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Abstract

Despite the rich literature on top executives' compensations in family and non-family firms, differences in the compensation structure of employees in these enterprises have received much less attention. Furthermore, not enough attention has been paid to the specific role of the compensation structure of employees on labour productivity and competitiveness of family business.

We analyze the compensation structure of Italian firms focusing on performance related pays (PRP) offered to employees to verify if these contingent rewards play a differential role on wages, labour productivity and competitiveness (i.e. the ratio of productivity and wages) in family-influenced firms with respect to their non family counterparts.

The empirical evidence is provided by a national sample of firms of the non-agricultural private sector of the Italian economy. A fixed effects quantile regression is used to explore heterogeneous effects of PRP along productivity and wages distributions. Our results show that PRP has a greater enhancing role on labour productivity in family businesses, coupled with a more moderate influence on wages with respect to their non family counterparts. Thus PRP may be a governance device that helps to gain competitiveness and may contribute at endurance of family firms.

JEL Classifications: G32, J33, D24.
Keywords: Family firms, performance related pays, labour productivity

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1. Introduction

The presence of family-influenced firms is a common trait in many economies and their role on enterprise performance animates an ongoing debate (Chrisman et al 2010)[1].

However, previous studies have mainly focused on their financial performance whereas limited evidence is available on their competitiveness, that is strictly conditioned by their compensation strategies and productivity results.

The role of family ownership on employee salaries has been largely neglected and incentive wage contracts have been examined in the principal-agent perspective only with respect to executives, with only few exceptions (Carrasco-Hernandez and Sánchez-Marín, 2007) although employee compensation represents the larger component of firms' operational costs (Gomez et al. 2006).

Likewise, the role of family ownership on labour productivity has been limited researched so far (see, among the few, Barbera and Moores, 2013; Damiani, Pompei and Ricci, 2016) and even much less is the available literature focusing on *both* issues. However, a comprehensive perspective on labour compensation *and* productivity may lead to ascertain the impact of family capitalism on its real degree of competitiveness.

Our contribution intends to fill this gap and offers one of the few investigations that explore the theme of non managerial pay and productivity performances of family firms. We verify if the adoption of wage incentive strategies, such as performance related pays (PRP), usually designed to align the interest of principals (owners) with those of their agents (employees and not only executives), is associated with family involvement and give rise to different wage increases and productivity gains in family and non family firms. Furthermore, we also estimate the role of PRP schemes on the productivity- wage gap. This strategy permits to ascertain if these schemes lead to employee salaries fully compensated or not by productivity improvements and thus represent efficacious devices to gain competitiveness in the two different groups of firms (family and non family firms).

Our analysis is carried out at national scale for the Italian economy. Looking at evidence for Italy is interesting because in this country family firms represent the largest share of total firms, accounting for a large proportion of national employment.

[1] Chrisman et al (2010) examine 25 articles that have been particularly influential in research on family businesses, identify common themes among those studies, and indicate directions for future research in the field.

Thus, as world-wide, where more than two out of every three businesses are family business (Westhead and Howorth, 2006), also in this country family firms are the prevalent type of organization and its experience may offer useful insights.

From a unique data set covering several firm-level information for two years (2007, 2010), we have access to information of about 4000 Italian firms. The data we use covers all non-agricultural sectors and enterprises of all sizes, as well as containing a wealth of information on firm ownership and management, employment composition, personnel organization, industrial relations and other workplace characteristics. Using this dataset, we investigate the role that PRP plays on productivity and wage costs, by performing separate estimates for family and non family firms. The quantile regressions enable us going beyond a mere conditional mean model and testing the presence or not of a substantial heterogeneity in the role of PRP. Furthermore, since part of the differences we found could be due to unobserved factors, we make a further step (with quantile fixed effects estimates) to disentangle the differences that are actually attributable to the different role of PRP, from other sources of firm unobserved heterogeneity. Our analysis and the results we found give a support to the importance of *productivity* heterogeneity (Syverson, 2011) but also add other pieces of evidence on *wage* heterogeneity.

The paper is organised as follows: section 1 briefly reviews the related literature; section 2 presents the data used and descriptive statistics; section 3 illustrates the econometric framework employed and section 4 shows our estimation results; eventually section 5 concludes.

2. Discussion

The compensation design has been usually analysed in the agency theory perspective but only with a focus on executive compensation, whereas "little is known about the determinants of employee compensation contracts from an agency perspective" (Carrasco-Hernandez and Sánchez-Marín, 2007, p. 215). However, along the entire hierarchy that characterizes the firm organization, several levels of agency relations coexist, not only among owners and top executive officers, but also among managers, supervisor and employees. In this scenario of multiple principal-agent relations, wage bonuses represent an important strategy in mitigating agency problems. However, family and non family firms may influence differently agency problems and solutions for the rest of the entire organization, as shown by Carrasco-Hernandez and Sánchez-

Marín (2007). Indeed, family firms are qualitatively different from non-family firms because do not have agency costs due to separation between ownership and control (Jensen & Meckling, 1976; Fama & Jensen, 1983). But other sources of agency costs and other conflicts of interests may plague their organisation, as widely discussed by Schulze et al. (2001) and Chrisman et al. (2004).

Three main factors might be considered, following Schulze et al. (2001). First, family firms, often characterised by private ownership, are not exposed to the discipline imposed by the market for corporate control and, as shown by Jensen (1993), failures in the market for corporate control allow inside owners to advance their personal interests at the expense of outside owners. Furthermore, family firms bear the agency threat posed by self-control that creates "agency problems with oneself" (Jensen 1998, p. 48). Indeed, other impairments are suffered not only for owners' selfish and opportunistic behaviour, but also for inefficiencies and near rational responses to external shocks. Systematic tendencies to overpay for transactions and acquisitions, inertial behaviour in adapting to changes in the competitive environment are only few but typical examples of counterproductive, non rational responses (Jensen, 1994). These failures, in non family-public corporations are corrected by the threat of outsiders' takeovers, whereas family firms, often featuring private ownership, are less exposed to this threat, rendering valuable and essential the adoption of alternative governance devices.

Second, family firms may incur adverse selection problems due to the inefficiency of their labour markets. This is because family owners, that usually prefer do not dilute their enterprise' s control and decide their firms not be public, do not offer stock options to prospective and talented applicants. These and related problems are particularly severe when management positions are chosen according to dynastic criteria rather than effective merits (Bloom and Van Reenen, 2010; Caselli and Gennaioli, 2013), with the consequence that family-influenced firms do not use promotional opportunities as a device to select and retain qualified executives and, along the ladder of the firm organization, qualified employees.

Finally, a related argument is that "altruism alters the incentive structure of family-managed firms" (Schulze et al., p. 100). Indeed, family firms manifest an 'asymmetric altruism' problem, as that featuring biased parental perception of a child's performance (Schulze et al. 2001), because family members tend to be altruistic toward each other. In these firms, one observes an excessive generosity in terms of perquisite consumption to family agents, free riding of family members (Bruce and

Waldman, 1990), entrenchment of ineffective family managers (Morck et al., 1988) and misperceptions of performance of family CEOs that make it more difficult to punish their mismanagement and are conducive to predatory managers (Morck and Yeung, 2003). All these traits originate agency problems that are unique to family firms and call for their solution the use of pay incentives as well as other control mechanisms (Schulze et al., 2001). Indeed, because altruism makes it "difficult for family agents to take actions that might harm another family member's welfare", it may be convenient to link a part of the family agent's wage to results that can be objectively assessed, like firm performance (Schulze et al. 2001, p.103). Thus, it is expected that pay incentives, such as profit sharing and performance related pay (PRP) schemes are conveniently offered in family firms to mitigate agency threats and might be a significant component of wage setting for the entire organization. It also entails, as suggested by Werner et al. (2005, p. 378), that "the role of ownership structure may be a determinant of the firm's overall pay–performance relations" because "the impact of ownership structure on pay–performance relations cascades to lower rungs of the organizational ladder" (Werner et al., 2005, p. 378).

Other related aspects focussed in our paper concern labour productivity and the efficiency enhancing role of PRP; such as profit sharing and payment by results, in family managed firms. As known, the vast related literature on PRP has shown that these contingent rewards generate beneficial effects in the form of higher effort and work quality, higher commitment and incentives to firm-specific human capital, better teamwork, greater workforce cooperation in facing new technology and organizational changes, lower labour turnover and longer average tenure (see among others the contributions of Svejnar, 1982; Estrin, Grout and Wadhwani, 1987; Prendergast, 1999). However, PRP are not immune from malfunctioning. For instance, collective PRP bonuses may induce employees to free-ride on the efforts of others and thus cut productivity. Peer effects and positive productivity spillovers in the workplace are relevant because peer pressure discourages free-riding, especially when workers expect that many future interactions with the same peers will occur (Mas and Moretti, 2009). Also, a plausible solution to the problem of free-riding attitudes is the promotion of team culture and employee participation in decision-making, a policy which contributes, like financial participation, to increasing commitment (Kruse et al. 2010). Furthermore, social ties across workers are important, as shown by Bandiera et al. (2010). This study finds positive spillover effects where social ties exist, as a given

worker's productivity is significantly higher when that person works in an environment of friendly relationships. Along these lines, it may be argued that in family business, the climate of industrial relations encouraging cooperative attitudes, self control and fairness, may mitigate the various drawbacks of incentive schemes.

