersion.

The most important assumption implied by this modelling strategy is it is possible to infer that non monetary compensations are at work from the existence of a lower degree of wage dispersion in the non-profit sector compared to the for-profit sector. This could be not the case. In fact, it could be either that workers in the non-profit sector have significantly different tastes (and technologies) from workers in the for-profit sector (and then imply that they provide the same effort than comparable workers in the for-profit sector) or simply that the non-profit sector is less efficient compared to the for-profit sector (Lazear's argument). Only in case one, low wage dispersion is a sign of motivation. In case two, we have a further proof that monetary compensation is the most important determinant of work effort. A third possibility is that some monetary compensations are concealed by wage data, as they are provided as fringe benefits and similar.

How to contrast these hypotheses? Our *ad hoc* survey of workers and firms in the for- and non-profit sector provide information regarding worker's satisfaction in private and non-profit companies. The information is based on answers to questions about the degree of work satisfaction. However, I don't trust so much this type of data, as it is obvious that a person working in an organisation providing, say, help to disabled people find important helping others. It is like asking a person working in the army whether he likes dressing the army uniform. Another possibility is the information on extra hours worked per day. In this case, extra wage compensation (fringe benefits) could be at work.

6 – Cross-sector differences in mean characteristics

In the following sections we test the above hypothesis linked to the determinants of wage level and wage equity across the organisations within the framework of the mincerian type's wage equation. First, let us define the variables used.

6 1– Variables definitions

As already noted, the dependent variable in the estimates is the natural logarithm of net hourly wages. This is obtained dividing the declared average monthly wage after tax by contractual hours.

A small number of sampled individuals (9.5%) do not declare either their monthly wage (6.8%) or their contractual hours (4.1%). Missing observations have been substituted by mean values of the variable distinguished by the organisation type. We test for robustness of our results estimating the same equations on the original and transformed dependent variable. There are not notable differences.

Voluntary workers are not included in the sample, as they declare not to receive any wage.

The independent variables introduced in the estimates in order to control for wage differences can be grouped into individual characteristics, human capital endowment and environmental variables, such as the sector and the type of occupation. Individual characteristics include, above all, a gender dummy variable for women. Three civil statuses are considered relative to married, unmarried and divorced individuals, where singles, the most numerous group, are considered as baseline.

Various forms of human capital endowment are considered. Education attainment is measured by the years of completed education, according to the Italian education system, including primary school (5 years), low secondary school (8), professional qualification (10), high secondary school (13), bachelor degree (16) and the traditional University degree (17)[14].

Generic work experience is computed subtracting from 1998, that is the year when the questionnaires were filled in, the year of birth and the years of completed education.

The enquiry considers data grouped by Italian regions. To check for the territorial impact we divide the data referring to organisations that carry on their activities in the north, south and centre. Furthermore, the organisations are grouped by distinguishing between, state organisations, for-profit organisations and non-profit organisations. All the data are introduced by considering the impact of the size of the organisation. The tenure, considered as the period spends

[14] The statutory years for the traditional University degree is from 4 (in general) to 5 (for Engineering and Medical studies) years. Nonetheless, the average actual years of attendance necessary to gain a degree is over 7-8 years according to the type of degree. To reduce this long University education, a recent reform implemented in the second half of the 1990s has allowed a new type of University degree that is possible to achieve in three years.

by worker in the same occupation is introduced by considering the year of the questionnaire is referred to subtracting from it the year when the worker received the job proposal. The impact on wages level is checked by introducing numerous variables that consider worker qualification and specialisation such as the posses of a professional title working in the non-profit sector, the degree etc.

As shown in Table 1 and 2, within NPOs, average wages are substantially different, with Social cooperatives and Other religious NPOs have a significantly lower wage than Other lay NPOs. In what follow, we call the first two types of organisation as NPOs1 and the latter type NPOs2.

6.2 – Differences in human capital endowment

Considering we are analysing social services, we find women prevail on men in any organisational type, representing 75.6% of the sample. The share of women is much higher in FPOs (88.2%) and state (83.4%) organisations compared to NPOs (69%). Now, considering that generally women have a lower reservation wage and tend hence to accept lower wages than men, then the prevalence of women in FPOs as opposed to NPOs would suggest that wages are in fact lower there. Evidence relative to other countries.

Moreover, workers in state organisations are significantly older than their counterparts in FPOs and NPOs. This suggests either that private and non-profit organisations are more recent and less stable than state organisations or that workers tend to migrate from the former to the latter after accumulating experience. Besides, we have shown that the state sector pays higher wages, which seems in line with this interpretation. As for the stability of the organisations note in the same table state organisations are on average much older, as they are aged 83, than NPOs (24) and FPOs (14).

The age difference by organisation contributes to explain why NPOs pay higher wages than their private for-profit counterparts. In fact, NPOs are much older, with an average year of 23.7 years, which is almost double that of FPOs. Also the standard deviation is higher for NPOs than for FPOs, suggesting that some NPOs reach also 50 years of age, whereas FPOs are not older than 24 years. The reason of the younger age of FPOs is private for-profit organisations have been allowed to operate in the supply of social services only very recently (law 383/2000)

The data on education attainment confirms the impression that workers in NPOs and in state organisations have higher wages than their colleagues in FPOs, because they have a higher level of accumulated human capital, measured in years of education. Those employed in NPOs have 12 years of education on average, suggesting that they have upper secondary levels. Almost the same applies to state organisations (11.7 years). Workers in FPOs (10.4 years) seem to possess on average a low secondary education.

Workers in state organisations have a significantly higher level of experience than workers in the other two types of organisations, where the experience level is very similar.

The lower level of tenure of workers in NPOs and FPOs compared to those in state organisations can be attributed to various factors, such as the years of

existence of state organisations. Consider that tenure measures the years of experience on the same job and is usually found to be an important determinant of the wage level.

Compared to their for-profit counterparts, NPOs tend to concentrate in Southern regions and in small provinces, where the cost of living and the general level of per capita GDP is lower. This fact would suggest that wages in NPOs be lower than in FPOs. However, despite the substantial regional unemployment differential, regional wage differentials are low in Italy, amounting to about 8 per cent in 2000, according to the Ministry of Labour.

7 – Econometric results

Tables A2-A7 in the Appendix report the results of mincerian wage equations, estimated by OLS, relative to the entire sample (A2) and to various types of organisations (A3-A7) operating in the social services in Italy, including group one and two of NPOs. As shown in section 5, we take differences in coefficients to reflect different payment methods, as opposed in differences in mean as differences in the endowment of human capital and other resources. For each type of organisation estimates are presented relative to the entire sample and disentangling full-time and part-time workers.

Table A2 shows that human capital endowment – in terms of years of education, tenure, years of experience and level of professional qualification – is a significant determinant of wages in the provision of communal services in Italy. The table suggests, *ceteris paribus*, gaining a University degree (4 years on average) increases the wage level by 45.6 per cent the wage of full-time workers.

In turn, comparison of tables A2-A4 highlights the overall human capital premium of workers in the sector mainly depend on the wage setting behaviour of State and NPOs. *Ceteris paribus*, profit seeking organisations do not seem to pay higher wages to better educated workers.

Interestingly enough, the significant difference in wage levels appeared in the unconditional means of Table 2 between NPO2 and state organisations, disappear in a multivariate regression analysis. In fact, the coefficient for NPO2 is not significant. This suggests that the unconditional difference in average wage levels be explained by differences in the characteristics of workers in the sample.

As to individual characteristics, the only sector where having a family, because married or divorced, pays off (Table A4).

8 – The variance decomposition

As illustrated above we use a human capital earning function that allow us to decompose actual wages into the portions attributable to the presence of specific characteristics endowed by workers and parts unexplainable. The different wage distribution between NPOs and FPOs can be attributed to the differences in the distribution of any of those components. We then apply the ordinary least square regression in order to estimate the standard human earning s function for workers in NPOs and FPOs examining the correlated distribution of actual, predicted and residual wages. The equation used for the estimation is

$$W^s = a^s + b^s C^s + \varepsilon^s \qquad 1$$

where W^s represents the natural log of the hourly wage, the superscript ^{s} refers to the sector analysed and ε^s is the error term of the equation. *C* instead contains the controls variables such us the education, the age of the organisation, the contracts types, etc.

We calculate the predicted log wages in a sector by

$$\hat{W}^s = \hat{a}^s + \hat{b}^s \hat{C}^s \qquad 2$$

where $\hat{a}^s$ and $\hat{b}^s$ are estimated coefficients of the sector. The residual log wages is calculated as

$$\overline{W}^s = W^s - \hat{W}^s \qquad 3$$

The wage equity is calculated by analysing the variance of the actual and the predicted and residual and comparing them among NPOs and FPOs.

The difference in the variance of predicted wages can be decomposed into the portions attributable to the differences in characteristics and differences in returns to those characteristics between NPOs ad FPOs. The differences attributable to different characteristics can be weighted by the return of either the NPOs and FPOs and vice versa. The variance differential for predicted wages is

$$Var\hat{W}^{FPOs} - Var\hat{W}^{NPOs} = Var(\hat{a}^{FPOs} + \hat{b}^{FPOs}\hat{C}^{FPOs}) \qquad 4$$

$$= \sum_{i,j} \hat{b}_i^{FPOs} \hat{b}_j^{FPOs} \operatorname{cov}(C_i^{FPOs}, C_j^{FPOs}) - \sum_{i,j} \hat{b}_i^{NPOs} \hat{b}_j^{NPOs} \operatorname{cov}(C_i^{NPOs}, C_j^{NPOs}) \qquad 5$$