This perspective is in accordance with the stewardship view that posits that family businesses are "uniquely nurtured by the stewardship of devoted family owners who pursue social and self-actualization goals to the benefit of all stakeholders" (Le Breton-Miller, and Miller, 2009, p. 1169). A number of factors explain why, as overviewed by Dodd and Dyck (2015). First, in family firms interpersonal relationships are characterized by stability and a shared social network (Nahapiet & Ghoshal, 1998). Furthermore, family businesses feature socio-emotional value and more identity than non kinship firms (Gómez-Mejía et al., 2007). In addition, owners who have a longer term commitment to their firm, have a greater concern for their personal reputation that can be supported by stewardship activities with respect to owners of non kinship firms. Also, family business more likely feature a "shared identification of their members with core cultural values" (Dodd and Frank, p. 314). For instance, Blodgett et al. (2011) show that family business expresses a higher frequency of ethical values than its nonfamily corporate counterpart, and identifying such values may help family business to detect what behavior will result in strategic global strategies for governance and performance (p. 36). In sum, all these characteristics, especially in workplaces characterised by incomplete contracts, provide important enforcement mechanisms that allow family firms to mitigate malfunctioning of incentive devices such as PRP .

Furthermore, innovation propensity may be higher in family managed firms because the work climate encourages a spontaneous engagement of employees' innovative work .For instance, employees, "on their own initiative, generate and suggest innovative ideas concerning exploitative elements, such as better ways of performing work tasks, novel approaches to solve problems or bottlenecks, and new ways to improve quality and reliability…" (Bammens et al. 2015, p. 125). Thus, in these firms employees "use their intimate knowledge of internal procedures and work methods to initiate incremental or process-oriented improvements along familiar trajectories" (Bammens et al. 2015, p.125). Thus family businesses, especially when show a high level of concern for their employees' well-being and when offer payments of

collective bonuses, might outperform other organizational forms because promote important internal informal sources of innovation.

It has been posited that a comparative advantage of family firms is associated with their long term horizons (Habbershon, 1999) and that their lengthy tenure, also to assuring the transmission of the value of the firm to future generations and family heirs, may reveal a credible commitment that favour implicit contracts (Anderson and Reeb 2003). These contracts must be self-enforcing and are typical of family firms who may win the trust of the employees with the tacit but plausible promise not to breach labour relationships. These enterprises, even in bad times, may persuade their employees to accept wage moderation with the insurance of retaining them. By doing so, as shown by Sraer and Thesmar (2006), Bassanini et al. (2013) and Ellul et al. (2014), family firms offer a compensation package that involves lower pay and might make affordable a positive gap between productivity gains and wage increases.

Summing up, this short discussion suggests the plausibility of three main hypotheses. First, family firms may experience specific agency costs that may lead to the adoption of performance payments. These incentives are not only fixed at the top of firm hierarchies, but also diffused (through a *cascade effect)* as one moves toward the lower levels of the entire organization, with the consequence that PRP may play some role in explaining wage determination also in family firms. Second, the involvement of families in implementing incentive designs represents a strategic commitment to employees that assures larger productivity gains. It means that the adoption of PRP (to both family and nonfamily agents) mitigates agency threats to firm performance and may represent a channel through which family firms decrease the efficiency gap with respect to their non-family competitors. Thirdly, the long term relationships featuring family firms enable them to offer compensation packages more favourable to their competitiveness: implicit contracts of stable labour relations may conducive to a potential positive gap (between productive gains and wage increases) activated by the adoption of PRP. These three hypotheses will be tested below.

3. Data and Descriptive Statistics

3.1 Data

The Employer and Employee Surveys (RIL) conducted by ISFOL provide a unique set of variables for estimating the role of PRP and testing their potential different effects

between family and non-family firms. The data we use are obtained by merging information from this source and balance-sheet data from the Bureau Van Dijk AIDA archive for Italian firm.

The RIL surveys offer information for a nationally representative sample of non-agricultural private sector of partnerships and limited liability firms for 2007 and 2010. The surveys collect a rich set of information about personnel organization, employment composition, industrial relations and other workplace characteristics[2]. For 2010, the survey also includes information on ownerships/control and management structure of firms[3]. This information permit to distinguish two group of enterprises i) family firms (FF), those owned and managed by a family and ii) non-family firms (NFF), all firms not owned by a family.[4] Thus, we created a dummy variable that equals one if a firm is owned and managed by a family (Family firms, FF) and 0 otherwise (Non-family firms, NFF).

With respect to our key explanatory variable, in the RIL questionnaire, each firm was asked whether a performance related pay scheme agreement (PRP) has been adopted. Thus, we created a dummy variable that indicates the existence or not of a PRP scheme for each year under study. Notice that in the Italian two-tiered bargaining regime, under positive demand shocks firms may distribute PRP wage premiums linked to firm results, at the second level of bargaining. This wage component is *added* to the base wage, set in the first (industrial) level, and could be zero when firms do not gain positive results. Thus, also risk-averse employees may accept these agreements, because employees do not take any extra-risks. Firms, on their part, would be more willing to adopt PRP schemes as a strategy to obtain higher employee performance and successful outcomes, also to compensate employment flexibility.

[2] The RIL Survey sample of firms is stratified by size, sector, geographic area and legal form. Inclusion depends on firm size, measured by the total number of employees. This choice has required the construction of a 'direct estimator' to take into account differing probabilities of inclusion of firms belonging to specific strata. In particular, the direct estimator is defined for each sample unit (firm) as the inverse of the probability of inclusion in the sample. Using this estimator, the RIL sample reproduces all active firms for each stratum and, simultaneously, the total number of employees in a given stratum (size, sector and other characteristics).

[3] We assumed that the same information holds for 2007. Therefore, both the FF and FM variables are time-invariant.

[4] From the ISFOL-RIL questionnaire, it is possible to distinguish three groups of firms: i) firms owned *and* managed by a family member; ii) firms owned by a family but not managed by a family member (hired professional management); iii) all other firms (firms not owned by a family). In our sample, only a small number of firms belong to the second group, and to save space we do not present the estimates for this subsample. These estimates are available on request.

In addition, we have information on the occupational composition of the labour force within the firm (executives, blue-collar workers and white-collar workers, percentage of trained workers), gender, type of contract (long-term/short-term), new hirings and other firm strategies (innovation and export). We also control for the sectors and regions (NUTS 1) in which firms are located.

The longitudinal RIL-AIDA merged sample was restricted to those companies that disclose detailed accounts in accordance with the scheme of the 4th Directive CEE. We also excluded firms with less than five employees. It allows us to eliminate self-employees as well as all small firms without an organizational structure that makes sense to test the role of PRP to reduce agency problems. These selection criterion is consistent with those adopted in comparable studies (as Chrisman et al. 2004). Furthermore, we excluded firms with missing data for the key variables. Therefore, the sample that we use is an unbalanced panel of approximately 4200 firms for 2007 and 2010.

Detailed definitions of variables are reported in Table A1.

3.2 Descriptive statistics

Table 1 allows a comparison *between* family and non family firms (FF and NFF, respectively), while Table 2 enables us to visualise, *within* each group, the main disparities among enterprises who adopt or not PRP.

Over the period 2007-2010, a meaningful divide has been found between FF and NFF. Concerning our key variable, PRP, we observe that a smaller fraction of FF adopt payments by results (9%) with respect to NFF (27%). Also, FF were less successful in terms of per capita value added (10.75 vs 11.02), paid lower wages (10.39 vs 10.60) and their competitiveness indicator (Ln(LP)-Ln(W)) resulted more unfavourable to these firms (0.36 vs 0.41)[5]. In addition, the Table 1 shows that FF employed less executives (3% vs 9% of total employees) and white collars (36% vs 48%), made less use of training (22% of trained workers vs 31%), were less active than non family enterprises in process innovation (51% of firms vs 54%) as well as in product innovation (42% vs 44%).

[5] All these variables are in natural logarithms.

However our major interest is enlightening the different disparities among firms that adopt or not contingent rewards and verify how these disparities diverge according to their different ownership structure. On these aspects, summary statistics reveal expected but also unexpected results.

As found for other countries, the incidence of PRP was greatest among large-sized firms, confirming that incentive schemes are mainly adopted to mitigate agency costs which mostly affect large enterprises. Indeed, the share of large FF (with more than 250 employees) was higher in the group of PRP firms (9%), whereas the share of large firms without PRP was only around 1%. A parallel significant differential was found for NF (the share of large firms with PRP was 23% and those without PRP was 3%).

Other expected results concern capital intensity. PRP family and non family firms had on average a higher value of the physical capital per employee with respect to the group of No-PRP firms: the differential (in log, 0.41) was exactly the same for FF and NF firms). Other summary statistics, which distinguish firms *with* and *without* PRP show that the former were more present in international markets and, as regards their workforce, had a higher proportions of men and trained employees and a lower percentage of fixed-term contracts. These different traits are confirmed for FF and NFF.

Interestingly, also less expected results are obtained. Family firms that adopt PRP reveal a larger advantage, in terms of labour productivity, with respect to their competitors that do not adopt PRP (the differential in log was + 0.20); this advantage is also present for the group of NF but has a minor magnitude (+0.03).

Data on wages also confirm major involvement of family firms in exploiting opportunities that emerge when they offer higher premiums to their workers. The differential of wages of PRP firms with respect to No-PRP firms was 0.22 for family firms and only 0.08 for non family firms.

A related result is that the differential of log values of labour productivity and wages (Ln(LP)-Ln(W)), achieved by firms that adopt PRP, is almost the same within the group of family firms (0.35 vs 0.36), whereas it is slightly lower in NFF adopting PRP with respect to NFF not adopting this contingent pay (0.39 vs 0.43).

Going beyond these descriptive statistics, what it is left to be discovered is the *combined* role of governance structure (ownership and management) and of governance devices (PRP and non PRP) to obtain a comprehensive representation of efficiency and competitiveness of Italian firms. In the next sections we will verify

whether family firms are more able to exploit beneficial effects of payments by results, offered to all employees, thus mitigating the specific agency problems featuring their entire organization.

4. Econometric strategy

4. 1 Methods

The relationship between labour productivity and PRP may be formalized by a production function augmented by a dummy variable capturing the incidence of PRP and inserting a set of other controls for firm characteristics and workforce composition. The following equation was estimated:

$$(1)\ ln\left(\frac{P}{L}\right)_{i,t} = \alpha + \beta \cdot PRP_{i,t} + \lambda \cdot ln\left(\frac{K}{L}\right)_{i,t} + \vartheta \cdot \boldsymbol{F}_{i,t} + \mu_s + \gamma_j + \eta_t + \varepsilon_{i,t} \quad t=2007,2010$$

where $\ln\left(\frac{P}{L}\right)_{i,t}$ is the (log of) valued added per employee, $\ln\left(\frac{K}{L}\right)_{it}$ is the (log of) physical capital per employee, PRP represents a dummy variable indicating the presence of PRP. The vector $\boldsymbol{F}_{it}$ denotes controls for workforce composition (shares of executives, white collars, blue collars, temporary contracts, women, trained workers and new hirings) and for firm characteristics, such as process and product innovations, and export propensity (for more details see table A.1 in the appendix). The parameter μ_s denotes sector specific fixed effects, γ_j regional (NUTS1_level) fixed effects for macro-areas, η_t represents year fixed effects and ε_{it} is the error term capturing the idiosyncratic component of labour productivity.

The wage equation parallels the productivity equation (1). Thus, we estimate the following equation:

$$(2)\ ln\left(\frac{W}{L}\right)_{i,t} = \theta + \kappa \cdot PRP_{i,t} + \upsilon \cdot ln\left(\frac{K}{L}\right)_{i,t} + \omega \cdot \boldsymbol{F}_{i,t} + \mu_s + \gamma_j + \eta_t + \varepsilon_{i,t} \quad t=2007,2010$$

where the dependent variable represents the (log of) the average annual wages (W) per employee (L), while the explanatory variables are the same included in equation (1).

We also apply a similar approach to estimate a model in which the gap between labour productivity and wages is regressed on the same set of explanatory variables of equations (1) and (2). This permits to obtain a coefficient for PRP that directly

measures the size and significance of the productivity wage gap (*P/W*). We estimate thus equation (3):

$$(3)\ ln\left(\frac{P}{W}\right)_{i,t} = \theta + \kappa \cdot PRP_{i,t} + \upsilon \cdot ln\left(\frac{K}{L}\right)_{i,t} + \omega \cdot \boldsymbol{F}_{i,t} + \mu_s + \gamma_j + \eta_t + \varepsilon_{i,t} \quad t=2007,2010$$

We started with a pooled cross section analysis of equations (1), (2) and (3), controlling for time fixed effects. We also use the quantile regression (QR) technique that allows us to estimate differing effects on different parts of the productivity and wage distributions. For example, workforce composition and firm characteristics being equal, if the impact of PRP on productivity differs along quantiles, it means that those management practices represented by incentive payments could be particularly good (or bad) for firms at the bottom of the productivity distribution (first decile), whit respect to the other bad performers (located at the first decile) that did not implement the PRP.

We used the classical Koenker and Basset (1978) estimator:

$$(4)\qquad (\alpha^\tau, \beta^\tau, \boldsymbol{\delta}^\tau) = argmin \sum \rho_\tau \cdot \left(ln\left(\frac{P}{L}\right)_{i,t} - \alpha - \beta \cdot PRP_{i,t} - \boldsymbol{\delta} \cdot \boldsymbol{X}_{i,t}\right)$$

$$(5)\qquad (\theta^\tau, \kappa^\tau, \boldsymbol{\phi}^\tau) = argmin \sum \rho_\tau \cdot \left(ln\left(\frac{W}{L}\right)_{i,t} - \theta - \kappa \cdot PRP_{i,t} - \boldsymbol{\phi} \cdot \boldsymbol{X}_{i,t}\right)$$

$$(6)\qquad (\mu^\tau, \gamma^\tau, \boldsymbol{\phi}^\tau) = argmin \sum \rho_\tau \cdot \left(ln\left(\frac{P}{W}\right)_{i,t} - \mu - \gamma \cdot PRP_{i,t} - \boldsymbol{\phi} \cdot \boldsymbol{X}_{i,t}\right)$$

where β, κ and γ are the coefficients of interest, $\boldsymbol{\delta}$, $\boldsymbol{\phi}$ and $\boldsymbol{\vartheta}$ are vectors of coefficients for all control variables that now are included in the vector $\boldsymbol{X}$, τ is the quantile 0.1; 0.25, 0.5; 0.75; 0.9, ρ_τ is the asymmetric loss function $\rho_\tau(u) = 1(u > 0) \cdot \tau|u| + 1(u \leq 0) \cdot (1 - \tau)|u|$.

However all these estimates may be biased because they do not take into account the problems of sorting of firms that will typically arise if more productive firms (and firms that are more generous in terms of pays) more likely adopt PRP agreements. Indeed, part of the differences imputed to PRP could be due to unobserved factors. To circumvent this problem and having time variation in our data, we adopt the quantile fixed effect estimator that permits to disentangle, for both the subsamples of family and non family firms, the differences that are actually attributable to the different role of PRP, from other sources of unobserved heterogeneity at firm level. Therefore, we

perform quantile fixed effects estimates, where the unobserved individual heterogeneity is proxied by individual fixed effects that capture time-invariant firm characteristics and apply the technique elaborated by Canay (2011).

5. Results

5.1 OLS and QR estimates

We briefly present the pooled estimates (OLS and QR, see Tables 3-5), before focusing on the main results obtained with the fixed effect quantile estimation that corrects for unobserved heterogeneity. Pooled estimates are obtained by including time, sector and regional (NUTS) dummies to control for time-, sector- and geographical factors which likely influence the dependent variables and cannot be captured by other controls included in our analysis.

[Insert Table 3-5]

The OLS estimates for the whole sample show the significant positive association of PRP with labour productivity and wages (Table 3, last column of Panel A and Panel B, respectively). Notice that these results are mainly driven by the family firm sub-sample (Table 4, last column of Panel A and B), and only the coefficient associated with PRP in the productivity-wage gap OLS is not significant for this subsample. On the contrary, for the group of non-family enterprises, the OLS coefficients of PRP for all three dependent variables are not significant (Panels A-C of Table 5, last column). This means that only in family firms adopting PRP fosters, on average, both labour productivity and wages. As said above, we have not looked exclusively at a conditional *mean* model, but explore patterns of heterogeneity in productivity and wage distribution. The standard QR estimates, shown in the first five columns of Tables 3-5, enable us to verify differences in the impact of PRP along the dependent variables' distributions. Our findings confirm for the whole sample and for family firms that the coefficient associated to our key explanatory variable PRP is positive and significant (at the 1% level of significance) in labour productivity and wages estimates at all quantiles (the only exception being the non significant coefficient in labour productivity estimates for the top decile, τ=0.90). These positive coefficients are larger for low deciles (τ =0.10 and τ =0.25, Tables 3-4, panels A and B) and indicate, at least at this preliminary stage, that PRP especially favours firms located at

the bottom of the productivity and wage distributions. In addition, the productivity-wage gap (Tables 3 and 4, Panels C) is significantly and negatively associated with PRP at the median values ($\tau = 0.5$), and for low deciles (τ =0.10 and τ =0.25), suggesting that PRP boosts wages more than productivity. Notice, however, that these results do not take into account unobserved factors that could bias the impact of PRP. Especially for wages, it is likely that different degrees of abilities and informal skills of workers, for which we do not control, could be responsible for endogeneity problems and overestimation of the PRP coefficient.

For non-family firms we obtain different results. Firstly, the non significant estimates of PRP on labour productivity suggest that these wage schemes do not present any association with efficiency enhancement (Table 5, Panel A). Instead, it seems that for these firms PRP schemes represent only an occasion to offer wage premiums, given that the associated coefficients are significant and positive, with the only exception for the τ = 0.25 decile (see Table 5, Panel B). Again, for the dependent variable (Ln(LP)-Ln(W)), we obtain negative and significant effects of PRP (Table 5, Panel C) only for two deciles out of five (Table 4, Panel C). Therefore, also the results for non-family firms confirm that the link of PRP with wages dominates the one with productivity (that in non-family firms, differently from the family firms, resulted completely non significant).

To sum up, these preliminary estimates suggest that the main difference between family and non-family firms concerns the positive and significant association of PRP with labour productivity found in the former group. Despite that, it is remarkable for both groups the dominant link of PRP with wages, that appears to be detrimental for the firms' competitiveness (negative link of PRP with the productivity-wage gap).

However, the possible unobserved heterogeneity of Italian enterprises deserves further attention, as we will see below.

5.2 Unobserved Heterogeneity: the Quantile Fixed Effects Estimates

Some of the differences or similarities we found with previous estimates could be due to unobserved factors, i.e. to different characteristics across firms but not strictly attributable to their adoption of PRP. As discussed above, we attempted to taking into account this issue with fixed effect estimates for both conditional mean and

conditional quantile methods. The results obtained by using these different estimators are shown in Tables 6-8. More precisely, as for quantile fixed effect (FE) regression methods (Canay, 2011), the estimates for the whole RIL-AIDA sample are reported in Table 6, those relative to the subsample of family firms are displayed in Table 7 while the FE quantile regression results for non-family firms are in Table 8. The last columns in Tables 6-8 report the standard fixed-effects (within) estimator used in the conditional mean methods.

[Insert Table 6-8]

On the whole, previous results concerning labour productivity and wages, separately taken, continue to hold, even though the fixed-effect estimators do their work in correcting the upward bias of the PRP coefficients. Overall, the latter appear slightly downsized in Tables 6 and 7 (Panels A and B), but still positive and significant.

For family firms the significance of the coefficient of PRP in labour productivity estimates is confirmed for all quantiles and only for the first quantile the coefficient is noticeably reduced (Table, 7, Panel A). The adoption of PRP is on average associated with a 5.1% rise in value added per employees (see the q50 and FE columns), and with a lower value of 3.3% for low performer family firms.