Reorganising, we obtain:

$$\sum_{i,j}\left[\hat{b}_i^{FPOs}\hat{b}_j^{FPOs}-\hat{b}_i^{NPOs}\hat{b}_j^{NPOs}\right]\mathrm{cov}(C_i^{FPOs},C_j^{FPOs})+$$
$$+\sum_{i,j}\hat{b}_i^{NPOs}\hat{b}_j^{NPOs}\left[\mathrm{cov}(C_i^{FPOs},C_j^{FPOs})-\mathrm{cov}(C_i^{NPOs},C_j^{NPOs})\right] \quad 6$$

or as

$$\sum_{i,j}\left[\hat{b}_i^{FPOs}\hat{b}_j^{FPOs}-\hat{b}_i^{NPOs}\hat{b}_j^{NPOs}\right]\mathrm{cov}(C_i^{FPOs},C_j^{FPOs})+$$
$$+\sum_{i,j}\hat{b}_i^{FPOs}\hat{b}_j^{FPOs}\left[\mathrm{cov}(C_i^{FPOs},C_j^{FPOs})-\mathrm{cov}(C_i^{NPOs},C_j^{NPOs})\right] \quad 7$$

from $i, j = 1 \ldots n$ where n represents the number of independent variables in C. In equation 6 and 7 the first term is the variance differential attributable to different returns to characteristics in NPOs and FPOs. In equation 6 these characteristics are weighted by FPOs characteristics; in equation 7 they are weighted by NPOs characteristics. In the same way, the second term of equation 6 and 7 is the difference attributable to differences in worker characteristics between NPOs and FPOs, weighted by the returns of either sectors.

Conclusions

In our enquiry on wage gap and on wage equity in Italy's non-profit sector we find two surprising results. Contrary to the expectations based on the theoretical models of efficiency wages, NPOs show in Italy the same wage level and lower wage equity than their profit seeking counterparts.

Different explanations of these findings are provided in the paper. Firstly, also in other countries, NPOs tend to pay higher and less equal wages than FPOs in the provision of social services. Hence, the focus of the data used on communal services could be driving the results.

Considerations based on a human capital approach would provide the remaining part of the rationale. OLS estimates of mincerian type wage equations show NPOs actually employ better educated, tenured and qualified workforce. In the mean time, they seem to have a different wage setting approach from FPOs, as the human capital premium is substantial within the former, but not within the latter type of organisations. Years of education, experience, tenure have all significant coefficients in the case of NPOs, but not of FPOs.

Overall our results suggest us to share the doubts of Ruhm and Borkoski (2000) on the several predominant models of non-profit wage settings available in the literature, including efficiency wage models. In fact, the analysis suggests the traditional Lazear's (1991) argument apply also to NPOs. According to the author, the effect of wage inequity needs not necessarily be a net loss of motivation or productivity. Hence, also for NPOs, it can be stated the loss of status to those at the bottom of the wage distribution could be compensated by the gain to those at the top.

On a more positive note, this work refutes a common fallacy of the policy debate in Italy. Many observers claim NPOs pay lower flat wages to their workforce and, hence, tend to employ less qualified workforce or to pay low wages to highly qualified workers. However, this work suggests the higher degree of motivation of workers in NPOs compared to FPOs in Italy, documented, for instance, in Borzaga (2000), is not used by this type of organisation as a non-monetary compensation to justify the payment of lower wages compared to their for-profit counterparts.