As for wages (Table, 7, Panel B), instead, the fixed effect coefficients of PRP are remarkably reduced compared to the previous pooled estimates and, in some cases (τ =0.75 and τ =0.90) the coefficients we obtain are even no longer statistically different from zero. This evidence suggests that the association of PRP with wages for the highest quantiles was driven by unobserved characteristics of family firms, since in the pooled analysis the impact was significant along the entire wage distribution.

Noticeably, when we pass to the third dependent variable (i.e. the difference between labour productivity and wages), we obtain that for family firms PRP is now associated with a competitiveness enhancing role, quite uniform along the distribution (Table, 7 Panel C) [6], whereas in the pooled estimates we found a detrimental effect (Table, 4, Panel C). As conjectured in the previous section, the upward bias of the PRP coefficients in the wage regression resulted far higher than that on labour productivity,

[6] A Wald test on the equality of these coefficients cannot be rejected for most of the quantiles. The only exception is the PRP coefficient on the 25th quantile, that resulted significantly lower than the remainders. All Wald tests on coefficients are available upon request s.

to such an extent that the fixed-effect correction led the productivity effect to be dominant and the competitiveness enhancement to emerge. Thus, with the quantile fixed-effects, on average (and in the middle of the distribution) PRP schemes are associated with increases in firm competitiveness of family firms by 4.1% , with minor variations along the firm distribution.

If we compare all these results with estimates for non family firms we have a totally different scenario and an additional confirmation that ownership structure matters. We obtain, again, that the role of PRP on labour productivity is broadly non significant (with the only exception of the median value that even shows a negative and significant sign), whereas the PRP coefficients for wages remain positive and significant at all quantiles. Finally, for the role of PRP on competitiveness ((Ln(LP)-Ln(W)), we obtain a negative significant role at all quantiles. From these estimates, we infer that in non-family firms PRP fosters employees' rewards, but not productivity increases. Therefore, the efficiency enhancement role of PRP is absent in these firms and dominant only for family firms, for which it is rather uniform at all quantiles.

Conclusions

In this article we have provided evidence that family firms may take advantage from adoption of incentive schemes, such as PRP, and use these contingent rewards to encourage commitment and motivation from their employees. Furthermore, the efficiency enhancing role of PRP, coupled with a moderate influence of these schemes on wage premiums, enable them to regain competitiveness. These results obtained for the Italian case, in conformity with other international evidence (Ellul et al 2014), seem coherent with the hypothesis of implicit contracts featuring family firms. These enterprises, also for their long-term horizons, may provide more employment protection than non family firms. This protection is compensated by a more moderate wage policy.

All results are obtained taking into account an ample set of covariates, related to firm strategies and workforce composition, and are confirmed controlling for the firm-level fixed effects. Our evidence thus signals that incentive schemes could be a strategic tool to face the specific agency costs that affect family firms and suggest that these schemes enable family firms to reduce the competitiveness gap with their (non-family) competitors.

On the contrary, widely held firms and firms run by professional management seem to offer wage incentives that 'do not have incentive effects'. For these firms, wage premiums more than compensate the (non significant) benefits in terms of labour productivity, with a final negative balance on their degree of competitiveness. These results are in line with other evidence showing that professional managers prefer to pay workers higher wages, but these pays do not translate into greater labour efficiency. This is because generous wage payments may allow management not born the costs associated to monitoring activities or to the enforcement of collaborative relations with their workforce. Wage premiums may be simply offered by management because permit them 'enjoying the quiet life' (Bertrand and Mullainathan, 2003).

Our study offers a contribution to find closer links between labour economics and corporate governance literature, along the lines of a few number of studies (Werner et al. 2005, Carrasco et al. 2007). With respect to these previous studies that mainly observe how the pay strategies change according to the agency relationship between owners and managers, we make a further step by investigating how the impacts of these strategies vary according to the firm ownership structure, but on these issues future research remains to be done.

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Table 1 Descriptive Statistics: Family and Non-Family Firms

Variables	FAMILY FIRMS			NON-FAMILY FIRMS		
	N	**mean**	**sd**	**N**	**mean**	**sd**
Ln(LP)	**6302**	**10.75**	**0.51**	**1599**	**11.02**	**0.61**
Ln(W)	**6337**	**10.39**	**0.37**	**1612**	**10.60**	**0.38**
Ln(LP)-Ln(W)	**6302**	**0.36**	**0.35**	**1599**	**0.41**	**0.46**
PRP	**6766**	**0.09**	**0.28**	**1868**	**0.27**	**0.44**
New hirings (share)	6591	0.11	0.16	1839	0.11	0.14
Executives (share)	6864	0.03	0.080	1896	0.09	0.133
White collars (share)	6864	0.36	0.29	1896	0.48	0.30
Blue collars (share)	6864	0.61	0.31	1896	0.43	0.35
Females (share)	6874	0.34	0.28	1901	0.37	0.26
Fixed-term contracts (share)	6874	0.09	0.15	1901	0.08	0.13
Trained workers (share)	6796	0.22	0.35	1851	0.31	0.37
5<n of employees<16	6864	0.46	0.50	1896	0.25	0.43
15<n of employees<100	6864	0.37	0.48	1896	0.37	0.48
99<n of employees<250	6864	0.16	0.37	1896	0.30	0.46
n of employees>249	6864	0.02	0.13	1896	0.09	0.28
Ln Kpc	6328	10.00	1.57	1604	10.10	1.83
product innovation	6802	0.51	0.50	1872	0.54	0.50
process innovation	6789	0.42	0.49	1870	0.44	0.50
foreign market	6870	0.27	0.45	1901	0.26	0.44
year 2010	6874	0.49	0.50	1901	0.48	0.50
Textile, Wearing Apparel, Food Industry	6874	0.15	0.35	1901	0.10	0.30
Other Manufacturing, Mining, Utilities	6874	0.34	0.47	1901	0.31	0.46
Constructions	6874	0.13	0.33	1901	0.05	0.21
Trade, hotels, restaurants	6874	0.14	0.34	1901	0.12	0.33
Transportation and communications	6874	0.04	0.20	1901	0.11	0.31
Intermediation and other business service	6874	0.09	0.29	1901	0.17	0.38
Education, health and private social services	6874	0.11	0.32	1901	0.14	0.35
North- West	6874	0.32	0.47	1901	0.38	0.49
North-East	6874	0.26	0.44	1901	0.29	0.45
Centre	6874	0.21	0.40	1901	0.20	0.40
South	6874	0.21	0.40	1901	0.13	0.34

Source: RIL-AIDA data. Note: All statistics refer to the pooled sample (2007 and 2010).

Table 2 Descriptive Statistics: Family and Non-Family Firms and PRP

	FAMILY FIRMS						NON - FAMILY FIRMS					
	N		mean		sd		N		mean		sd	
PRP	**6766**		**0.09**		**0.28**		**1868**		**0.27**		**0.44**	
	PRP			No-PRP			PRP			No-PRP		
	N	mean	sd	N	mean	sd	N	mean	sd	N	mean	sd
Ln(LP)	**536**	**10.93**	**0.48**	**5669**	**10.73**	**0.51**	**390**	**11.04**	**0.49**	**1182**	**11.01**	**0.65**
Ln(W)	**541**	**10.59**	**0.33**	**5699**	**10.37**	**0.37**	**391**	**10.66**	**0.27**	**1193**	**10.58**	**0.41**
Ln(LP)-Ln(W)	**536**	**0.35**	**0.33**	**5669**	**0.36**	**0.35**	**390**	**0.39**	**0.36**	**1182**	**0.43**	**0.49**
New hirings (share)	557	0.08	0.12	5945	0.12	0.16	494	0.10	0.13	1318	0.11	0.15
Executives (share)	586	0.05	0.08	6172	0.04	0.08	506	0.10	0.12	1360	0.08	0.14
White collars (share)	586	0.30	0.22	6172	0.36	0.30	506	0.42	0.27	1360	0.50	0.31
Blue collars (share)	586	0.65	0.25	6172	0.60	0.31	506	0.48	0.34	1360	0.42	0.35
Females (share)	586	0.28	0.22	6180	0.34	0.28	506	0.32	0.22	1362	0.38	0.27
Fixed-term contracts (share)	586	0.07	0.12	6180	0.09	0.15	506	0.07	0.10	1362	0.08	0.14
Trained workers (share)	579	0.29	0.35	6110	0.22	0.35	488	0.41	0.37	1330	0.28	0.36
5<n of employees<16	586	0.11	0.32	6172	0.49	0.50	506	0.05	0.22	1360	0.32	0.47
15<n of employees<100	586	0.38	0.49	6172	0.37	0.48	506	0.23	0.42	1360	0.41	0.49
99<n of employees<250	586	0.42	0.49	6172	0.14	0.34	506	0.49	0.50	1360	0.23	0.42
n of employees>249	586	0.09	0.28	6172	0.01	0.10	506	0.23	0.42	1360	0.03	0.18
Ln Kpc	540	10.38	1.39	5691	9.97	1.58	389	10.41	1.56	1187	10.00	1.90
product innovation	579	0.61	0.49	6132	0.50	0.50	501	0.66	0.48	1344	0.50	0.50
process innovation	578	0.58	0.49	6121	0.41	0.49	498	0.58	0.49	1343	0.39	0.49
foreign market	585	0.47	0.50	6177	0.26	0.44	506	0.36	0.48	1362	0.22	0.42
year 2010	586	0.54	0.50	6180	0.49	0.50	506	0.51	0.50	1362	0.48	0.50
Textile, Wearing Apparel, Food Industry	586	0.19	0.39	6180	0.14	0.35	506	0.16	0.37	1362	0.08	0.27
Other Manufacturing, Mining, Utilities	586	0.49	0.50	6180	0.33	0.47	506	0.38	0.49	1362	0.28	0.45
Constructions	586	0.07	0.26	6180	0.13	0.34	506	0.02	0.13	1362	0.06	0.24
Trade, hotels, restaurants	586	0.09	0.28	6180	0.14	0.35	506	0.08	0.27	1362	0.14	0.35
Transportation and communication	586	0.05	0.22	6180	0.04	0.20	506	0.14	0.34	1362	0.10	0.30
Intermediation and other business service	586	0.06	0.24	6180	0.10	0.30	506	0.15	0.36	1362	0.18	0.38
Education, health and private social services	586	0.05	0.23	6180	0.12	0.32	506	0.08	0.26	1362	0.16	0.37
North- West	586	0.39	0.49	6180	0.32	0.47	506	0.39	0.49	1362	0.37	0.48
North-East	586	0.36	0.48	6180	0.26	0.44	506	0.34	0.47	1362	0.27	0.44
Centre	586	0.16	0.37	6180	0.21	0.41	506	0.17	0.37	1362	0.21	0.41
South	586	0.09	0.28	6180	0.22	0.41	506	0.10	0.30	1362	0.14	0.35

Source: RIL-AIDA data. Note: All statistics refer to the pooled sample (2007 and 2010).

Table 3: Pooled quantile estimates, whole sample, Panel A

Dep. Var. : Labour productivity						
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	**0.054*** **	**0.064*** **	**0.047*** **	**0.050*** **	**0.047**	**0.066*** **
	[0.02]	[0.018]	[0.017]	[0.019]	[0.032]	[0.017]
New hirings (share)	-0.051	-0.004	0.085**	0.100***	0.001	0.021
	[0.077]	[0.045]	[0.04]	[0.038]	[0.067]	[0.041]
White collars (share)	0.067	-0.203	-0.757***	-1.076***	-1.303***	-0.644***
	[0.112]	[0.126]	[0.105]	[0.105]	[0.189]	[0.105]
Blue collars (share)	-0.305***	-0.609***	-1.232***	-1.612***	-1.995***	-1.138***
	[0.11]	[0.122]	[0.096]	[0.101]	[0.176]	[0.101]
Females (share)	-0.470***	-0.451***	-0.421***	-0.378***	-0.385***	-0.412***
	[0.037]	[0.023]	[0.026]	[0.031]	[0.042]	[0.026]
Fixed-term contracts (share)	-0.332***	-0.334***	-0.359***	-0.310***	-0.107	-0.293***
	[0.075]	[0.049]	[0.046]	[0.056]	[0.097]	[0.053]
Trained workers (share)	0.101***	0.091***	0.087***	0.062***	0.066**	0.073***
	[0.022]	[0.017]	[0.016]	[0.019]	[0.032]	[0.016]
15<n of employees<100	0.090***	0.052***	0.022**	-0.003	-0.055***	0.02
	[0.019]	[0.014]	[0.011]	[0.014]	[0.02]	[0.013]
99<n of employees<250	0.162***	0.112***	0.081***	0.034*	-0.053*	0.069***
	[0.026]	[0.018]	[0.016]	[0.019]	[0.029]	[0.015]
n of employees>249	0.003	0.062**	0.017	-0.023	-0.068	-0.048
	[0.076]	[0.026]	[0.036]	[0.037]	[0.056]	[0.043]
Ln Kpc	0.080***	0.096***	0.104***	0.119***	0.139***	0.115***
	[0.006]	[0.005]	[0.004]	[0.005]	[0.007]	[0.004]
produc innovation	0.036*	-0.004	-0.008	-0.012	-0.043*	-0.017
	[0.019]	[0.013]	[0.01]	[0.015]	[0.024]	[0.013]
process innovation	0.036*	0.014	0.000	-0.007	-0.009	0.013
	[0.019]	[0.014]	[0.01]	[0.017]	[0.024]	[0.013]
foreign market	0.065***	0.073***	0.040***	0.057***	0.072***	0.055***
	[0.018]	[0.015]	[0.013]	[0.013]	[0.028]	[0.013]
year 2010	-0.097***	-0.063***	-0.060***	-0.066***	-0.086***	-0.092***
	[0.014]	[0.012]	[0.011]	[0.012]	[0.022]	[0.011]
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	9.570***	10.012***	10.756***	11.206***	11.623***	10.546***
	[0.129]	[0.132]	[0.117]	[0.116]	[0.206]	[0.112]
Pseudo R2	0.164	0.171	0.183	0.192	0.200	0.287
N of Obs	7538					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 3 Pooled quantile estimates, whole sample, Panel B

	Dep. Var. : Ln Wages					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	0.096***	0.088***	0.066***	0.051***	0.033***	0.086***
	[0.017]	[0.009]	[0.008]	[0.008]	[0.012]	[0.011]
New hirings (share)	-0.04	-0.012	0.045	0.055**	0.068*	0.009
	[0.053	[0.038	[0.028	[0.028	[0.036	[0.031
White collars (share)	0.231**	-0.196**	-0.802***	-1.107***	-1.331***	-0.590***
	[0.111	[0.078	[0.085	[0.076	[0.125	[0.082
Blue collars (share)	-0.132	-0.575***	-1.164***	-1.470***	-1.717***	-0.978***
	[0.111	[0.077	[0.08	[0.07	[0.113	[0.078
Females (share)	-0.460***	-0.479***	-0.428***	-0.418***	-0.420***	-0.441***
	[0.025	[0.02	[0.016	[0.016	[0.023	[0.02
Fixed-term contracts (share)	-0.559***	-0.513***	-0.420***	-0.388***	-0.295***	-0.461***
	[0.07	[0.039	[0.034	[0.039	[0.052	[0.046
Trained workers (share)	0.050***	0.046***	0.047***	0.036***	0.024*	0.040***
	[0.015	[0.011	[0.009	[0.01	[0.014	[0.01
15<n of employees<100	0.099***	0.084***	0.058***	0.041***	0.028***	0.060***
	[0.014	[0.011	[0.007	[0.008	[0.01	[0.008
99<n of employees<250	0.193***	0.169***	0.116***	0.079***	0.060***	0.121***
	[0.018	[0.011	[0.008	[0.009	[0.014	[0.01
n of employees>249	0.161***	0.137***	0.092***	0.064***	0.036*	0.027
	[0.05	[0.021	[0.021	[0.019	[0.02	[0.041
Ln Kpc	0.051***	0.037***	0.035***	0.032***	0.028***	0.043***
	[0.005	[0.003	[0.002	[0.003	[0.003	[0.003
product innovation	0.001	-0.005	-0.007	-0.015	-0.018	-0.006
	[0.015	[0.009	[0.008	[0.011	[0.012	[0.008
process innovation	0.009	-0.003	-0.019**	-0.019**	-0.029**	-0.015*
	[0.014	[0.009	[0.008	[0.009	[0.012	[0.008
foreign market	0.048***	0.031***	0.016**	0.016*	0.005	0.035***
	[0.014	[0.008	[0.007	[0.009	[0.01	[0.008
year 2010	0.020*	0.035***	0.039***	0.042***	0.049***	0.025***
	[0.012	[0.008	[0.007	[0.007	[0.01	[0.007
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	9.471***	10.261***	11.036***	11.541***	11.984***	10.741***
	[0.127	[0.092	[0.085	[0.08	[0.124	[0.087
Pseudo R2	0.250	0.250	0.250	0.247	0.249	0.358
N of obs	7586					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 3 Pooled quantile estimates, whole sample, Panel C

	Dep. Var. : Labour productivity-wage gap					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	-0.050***	-0.020**	-0.022*	-0.025	-0.02	-0.015
	[0.016	[0.01	[0.011	[0.018	[0.026	[0.014
New hirings (share)	0.076***	0.036*	0.02	0.004	0.035	0.014
	[0.029	[0.019	[0.023	[0.034	[0.065	[0.03
White collars (share)	-0.013	-0.035	-0.024	-0.152*	-0.366**	-0.094
	[0.085	[0.031	[0.047	[0.081	[0.159	[0.06
Blue collars (share)	-0.011	-0.075***	-0.085*	-0.257***	-0.595***	-0.198***
	[0.077	[0.029	[0.047	[0.08	[0.148	[0.058
Females (share)	0.008	0.002	0.026*	0.053**	0.073*	0.033*
	[0.023	[0.013	[0.015	[0.024	[0.042	[0.02
Fixed-term contracts (share)	0.080*	0.083***	0.103***	0.129***	0.172**	0.169***
	[0.042	[0.023	[0.023	[0.041	[0.079	[0.032
Trained workers (share)	0.053***	0.027***	0.013	0.027**	0.034	0.033***
	[0.015	[0.008	[0.008	[0.014	[0.027	[0.012
15<n of employees<100	0.016	-0.012*	-0.028***	-0.068***	-0.119***	-0.039***
	[0.013	[0.007	[0.007	[0.012	[0.021	[0.01
99<n of employees<250	0.027	-0.007	-0.040***	-0.088***	-0.174***	-0.055***
	[0.017	[0.01	[0.009	[0.014	[0.024	[0.012
n of employees>249	0.015	-0.006	-0.049**	-0.083***	-0.141***	-0.080***
	[0.03	[0.015	[0.019	[0.027	[0.046	[0.029
Ln Kpc	0.025***	0.041***	0.063***	0.088***	0.112***	0.073***
	[0.004	[0.002	[0.002	[0.003	[0.005	[0.003
produc innovation	-0.006	-0.002	0.002	-0.023**	-0.023	-0.012
	[0.013	[0.008	[0.008	[0.011	[0.025	[0.01
process innovation	0.041***	0.027***	0.021***	0.025**	0.018	0.030***
	[0.014	[0.008	[0.008	[0.01	[0.023	[0.01
foreign market	0.019	0.014*	0.028***	0.024*	0.044*	0.020*
	[0.016	[0.008	[0.009	[0.014	[0.025	[0.011
year 2010	-0.103***	-0.070***	-0.083***	-0.108***	-0.119***	-0.120***
	[0.014	[0.007	[0.006	[0.009	[0.018	[0.009
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	-0.186**	-0.137***	-0.190***	-0.082	0.17	-0.169**
	[0.089]	[0.037]	[0.053]	[0.091]	[0.168]	[0.066]
Pseudo R2	0.032	0.057	0.090	0.118	0.132	0.126
N of Obs.	7538					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 4 Pooled Estimates, Family firms, Panel A