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Appendix

Tab. A1 – Means of independent variables by sector relative to full time workers

	State			FPOs			NPOs			Total		
Variables	Mean	N	St. Dev.	Mean	N	St. Dev.	Mean	N	St. Dev.	Mean	N	St. Dev.
	Means											
Age	39.4	486	8.7	36.4	140	10.1	36.2	852	9.4	37.3	1478	9.4
Years of education	11.7	500	3.1	10.4	152	3.3	12.0	883	3.3	11.8	1535	3.3
Experience	21.6	485	9.8	20.1	140	11.8	18.1	850	10.7	19.5	1475	10.7
Squared Experience	564	485	482	544	140	594	443	850	515	492	1475	516
Tenure	10.6	482	8.1	6.8	139	7.3	7.0	854	7.2	8.2	1475	7.7
Age of the organisation	83.3	447	158.7	13.5	152	10.8	23.7	879	27.4	40.7	1478	94.1
	Percentages											
	Individual characteristics											
Women	83.4	499	37.3	88.2	152	32.4	69.0	884	46.3	75.6	1535	43.0
Married	67.9	502	46.7	55.3	152	49.9	55.3	885	50.0	59.4	1539	49.1
Unmarried	23.1	502	42.2	34.2	152	47.6	36.4	885	48.1	31.8	1539	46.6
Divorced	8.4	502	27.7	9.2	152	29.0	7.7	885	26.6	8.1	1539	27.2
	Location											
North	88.1	502	32.4	79.0	152	40.9	72.7	884	44.6	78.4	1538	41.2
South	10.6	502	30.8	15.1	152	36.0	20.6	884	40.5	16.8	1538	37.4
Centre	1.4	502	11.7	5.9	152	23.7	6.7	884	25.0	4.9	1538	21.5
North East	46.6	502	49.9	92.1	152	29.0	39.9	884	49.0	39.1	1538	48.8
North West	41.4	502	49.3	69.7	152	46.1	32.8	884	47.0	39.3	1538	48.9
Big cities	40.8	502	49.2	82.9	152	37.8	41.5	884	49.3	45.4	1538	49.8
Big Provinces in the North	30.3	502	46.0	67.8	152	46.9	28.2	884	45.0	32.8	1538	47.0
Big Provinces in the South	2.4	502	15.3	0.7	152	8.1	4.6	884	21.0	3.5	1538	18.4
Small Provinces in the North	59.2	502	49.2	17.1	152	37.8	51.2	884	50.0	50.5	1538	50.0
Small Provinces in the South	8.2	502	27.4	14.5	152	35.3	16.0	884	36.6	13.3	1538	33.9
	Sector											
Assistance and guardianship services	55.8	502	49.7	77.6	152	41.8	45.5	885	49.8	52.0	1539	50.0
Servizi infermieristici e riabilitativi	8.4	502	27.7	21.1	152	40.9	8.1	885	27.4	9.5	1539	29.3
Educational services	28.7	502	45.3	0.7	152	8.1	23.6	885	42.5	23.0	1539	42.1
Cultural services	0.0	502	0.0	0.0	152	0.0	0.0	885	0.0	0.0	1539	0.0
Recreational services	3.0	502	17.0	0.7	152	8.1	2.0	885	14.1	2.2	1539	14.7
From school to work services	0.6	502	7.7	0.0	152	0.0	4.0	885	19.5	2.5	1539	15.5
Training services	0.0	502	0.0	0.0	152	0.0	11.4	885	31.8	6.6	1539	24.8
Other services	3.0	502	17.0	0.0	152	0.0	3.8	885	19.2	3.2	1539	17.6
	Occupations											
Professional title to work in NPOs	56.8	502	49.6	38.2	152	48.7	37.2	885	48.4	43.7	1539	49.6
Assistance at home	13.3	502	34	2	152	14	10.8	885	31.1	10.8	1539	31
Social Assistance	3.2	502	17.6	6.6	152	24.9	1.8	885	13.3	2.7	1539	16.3
Social Assistance operator	19.5	502	39.7	23.7	152	42.7	13.7	885	34.4	16.6	1539	37.2
Educator teacher	29.7	502	45.7	3.3	152	17.9	28.2	885	45	26.3	1539	44
Generic nurse	1.8	502	13.3	4.6	152	21	0.6	885	7.5	1.4	1539	11.6
Professional nurse	4.2	502	20	11.2	152	31.6	3.4	885	18.1	4.4	1539	20.6

Medical Doctor	1.8	502	13.3	0	152	0	0	885	0	0.6	1539	7.6
Social Therapist	0.8	502	8.9	7.2	152	26	4.3	885	20.3	3.4	1539	18.2
Sociologist	0.2	502	4.5	0	152	0	0.2	885	4.8	0.2	1539	4.4
Religious	0	502	0	0	152	0	0	885	0	0	1539	0
	Type of contract											
Dependent worker with permanent contract	76.7	502	42.3	88.2	152	32.4	82.3	885	38.2	81	1539	39.2
Training and work contracts	1.2	502	10.9	4.6	152	21	1.5	885	12	1.7	1539	12.9
Dependent worker with temporary contract	14.1	502	34.9	2	152	14	5.2	885	22.2	7.8	1539	26.8
Professional worker with permanent contract	2	502	14	2	152	14	2.5	885	15.6	2.3	1539	14.9
Professional occasional worker	0	502	0	0	152	0	0.5	885	6.7	0.3	1539	5.1
Independent advisor	0	502	0	0	152	0	0.2	885	4.8	0.1	1539	3.6
Dependent worker from the state sector	2.4	502	15.3	0	152	0	0.3	885	5.8	1	1539	9.8
Dependent worker from the private sector	0.4	502	6.3	0	152	0	0.7	885	8.2	0.5	1539	7.2
Contract based on union agreements	79.3	502	40.6	80.3	152	39.9	68.4	885	46.5	73.1	1539	44.4
Contract based on internal agreements	14.1	502	34.9	12.5	152	33.2	26.2	885	44	20.9	1539	40.7
Contract based on an ad hoc agreement	2.2	502	14.7	1.3	152	11.4	1.4	885	11.6	1.6	1539	12.6
No contract	0.6	502	7.7	0	152	0	0.5	885	6.7	0.5	1539	6.7
	Relation with extraordinary work											
Extraordinary work totally paid	18.1	502	38.6	32.2	152	46.9	17.9	885	38.3	19.4	1539	39.5
Extraordinary work partially paid	4.6	502	20.9	5.9	152	23.7	2.4	885	15.2	3.4	1539	18.2
Extraordinary work totally recovered	17.9	502	38.4	8.6	152	28.1	10.6	885	30.8	12.8	1539	33.4
Extraordinary work partially recovered	7.4	502	26.2	0.7	152	8.1	7.6	885	26.5	6.8	1539	25.2
Extraordinary work partially paid or recovered	12	502	32.5	4.6	152	21	3.6	885	18.7	6.4	1539	24.5
Extraordinary work neither recovered nor paid	2.8	502	16.5	1.3	152	11.4	10.1	885	30.1	6.8	1539	25.2
In case there are strikes in the firm	39.6	502	49	15.1	152	36	5.2	885	22.2	17.4	1539	37.9
STRIKES	11	502	31.3	0.7	152	8.1	1.9	885	13.7	4.7	1539	21.3
	Hiring method											
The individual had a previous professional relation with the npo	5.6	502	23	9.2	152	29	11.9	885	32.4	9.6	1539	29.4
Work with a linked association	0.4	502	6.3	2	152	14	5.6	885	23.1	3.6	1539	18.6
Civil service with the organisations	0	502	0	0	152	0	2.1	885	14.5	1.2	1539	11
He was a user of the services of the organisation	1.8	502	13.3	3.9	152	19.5	4.4	885	20.5	3.5	1539	18.4
Recommendation by relatives & friends	11.2	502	31.5	27.6	152	44.9	31.1	885	46.3	24.2	1539	42.9
I knew the organisation as it operates in my living area	9	502	28.6	21.7	152	41.4	15.8	885	36.5	14.2	1539	34.9
Previously he was a volunteer	2.4	502	15.3	0.7	152	8.1	7.1	885	25.7	4.9	1539	21.7
I found the news in the mass media	39	502	48.8	7.2	152	26	3.1	885	17.2	15.2	1539	35.9
I found the news in the employment office	13.7	502	34.5	13.8	152	34.6	2.5	885	15.6	7.3	1539	26

Source: own elaboration on the SESCES.

Tab. A2 – Wage equations in the provision of social services. All sectors

	All workers	Full-time workers	Part-time workers
(Costante)	8.865***	8.933***	8.968***
Women	-0.034*	-0.004	-0.177***
Yearsed	0.016***	0.012***	0.020***
EXPER	0.010***	0.009***	0.006
$EXPER^2$	0.000***	0.000***	0.000
TENURE	0.003***	0.003***	0.000
Ageorg	0.000	0.000	0.001**
Provinces South	-0.029	-0.013	0.024
Provinces Centre	-0.025	-0.006	-0.040
Big cities		-0.025	-0.042
Private orgs	-0.079***	-0.125***	0.058
NPO1	-0.047**	-0.087***	0.083
NPO2	0.020	-0.016	0.132*
Nursing sevices	0.083***	0.086***	0.067
Educational and cultural services	0.034	**0.002**	0.044
Recreative and other services	-0.008	-0.004	-0.023
Training and school-to-work services	-0.021	0.000	-0.088
Professional title to work in npo	0.022	0.036**	0.013
Part-time worker	0.106***		
Assistance at home	-0.050*	-0.097***	0.020
Social Assistance	0.032	0.003	0.002
Social Assistance operator	-0.031	-0.039*	-0.044
Educator teacher	-0.003	0.014	-0.043
Generic nurse	0.006	0.027	-0.181
Professional nurse	0.173***	0.151***	0.275**
Medical Doctor	0.469***	0.480***	
Social Therapist	0.136***	0.132***	0.120
Sociologist	-0.320**	-0.129	-1.006***
Training and work contracts	-0.167***	0.015	-0.536***
Dependent worker with temporary contract	0.093***	0.056**	0.121**
Professional worker with permanent contract	-0.066*	-0.253***	-0.047
Professional occasional worker	0.132	-0.084	0.210
Independent advisor	0.318***	0.121	0.224*
Dependent worker from the state sector	-0.013	-0.012	-0.127
Dependent worker from the private sector	-0.043	-0.051	-0.108
Other contract	-0.114***	-0.098***	-0.140
Contract based on internal agreements	-0.032*	-0.015	-0.076
Contract based on an ad hoc agreement	-0.122***	-0.381***	0.127
No contract	-0.192***	-0.028	-0.153
Extraordinary work totally paid	-0.006	0.016	-0.029
Extraordinary work partially paid	-0.026	0.016	-0.023
Extraordinary work totally recovered	0.054***	0.054***	0.099
Extraordinary work partially recovered	0.104***	0.116***	0.156
Extraordinary work partially paid or recovered	0.008	0.033	-0.003
Extraordinary work neither recovered nor paid	0.010	-0.009	0.147*
In case there are strikes in the firm	0.069***	0.050**	0.250
STRIKYES	-0.004	0.010	-0.040
Civil service with the organisations	-0.161***	-0.099	-0.418**
I found the news in the massmedia	0.064***	0.035	0.147*

*Note: The stars represent significance levels: *, **, *** indicate a significance level of 10, 5 and 1 per cent respectively.*
Source: own elaboration on the SESCES.