	Dep. Var. : Ln (labour productivity)					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	0.085***	0.050**	0.043**	0.048*	0.047	0.073***
	[0.026	[0.021	[0.02	[0.025	[0.043	[0.021
New hirings (share)	-0.166**	-0.065	0.045	0.056	-0.083	-0.039
	[0.079	[0.042	[0.041	[0.043	[0.07	[0.044
White collars (share)	0.315**	0.098	-0.239**	-0.609***	-0.739***	-0.222**
	[0.137	[0.102	[0.12	[0.149	[0.202	[0.107
Blue collars (share)	-0.001	-0.283***	-0.699***	-1.090***	-1.290***	-0.631***
	[0.138	[0.093	[0.114	[0.142	[0.192	[0.103
Females (share)	-0.439***	-0.429***	-0.421***	-0.382***	-0.338***	-0.397***
	[0.039	[0.029	[0.027	[0.036	[0.049	[0.027
Fixed-term contracts (share)	-0.284***	-0.295***	-0.309***	-0.261***	-0.049	-0.266***
	[0.093	[0.062	[0.054	[0.054	[0.094	[0.055
Trained workers (share)	0.111***	0.091***	0.083***	0.059***	0.043	0.081***
	[0.026	[0.02	[0.016	[0.019	[0.027	[0.017
15<n of employees<100	0.069***	0.038***	0.015	-0.026	-0.076***	0.005
	[0.021	[0.014	[0.012	[0.016	[0.023	[0.013
99<n of employees<250	0.147***	0.099***	0.072***	0.023	-0.072**	0.047***
	[0.024	[0.016	[0.017	[0.019	[0.028	[0.017
n of employees>249	-0.207*	0.029	-0.009	-0.011	-0.066	-0.121*
	[0.124	[0.063	[0.051	[0.068	[0.079	[0.073
Ln Kpc	0.081***	0.100***	0.106***	0.118***	0.140***	0.116***
	[0.007	[0.005	[0.005	[0.005	[0.007	[0.005
produc innov	0.045**	-0.011	-0.005	-0.016	-0.017	-0.007
	[0.022	[0.017	[0.014	[0.016	[0.024	[0.013
process innov	0.049**	0.025	0.015	0.003	-0.009	0.032**
	[0.023	[0.019	[0.015	[0.017	[0.028	[0.014
foreign market	0.067***	0.080***	0.049***	0.067***	0.082***	0.074***
	[0.02	[0.012	[0.014	[0.016	[0.024	[0.014
year 2010	-0.096***	-0.068***	-0.051***	-0.062***	-0.082***	-0.094***
	[0.019	[0.014	[0.013	[0.017	[0.02	[0.012
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	9.272***	9.650***	10.185***	10.693***	10.881***	10.021***
	[0.148	[0.1	[0.116	[0.16	[0.212	[0.115
Pseudo R2	0.1771	0.1764	0.1798	0.1834	0.1848	
N of Obs	5839					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 4 Pooled Estimates, Family firms, Panel B

	Dep. Var. : ln (wages)					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	0.082***	0.071***	0.066***	0.042***	0.055***	0.091***
	[0.02	[0.013	[0.01	[0.013	[0.02	[0.014
New hirings (share)	-0.069	-0.026	0.021	0.042	0.058	-0.011
	[0.056	[0.035	[0.028	[0.031	[0.036	[0.035
White collars (share)	0.481***	0.084	-0.383***	-0.863***	-1.062***	-0.240***
	[0.12	[0.087	[0.093	[0.104	[0.126	[0.087
Blue collars (share)	0.127	-0.276***	-0.736***	-1.228***	-1.440***	-0.596***
	[0.113	[0.084	[0.088	[0.096	[0.12	[0.083
Females (share)	-0.461***	-0.455***	-0.419***	-0.401***	-0.395***	-0.422***
	[0.032	[0.025	[0.02	[0.02	[0.028	[0.022
Fixed-term contracts (share)	-0.558***	-0.468***	-0.402***	-0.352***	-0.238***	-0.439***
	[0.064	[0.039	[0.04	[0.039	[0.054	[0.049
Trained workers (share)	0.032*	0.039***	0.049***	0.046***	0.043***	0.045***
	[0.019	[0.012	[0.011	[0.012	[0.015	[0.012
15<n of employees<100	0.090***	0.081***	0.055***	0.034***	0.022**	0.051***
	[0.014	[0.01	[0.009	[0.009	[0.011	[0.009
99<n of employees<250	0.189***	0.169***	0.121***	0.082***	0.059***	0.116***
	[0.017	[0.011	[0.009	[0.011	[0.013	[0.011
n of employees>249	0.091	0.127***	0.074***	0.032	-0.029	-0.042
	[0.109	[0.042	[0.024	[0.026	[0.034	[0.074
Ln Kpc	0.053***	0.040***	0.038***	0.036***	0.030***	0.048***
	[0.005	[0.003	[0.002	[0.003	[0.004	[0.003
produc innov	0.008	-0.003	-0.001	-0.015	-0.019*	0
	[0.015	[0.01	[0.009	[0.01	[0.011	[0.009
process innov	0.014	0.002	-0.011	-0.007	-0.024**	-0.005
	[0.015	[0.01	[0.01	[0.01	[0.011	[0.009
foreign market	0.051***	0.038***	0.015*	0.01	0.008	0.036***
	[0.014	[0.01	[0.008	[0.01	[0.012	[0.009
year 2010	0.02	0.036***	0.037***	0.044***	0.050***	0.028***
	[0.012	[0.009	[0.007	[0.008	[0.01	[0.008
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	9.184***	9.903***	10.545***	11.215***	11.638***	10.287***
	[0.118	[0.092	[0.091	[0.101	[0.139	[0.093
Pseudo R2	0.255	0.245	0.235	0.221	0.218	0.349
N of Obs	5872					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 4 Pooled Estimates, Family firms, Panel C

	Dep. Var. : ln(productivity- wage) gap					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	-0.036*	-0.031***	-0.032***	-0.018	-0.004	-0.010
	[0.02	[0.012	[0.012	[0.023	[0.031	[0.016
New hirings (share)	0.067	0.017	-0.003	-0.027	-0.014	-0.022
	[0.041	[0.017	[0.024	[0.032	[0.063	[0.031
White collars (share)	0.035	-0.011	0.006	-0.108	-0.27	-0.042
	[0.137	[0.034	[0.049	[0.081	[0.2	[0.068
Blue collars (share)	0.05	-0.038	-0.046	-0.195**	-0.383*	-0.097
	[0.132	[0.036	[0.047	[0.08	[0.2	[0.066
Females (share)	0.022	0.016	0.035**	0.046*	0.044	0.024
	[0.027	[0.017	[0.014	[0.027	[0.042	[0.02
Fixed-term contracts (share)	0.099**	0.086***	0.114***	0.157***	0.161**	0.171***
	[0.045	[0.023	[0.027	[0.04	[0.072	[0.033
Trained workers (share)	0.065***	0.030***	0.01	0.016	0.033	0.035***
	[0.013	[0.009	[0.01	[0.016	[0.029	[0.012
15<n of employees<100	0.008	-0.015**	-0.032***	-0.078***	-0.126***	-0.044***
	[0.013	[0.007	[0.009	[0.013	[0.024	[0.01
99<n of employees<250	-0.001	-0.018**	-0.045***	-0.087***	-0.177***	-0.068***
	[0.017	[0.008	[0.011	[0.018	[0.029	[0.012
n of employees>249	-0.011	-0.024	-0.046*	-0.078**	-0.117	-0.084***
	[0.07	[0.023	[0.027	[0.035	[0.072	[0.032
Ln Kpc	0.027***	0.043***	0.061***	0.082***	0.100***	0.068***
	[0.006	[0.002	[0.003	[0.004	[0.006	[0.004
product innovation	-0.01	-0.004	0.006	-0.012	-0.01	-0.01
	[0.014	[0.008	[0.009	[0.012	[0.024	[0.011
process innovation	0.042***	0.027***	0.018**	0.024**	0.02	0.038***
	[0.015	[0.008	[0.009	[0.012	[0.027	[0.011
foreign market	0.038**	0.016**	0.037***	0.031**	0.050**	0.038***
	[0.016	[0.008	[0.008	[0.015	[0.025	[0.011
year 2010	-0.113***	-0.075***	-0.086***	-0.112***	-0.119***	-0.123***
	[0.016	[0.007	[0.007	[0.01	[0.019	[0.009
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	-0.248*	-0.179***	-0.222***	-0.084	0.1	-0.210***
	[0.141	[0.05	[0.057	[0.093	[0.226	[0.076
Pseudo R2	0.033	0.061	0.090	0.115	0.123	
N of Obs.	5839					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 5 Pooled Estimates, Non Family firms, Panel A