Tab. A3 – Wage equations in the provision of social services. State organisations

	All workers	Full-time workers	Part-time workers
(Costante)	9.004***	9.195***	8.306***
Women	0.023	0.000	0.361**
Yearsed	0.011***	0.000	0.020
EXPER	0.004	0.000	0.017
$EXPER^2$	0.000	0.000	0.000
TENURE	0.003***	0.001	0.010
Ageorg	0.000	0.000	0.000
Provinces South	-0.066*	0.006	-1.043***
Provinces Centre	0.262***	0.254***	0.221
Big cities	-0.079***	-0.065***	0.045
Married	-0.005	-0.002	-0.217
Divorced	0.001	0.018	8.306
Nursing sevices	0.024	0.013	0.064
Educational and cultural services	-0.025	0.029	0.071
Recreative and other services	0.011	0.082***	-0.283
Training and school-to-work services	0.059	0.125	
Professional title to work in npo	0.040*	0.066***	-0.167
Part-time worker	0.074***		
Assistance at home	-0.063	-0.081***	0.271*
Social Assistance	0.042	0.046	0.220
Social Assistance operator	-0.074***	-0.063***	0.262
Educator teacher	0.092***	0.072***	0.437***
Generic nurse	-0.029	0.029	
Professional nurse	0.115***	0.111***	
Medical Doctor	0.579***	0.633***	
Social Therapist	0.385***	0.493***	0.846***
Sociologist	-0.043	-0.056	
Training and work contracts	-0.243***	0.275***	-0.258
Dependent worker with temporary contract	0.038	0.000	0.115
Professional worker with permanent contract	0.063	0.041	0.035
Professional occasional worker			
Independent advisor	0.106		-0.572
Dependent worker from the state sector	0.093*	0.071	
Dependent worker from the private sector	-0.050	-0.090	-0.226
Other contract	-0.002	-0.069*	0.300
Contract based on internal agreements	-0.010	-0.033*	-0.079
Contract based on an ad hoc agreement	-0.189***	-0.024	0.534*
No contract	0.053	0.029	
Extraordinary work totally paid	-0.016	-0.013	0.061
Extraordinary work partially paid	0.023	0.105***	-0.264
Extraordinary work totally recovered	0.017	0.011	0.072
Extraordinary work partially recovered	0.012	0.000	0.049
Extraordinary work partially paid or recovered	0.004	0.013	0.114
Extraordinary work neither recovered nor paid	0.109**	-0.011	0.860***
In case there are strikes in the firm	0.078***	0.037**	0.127
STRIKYES	0.006	0.014	-0.120
Civil service with the organisations	-0.442**		-0.114
I found the news in the massmedia	0.041***	0.034***	0.017

*Note: The stars represent significance levels: *, **, *** indicate a significance level of 10, 5 and 1 per cent respectively.*
Source: own elaboration on the SESCES.

Tab. A4 – Wage equations in the provision of social services in FPOs

	All workers	Full-time workers	Part-time workers
(Costante)	9.008***	8.964***	9.615
Women	-0.104	0.052*	0.928
Yearsed	0.010	0.014***	0.132
EXPER	-0.010	-0.001	-0.214
$EXPER^2$	0.000	0.000	0.005
TENURE	0.006	0.003**	0.001
Ageorg	0.010*	0.001	0.013
Provinces South	0.248	0.055	2.035
Provinces Centre	0.238	0.052	1.901
Big cities	-0.163	-0.106***	-0.569
Married	0.216***	0.052**	-0.414
Divorced	0.313**	0.077*	4.601
Nursing sevices	0.094	0.163***	
Educational and cultural services	-0.626*	-0.867***	-5.686
Recreative and other services	-4.579***	-7.616***	-0.843
Training and school-to-work services			-0.389
Professional title to work in npo	0.214**	-0.005	-0.389
Part-time worker	0.216*		
Assistance at home	-0.104	-0.078	
Social Assistance	-0.066	-0.029	-1.822
Social Assistance operator	-0.172*	-0.075***	-1.592
Educator teacher	0.174	0.112	3.101
Generic nurse	-0.158	0.022	
Professional nurse	-0.041	0.078**	
Medical Doctor			
Social Therapist	-0.147	0.021	
Sociologist	-0.269	-0.183***	
Training and work contracts	-0.246	-0.183***	
Dependent worker with temporary contract	0.304	0.168***	
Professional worker with permanent contract	-0.269	-0.037	-4.129
Professional occasional worker	3.593***		-4.818
Independent advisor	-0.682		-3.164
Dependent worker from the state sector			
Dependent worker from the private sector	-0.263		-4.870
Other contract	-0.626*	-0.132**	
Contract based on internal agreements	-0.064	-0.053*	0.650
Contract based on an ad hoc agreement	0.285	0.083	1.709
No contract	0.216*		
Extraordinary work totally paid	-0.022	-0.010	
Extraordinary work partially paid	-0.080	-0.010	-0.108
Extraordinary work totally recovered	0.092	-0.001	
Extraordinary work partially recovered	-0.251	-0.007	
Extraordinary work partially paid or recovered	0.109	0.045	
Extraordinary work neither recovered nor paid	-0.140	0.014	-3.400
In case there are strikes in the firm			
	-0.262	0.0027	
STRIKYES	-0.062	0.003	
Civil service with the organisations			
I found the news in the massmedia	0.421***	0.068*	-1.744

*Note: The stars represent significance levels: *, **, *** indicate a significance level of 10, 5 and 1 per cent respectively.*

Source: own elaboration on the SESCES.

Tab. A5 – Wage equations in the provision of social services in NPOs

	All workers	Full-time workers	Part-time workers
(Costante)	**8.758*** **	**8.723*** **	**9.082*** **
Women	-0.059***	-0.009	**-0.213*** **
Yearsed	**0.019*** **	0.017***	**0.017***
EXPER	**0.013*** **	0.014***	**0.004**
$EXPER^2$	**0.000*** **	0.000***	**0.000**
TENURE	0.004***	**0.005*** **	**-0.004**
Ageorg	**0.001*** **	0.000	**0.003***
Provinces South	**-0.002**	-0.043**	**0.128***
Provinces Centre	**-0.021**	-0.064**	**0.107**
Big cities	**-0.022**	-0.004	**-0.060**
Married	**0.009**	-0.002	**0.096**
Divorced	0.005	-0.038	**0.075**
Nursing sevices	0.079**	0.134***	**-0.075**
Educational and cultural services	0.058**	0.026	**0.045**
Recreative and other services	**0.108*** **	**0.130*** **	**0.066**
Training and school-to-work services	**-0.013**	**0.017**	**-0.073**
Professional title to work in npo	**-0.018**	-0.007	**-0.018**
Part-time worker	**0.116*** **		
Assistance at home	0.003	**-0.039**	**0.063**
Social Assistance	0.109	**0.091***	**-0.034**
Social Assistance operator	**-0.006**	**-0.003**	**-0.077**
Educator teacher	-0.028	**-0.001**	-0.071
Generic nurse	**-0.006**	**0.032**	-0.277
Professional nurse	0.214***	**0.153*** **	**0.242***
Medical Doctor			
Social Therapist	**0.143*** **	**0.117*** **	**0.122**
Sociologist	-0.504***	**-0.137**	**-1.249*** **
Training and work contracts	**0.018**	**-0.008**	0.053
Dependent worker with temporary contract	0.083***	**0.017**	0.114
Professional worker with permanent contract	**-0.023**		-0.054
Professional occasional worker	**0.087**	**-0.057**	0.301*
Independent advisor	**0.228*** **	**-0.034**	0.194
Dependent worker from the state sector	**-0.160**	**-0.157**	-0.195
Dependent worker from the private sector	**0.043**	**-0.034**	-0.155
Other contract	**-0.092*** **	**-0.076*** **	
Contract based on internal agreements	-0.016	**-0.003**	-0.049
Contract based on an ad hoc agreement	0.096**	**-0.237*** **	0.262***
No contract	**-0.234*** **	**-0.143**	-0.157
Extraordinary work totally paid	-0.006	**0.017**	-0.010
Extraordinary work partially paid	**-0.029**	**-0.014**	0.100
Extraordinary work totally recovered	**0.053***	**0.044***	0.094
Extraordinary work partially recovered	0.164***	**0.166*** **	0.160
Extraordinary work partially paid or recovered	-0.048	**-0.021**	0.038
Extraordinary work neither recovered nor paid	**-0.013**	**-0.030**	0.153*
In case there are strikes in the firm	0.026	**0.040**	-0.105
STRIKYES	**-0.022**	**-0.033**	
Civil service with the organisations	-0.165***	-0.084*	-0.415*
I found the news in the massmedia	**0.049**	0.081**	-0.238

*Note: The stars represent significance levels: *, **, *** indicate a significance level of 10, 5 and 1 per cent respectively.*

Source: own elaboration on the SESCES.