	Dep. Var. : Ln (Labour productivity)					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	0.001	0.014	-0.002	0.007	-0.087	0.001
	[0.059	[0.036	[0.035	[0.036	[0.055	[0.032
New hirings (share)	0.291**	0.112	0.190*	0.343**	0.156	0.172
	[0.118	[0.096	[0.112	[0.136	[0.249	[0.109
White collars (share)	-1.258***	-1.358***	-1.549***	-1.583***	-2.065***	-1.632***
	[0.38	[0.189	[0.204	[0.286	[0.589	[0.214
Blue collars (share)	-1.659***	-1.671***	-1.965***	-2.213***	-2.852***	-2.219***
	[0.327	[0.165	[0.183	[0.25	[0.525	[0.207
Females (share)	-0.531***	-0.529***	-0.459***	-0.411***	-0.241	-0.417***
	[0.096	[0.063	[0.076	[0.079	[0.147	[0.075
Fixed-term contracts (share)	-0.631***	-0.651***	-0.623***	-0.536***	-0.197	-0.379**
	[0.225	[0.145	[0.129	[0.166	[0.542	[0.17
Trained workers (share)	0.090*	0.026	0.105***	0.075*	0.042	0.036
	[0.054	[0.041	[0.038	[0.042	[0.071	[0.041
15<n of employees<100	0.165***	0.068*	-0.025	-0.144***	-0.268***	-0.028
	[0.064	[0.036	[0.039	[0.054	[0.087	[0.041
99<n of employees<250	0.247***	0.129***	-0.043	-0.176***	-0.300***	-0.019
	[0.07	[0.037	[0.045	[0.062	[0.096	[0.046
n of employees>249	0.142	0.048	-0.076	-0.274***	-0.309**	-0.105
	[0.106	[0.066	[0.061	[0.077	[0.123	[0.068
Ln Kpc	0.047***	0.069***	0.097***	0.126***	0.145***	0.107***
	[0.013	[0.011	[0.009	[0.011	[0.016	[0.01
product innovation	-0.072	-0.024	-0.015	-0.036	-0.03	-0.053*
	[0.051	[0.034	[0.034	[0.034	[0.06	[0.032
process innovation	0.04	0.013	-0.014	-0.015	-0.087	-0.027
	[0.051	[0.037	[0.041	[0.042	[0.068	[0.033
foreign market	-0.024	0.02	0.066**	0.120***	0.067	0.019
	[0.054	[0.034	[0.032	[0.037	[0.056	[0.037
year 2010	-0.048	-0.021	-0.032	-0.094***	-0.122*	-0.058**
	[0.045	[0.029	[0.027	[0.031	[0.062	[0.028
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	11.333***	11.522***	11.865***	12.093***	12.981***	11.980***
	[0.347	[0.144	[0.204	[0.321	[0.592	[0.223
Pseudo R2	0.132	0.167	0.184	0.215	0.262	
N of Obs	1453					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 5 Pooled Estimates, Non Family firms, Panel B

	Dep. Var. : ln (Wages)					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	0.047**	0.047	0.045***	0.029*	0.040**	-0.005
	[0.019	[0.029	[0.017	[0.016	[0.016	[0.024
New hirings (share)	0.03	-0.005	0.077	0.079	0.064	0.132
	[0.069	[0.108	[0.065	[0.05	[0.071	[0.123
White collars (share)	-1.359***	-0.815***	-1.055***	-1.307***	-1.478***	-1.660***
	[0.154	[0.256	[0.138	[0.105	[0.157	[0.237
Blue collars (share)	-1.692***	-1.091***	-1.349***	-1.620***	-1.786***	-2.018***
	[0.147	[0.222	[0.128	[0.103	[0.146	[0.228
Females (share)	-0.448***	-0.517***	-0.462***	-0.509***	-0.416***	-0.466***
	[0.05	[0.063	[0.03	[0.032	[0.036	[0.057
Fixed-term contracts (share)	-0.533***	-0.683***	-0.603***	-0.523***	-0.578***	-0.625***
	[0.126	[0.178	[0.091	[0.072	[0.079	[0.164
Trained workers (share)	0.018	0.095***	0.043***	0.015	-0.003	-0.019
	[0.021	[0.033	[0.016	[0.018	[0.022	[0.032
15<n of employees<100	0.01	0.052	0.050***	0.033*	0.003	-0.043
	[0.022	[0.035	[0.019	[0.018	[0.024	[0.032
99<n of employees<250	0.028	0.106***	0.084***	0.066***	0.001	-0.028
	[0.027	[0.036	[0.02	[0.018	[0.021	[0.039
n of employees>249	-0.022	0.05	0.052*	0.061**	-0.011	-0.06
	[0.046	[0.075	[0.03	[0.03	[0.028	[0.039
Ln Kpc	0.023***	0.015**	0.022***	0.024***	0.020***	0.012*
	[0.006	[0.007	[0.004	[0.004	[0.006	[0.007
produc innov	-0.021	-0.037	-0.005	0	-0.001	-0.001
	[0.019	[0.029	[0.015	[0.015	[0.02	[0.026
process innov	-0.038**	0.003	-0.034**	-0.032*	-0.03	-0.037
	[0.018	[0.025	[0.016	[0.018	[0.024	[0.027
foreign market	0.045**	0.003	0.025	0.019	0.022	0.047*
	[0.018	[0.028	[0.018	[0.018	[0.017	[0.025
year 2010	0.034**	0.029	0.052***	0.052***	0.044**	0.038*
	[0.016	[0.028	[0.016	[0.015	[0.017	[0.02
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	11.897***	11.134***	11.399***	11.826***	12.196***	12.645***
	[0.154	[0.248	[0.147	[0.117	[0.177	[0.272
Pseudo R2	0.2338	0.2695	0.2805	0.292	0.291	
n of obs.	1465					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 5 Pooled Estimates, Non Family firms, Panel C

	Dep. Var. : ln(Productivity- wage) gap					
	q10	**q25**	**q50**	**q75**	**q90**	**OLS**
PRP	-0.054	-0.025	-0.01	-0.067**	-0.104**	-0.04
	[0.045]	[0.022]	[0.022]	[0.03]	[0.045]	[0.028]
New hirings (share)	0.192***	0.063	0.037	0.127	0.446*	0.132
	[0.068]	[0.05]	[0.06]	[0.106]	[0.228]	[0.085]
White collars (share)	-0.254**	-0.179***	-0.178**	-0.254*	-0.028	-0.276**
	[0.102]	[0.062]	[0.085]	[0.146]	[0.396]	[0.136]
Blue collars (share)	-0.277***	-0.241***	-0.313***	-0.501***	-0.477	-0.520***
	[0.096]	[0.061]	[0.086]	[0.143]	[0.343]	[0.134
Females (share)	0.031	-0.054	-0.047	0.061	0.078	0.05
	[0.057	[0.037	[0.046	[0.071	[0.106	[0.059
Fixed-term contracts (share)	-0.004	0.08	0.084	0.057	0.118	0.16
	[0.136	[0.076	[0.089	[0.125	[0.233	[0.112
Trained workers (share)	0.016	0.034	0.038	0.062	0.033	0.025
	[0.038	[0.023	[0.028	[0.038	[0.061	[0.034
15<n of employees<100	0.052	0.017	-0.003	-0.112***	-0.282***	-0.042
	[0.039	[0.026	[0.028	[0.04	[0.084	[0.035
99<n of employees<250	0.103**	0.035	-0.046	-0.176***	-0.393***	-0.059
	[0.043	[0.029	[0.029	[0.047	[0.091	[0.038
n of employees>249	0.114*	0.028	-0.091***	-0.210***	-0.352***	-0.093
	[0.068	[0.039	[0.035	[0.072	[0.113	[0.066
Ln Kpc	0.017**	0.038***	0.068***	0.110***	0.128***	0.086***
	[0.008	[0.005	[0.007	[0.009	[0.011	[0.008
product innovation	-0.009	-0.007	-0.005	-0.026	-0.059	-0.023
	[0.033	[0.019	[0.022	[0.03	[0.061	[0.026
process innovation	0.063*	0.041**	0.028	0.033	-0.013	0.009
	[0.036	[0.02	[0.024	[0.033	[0.066	[0.028
foreign market	-0.013	0.009	0	0.017	0.038	-0.022
	[0.039	[0.022	[0.023	[0.038	[0.058	[0.032
year 2010	-0.058**	-0.056***	-0.065***	-0.142***	-0.101**	-0.099***
	[0.028	[0.016	[0.021	[0.032	[0.046	[0.024
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	-0.03	0.01	0.014	0.058	0.25	0.044
	[0.145	[0.081	[0.101	[0.179	[0.391	[0.15
Pseudo R2	0.050	0.063	0.109	0.149	0.213	0.159
N of obs	1453					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 6: Quantile fixed effects, whole sample, Panel A

	Dep. Var. : Ln (Labour productivity)					
	q10	**q25**	**q50**	**q75**	**q90**	**FE**
PRP	0.026*	0.042***	0.042***	0.029***	0.056***	0.042*
	[0.015]	[0.008]	[0.001]	[0.008]	[0.016]	[0.023]
New hirings (share)	0.096***	0.129***	0.108***	0.083***	0.117***	0.108***
	[0.022	[0.013	[0.001	[0.018	[0.022	[0.041
White collars (share)	0.476***	0.417***	0.376***	0.339***	0.301***	0.376***
	[0.079	[0.033	[0.002	[0.026	[0.072	[0.084
Blue collars (share)	0.531***	0.441***	0.384***	0.336***	0.277***	0.384***
	[0.075	[0.032	[0.002	[0.025	[0.068	[0.087
Females (share)	0.141***	0.142***	0.134***	0.128***	0.131***	0.134*
	[0.014	[0.009	[0.001	[0.012	[0.021	[0.07
Fixed-term contracts (share)	-0.195***	-0.207***	-0.198***	-0.216***	-0.187***	-0.198***
	[0.035	[0.021	[0.001	[0.021	[0.037	[0.052
Trained workers (share)	0.011	0.004	-0.005***	-0.003	-0.01	-0.005
	[0.012	[0.006	[0.001	[0.007	[0.011	[0.017
15<n of employees<100	-0.116***	-0.127***	-0.142***	-0.158***	-0.166***	-0.142***
	[0.01	[0.006	[0.000]	[0.006	[0.009	[0.022
99<n of employees<250	-0.137***	-0.164***	-0.190***	-0.213***	-0.246***	-0.190***
	[0.011	[0.006	[0.000]	[0.007	[0.012	[0.041
n of employees>249	-0.141***	-0.161***	-0.188***	-0.225***	-0.245***	-0.188**
	[0.026	[0.015	[0.001	[0.011	[0.023	[0.082
Ln Kpc	0.052***	0.059***	0.064***	0.066***	0.075***	0.064***
	[0.003	[0.002	[0.000]	[0.002	[0.003	[0.008
product innovation	0.004	-0.008	-0.007***	-0.002	-0.014	-0.007
	[0.011	[0.007	[0.000]	[0.006	[0.01	[0.013
process innovation	0.003	0.007	-0.002***	-0.005	-0.013	-0.002
	[0.01	[0.006	[0.000]	[0.006	[0.011	[0.013
foreign market	-0.014	-0.019***	-0.019***	-0.017***	-0.011	-0.019
	[0.01	[0.006	[0.000]	[0.005	[0.01	[0.013
year 2010	-0.039***	-0.020***	-0.044***	-0.032***	-0.056***	-0.044***
	[0.009	[0.006	[0.001	[0.004	[0.008	[0.008
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
_cons	9.510***	9.649***	9.750***	9.849***	9.963***	9.750***
	[0.084	[0.036	[0.002	[0.03	[0.074	[0.194
Pseudo R2	0.3179	0.4033	0.4461	0.3881	0.3248	
N of firms (panels)	4222					
N of obs	7538					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 6: Quantile fixed effects, whole sample, Panel B