Tab. A6 – Wage equations in the provision of social services in NPOs of type one

	All workers	Full-time workers	Part-time workers
(Costante)	8.830***	8.810***	9.01***
Women	-0.073***	-0.011	-0.33***
Yearsed	0.014***	0.010***	0.03***
EXPER	0.010***	0.012***	0.00
$EXPER^2$	-0.000***	0.000***	0.00
TENURE	0.004***	0.004***	0.00
Ageorg	0.000	0.000	0.00
Provinces South	-0.007	-0.047*	0.08
Provinces Centre	-0.0289	-0.017	-0.04
Big cities	0.032	0.018	0.04
Married	0.018	0.018	0.09
Divorced	0.027	-0.001	0.12
Nursing services	0.043	0.102**	-0.3
Educational and cultural services	0.096***	0.049*	0.05
Recreative and other services	0.084	0.162***	-0.17
Training and school-to-work services	-0.022	-0.018	-0.01
Professional title to work in npo	0.009	0.010	0.05
Part-time worker	0.122***		
Assistance at home	0.016	-0.031	0.03
Social Assistance	0.133	0.054	-0.04
Social Assistance operator	-0.011	-0.006	-0.17
Educator teacher	-0.083***	-0.042*	-015
Generic nurse	0.010	0.074	-0.29
Professional nurse	0.233***	0.152***	0.25
Medical Doctor			
Social Therapist	0.228***	0.264***	-0.08
Sociologist	-0.388	0.244	-1.31
Training and work contracts	0.054	0.028	0.07
Dependent worker with temporary contract	0.099***	0.015	0.17
Professional worker with permanent contract	-0.043	-0.058	0.05
Professional occasional worker	0.149	-0.051	0.67
Independent advisor	0.145	-0.119	0.16
Dependent worker from the state sector	-0.174	-0.145	0.07
Dependent worker from the private sector	0.035	0.014	-0.15
Other contract	-0.079**	-0.063*	
Contract based on internal agreements	0.004	0.017	-0.02
Contract based on an ad hoc agreement	-0.057	-0.311***	0.19
No contract	-0.032	-0.084*	0.13
Extraordinary work totally paid	-0.004	0.040*	-0.10
Extraordinary work partially paid	0.004	0.031	0.06
Extraordinary work totally recovered	0.043	0.047*	-0.02
Extraordinary work partially recovered	0.186***	0.217***	-0.05
Extraordinary work partially paid or recovered	-0.015	0.002	0.07
Extraordinary work neither recovered nor paid	-0.005	-0.008	0.14
In case there are strikes in the firm	-0.021	-0.038	0.02
STRIKYES	-0.058	-0.049	
Civil service with the organisations	-0.233***	-0.145***	-0.45
I found the news in the massmedia	0.004	0.016	-0.22

*Note: The stars represent significance levels: *, **, *** indicate a significance level of 10, 5 and 1 per cent respectively.*

Source: own elaboration on the SESCES

Tab. A7 – Wage equations in the provision of social services in NPOs of type two

	All workers	Full-time workers	Part-time workers
(Costante)	**8.851*** **	8.621***	9.670***
Women	**-0.043**	**-0.003**	-0.153
Yearsed	0.013**	0.016***	-0.005
EXPER	**0.011** **	0.015***	0.001
$EXPER^2$	**0.000***	0.000***	0.000
TENURE	**0.001**	0.008***	-0.009
Ageorg	0.004***	**0.003*** **	0.002
Provinces South	**0.002**	0.044	0.087
Provinces Centre	**0.044**	-0.196***	0.335
Big cities	**-0.063**	0.069	-0.311
Married	**0.018**	-0.010	0.194
Divorced	**0.007**	-0.057	0.284
Nursing sevices	0.165**	0.082	0.619*
Educational and cultural services	-0.013	0.080*	-0.219
Recreative and other services	0.038	0.181***	-0.326
Training and school-to-work services	**-0.056**	0.098*	-0.604
Professional title to work in npo	**-0.023**	0.013	-0.193
Part-time worker	**0.115*** **	**-0.009**	-0.069
Assistance at home	**-0.045**	0.094	-0.018
Social Assistance	0.162*	8.621	0.122
Social Assistance operator	0.012	-0.027	0.077
Educator teacher	**0.068***	0.075***	-0.240
Generic nurse	-0.289	-0.204	-0.193
Professional nurse	**0.125**	0.123*	-0.069
Medical Doctor			
Social Therapist	0.052	0.017	-0.125
Sociologist	**-0.254**	-0.568***	
Training and work contracts	0.029	0.032	0.053
Dependent worker with temporary contract	**-0.027**	0.033	-0.259
Professional worker with permanent contract	-0.100	-0.109	-0.272
Professional occasional worker	**-0.075**		0.211
Independent advisor	**0.236** **		0.067
Dependent worker from the state sector	**-0.148**	-0.148	
Dependent worker from the private sector	0.146	-0.019	-0.444
Other contract	**-0.135**	**0.05**	
Contract based on internal agreements	**-0.039**	**0.03**	-0.203
Contract based on an ad hoc agreement	0.346***	**0.13**	0.632***
No contract	-0.343***	**0.16**	-0.200
Extraordinary work totally paid	0.012	-0.019	0.226
Extraordinary work partially paid	-0.040***	0.019	
Extraordinary work totally recovered	**0.081**	0.038	0.292
Extraordinary work partially recovered	**0.153**	0.043	0.329
Extraordinary work partially paid or recovered	-0.042	-0.072	-0.479
Extraordinary work neither recovered nor paid	0.072	0.043	0.421*
In case there are strikes in the firm	**0.091**	0.046	
STRIKYES	0.019	0.037	
Civil service with the organisations	**0.001**	0.093	0.201
I found the news in the massmedia	0.133	0.136***	

*Note: The stars represent significance levels: *, **, *** indicate a significance level of 10, 5 and 1 per cent respectively.*
Source: own elaboration on the SESCES.