	Dep. Var. : ln (Wages)					
	q10	**q25**	**q50**	**q75**	**q90**	**FE**
PRP	0.031***	0.025***	0.024***	0.015***	0.009*	0.024*
	[0.007]	[0.004]	[0.000]	[0.004]	[0.005]	[0.013]
New hirings (share)	0.080***	0.082***	0.096***	0.097***	0.125***	0.096***
	[0.016]	[0.01]	[0.000]	[0.011]	[0.017]	[0.024]
White collars (share)	0.311***	0.215***	0.200***	0.157***	0.149***	0.200***
	[0.037]	[0.022]	[0.001]	[0.02]	[0.037]	[0.049]
Blue collars (share)	0.293***	0.205***	0.188***	0.145***	0.132***	0.188***
	[0.035]	[0.02]	[0.001]	[0.02]	[0.033]	[0.051]
Females (share)	-0.002	0.007	0.009***	0.006	0.016	0.009
	[0.01]	[0.006]	[0.000]	[0.006]	[0.011]	[0.041]
Fixed-term contracts (share)	-0.420***	-0.345***	-0.365***	-0.335***	-0.304***	-0.365***
	[0.023	[0.014	[0.001	[0.014	[0.019	[0.03
Trained workers (share)	-0.005	-0.005	-0.008***	-0.009**	-0.008	-0.008
	[0.007	[0.004	[0.000]	[0.003	[0.006	[0.01
15<n of employees<100	-0.101***	-0.109***	-0.123***	-0.134***	-0.142***	-0.123***
	[0.005	[0.004	[0.000]	[0.003	[0.005	[0.013
99<n of employees<250	-0.191***	-0.206***	-0.229***	-0.244***	-0.261***	-0.229***
	[0.006	[0.004	[0.000]	[0.004	[0.006	[0.024
n of employees>249	-0.212***	-0.224***	-0.245***	-0.266***	-0.275***	-0.245***
	[0.013	[0.008	[0.000]	[0.009	[0.019	[0.047
Ln kpc	0.042***	0.040***	0.041***	0.039***	0.039***	0.041***
	[0.001	[0.001	[0.000]	[0.001]	[0.001]	[0.005]
product innovation	0.000	0.000	0.003***	0.003	0.001	0.003
	[0.004]	[0.004]	[0.000]	[0.003]	[0.004]	[0.008]
process innovation	0.003	-0.004	-0.005***	-0.009***	-0.004	-0.005
	[0.005	[0.004	[0.000]	[0.003	[0.004	[0.008
foreign market	0.001	0.003	0.001***	-0.004	0.000	0.001
	[0.005	[0.003	[0.000]	[0.004	[0.006	[0.008
year 2010	0.052***	0.058***	0.053***	0.058***	0.048***	0.053***
	[0.004	[0.003	[0.000]	[0.003	[0.005	[0.005
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
constant	9.618***	9.797***	9.853***	9.970***	10.042***	9.853***
	[0.041	[0.024	[0.001	[0.025	[0.042	[0.114
Pseudo R2	0.4479	0.5116	0.5555	0.5152	0.451	
N. of firms (panels)	4231					
N of obs	7586					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 6:Quantile fixed effects, whole sample, Panel C

	Dep. Var. : Ln (Labour productivity wage) gap					
	q10	**q25**	**q50**	**q75**	**q90**	**FE**
PRP	0.006	0.009	0.015***	0.018***	0.008	0.015
	[0.013]	[0.006]	[0.001]	[0.005]	[0.013]	[0.02]
New hirings (share)	0.027	0.02	0.010***	0.002	-0.005	0.01
	[0.019]	[0.014]	[0.002]	[0.011]	[0.027]	[0.036]
White collars (share)	0.235***	0.199***	0.174***	0.139***	0.142***	0.174**
	[0.051]	[0.033]	[0.006]	[0.02]	[0.05]	[0.073]
Blue collars (share)	0.293***	0.220***	0.185***	0.135***	0.105**	0.185**
	[0.046]	[0.031]	[0.006]	[0.019]	[0.049]	[0.075]
Females (share)	0.103***	0.116***	0.111***	0.104***	0.124***	0.111*
	[0.012]	[0.007]	[0.001]	[0.007]	[0.016]	[0.061]
Fixed-term contracts (share)	0.154***	0.167***	0.167***	0.148***	0.134***	0.167***
	[0.025	[0.017	[0.001	[0.012	[0.024	[0.045
Trained workers (share)	0.012	0.008	0.004***	0.003	-0.008	0.004
	[0.01	[0.005	[0.001	[0.005	[0.009	[0.015
15<n of employees<100	0.019**	0.000	-0.011***	-0.025***	-0.039***	-0.011
	[0.008	[0.004	[0.000]	[0.005	[0.009	[0.019
99<n of employees<250	0.073***	0.049***	0.030***	0.012**	-0.005	0.03
	[0.01	[0.006	[0.001	[0.005	[0.01	[0.035
n of employees>249	0.105***	0.067***	0.045***	0.021**	-0.004	0.045
	[0.017	[0.009	[0.001	[0.01	[0.021	[0.071
Ln Kpc	0.011***	0.021***	0.026***	0.030***	0.038***	0.026***
	[0.002	[0.001	[0.000]	[0.001	[0.002	[0.007
produc innovation	-0.006	-0.012***	-0.011***	-0.009**	-0.015*	-0.011
	[0.008	[0.004	[0.001	[0.004	[0.009	[0.011
process innovation	0.018**	0.012***	0.005***	0.000	-0.004	0.005
	[0.008	[0.004	[0.000]	[0.005	[0.008	[0.011
foreign market	-0.023***	-0.016***	-0.020***	-0.024***	-0.025***	-0.020*
	[0.008	[0.005	[0.001	[0.004	[0.009	[0.011
year 2010	-0.080***	-0.077***	-0.101***	-0.082***	-0.102***	-0.101***
	[0.007	[0.004	[0.001	[0.003	[0.008	[0.007
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
constant	-0.232***	-0.152***	-0.104***	-0.048**	0.011	-0.104
	[0.049	[0.035	[0.006	[0.023	[0.051	[0.168
Pseudo R2	0.1968	0.2758	0.3306	0.2734	0.2017	
N. of firms (panels)			4222			
N of obs.			7538			

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 7: Quantile fixed effects, family firms, Panel A

	Dep. Var. : Ln (Labour productivity)					
	q10	q25	q50	q75	q90	fe
PRP	0.033*	0.053***	0.051***	0.042***	0.050**	0.051*
	[0.018]	[0.01]	[0.000]	[0.008]	[0.023]	[0.028]
New hirings (share)	0.070**	0.117***	0.079***	0.064***	0.097***	0.079*
	[0.033]	[0.018]	[0.000]	[0.019]	[0.029]	[0.044]
White collars (share)	0.569***	0.505***	0.461***	0.409***	0.448***	0.461***
	[0.095	[0.051	[0.000]	[0.031	[0.063	[0.092
Blue collars (share)	0.630***	0.533***	0.483***	0.418***	0.438***	0.483***
	[0.091	[0.05	[0.000]	[0.029	[0.059	[0.092
Females (share)	0.047**	0.067***	0.060***	0.049***	0.079***	0.06
	[0.021	[0.012	[0.000]	[0.012	[0.018	[0.078
Fixed-term contracts (share)	-0.225***	-0.252***	-0.240***	-0.255***	-0.251***	-0.240***
	[0.035	[0.023	[0.000]	[0.025	[0.037	[0.056
Trained workers (share)	0.007	0.009	-0.005***	-0.001	-0.018	-0.005
	[0.013	[0.008	[0.000]	[0.008	[0.013	[0.018
15<n of employees<100	-0.097***	-0.116***	-0.134***	-0.154***	-0.169***	-0.134***
	[0.01	[0.007	[0.000]	[0.006	[0.009	[0.024
99<n of employees<250	-0.131***	-0.157***	-0.185***	-0.206***	-0.231***	-0.185***
	[0.013	[0.008	[0.000]	[0.007	[0.011	[0.046
n of employees>249	-0.125***	-0.153***	-0.147***	-0.181***	-0.163**	-0.147
	[0.041	[0.031	[0.005	[0.024	[0.066	[0.116
Ln Kpc	0.048***	0.053***	0.057***	0.060***	0.065***	0.057***
	[0.003	[0.002	[0.000]	[0.002	[0.003	[0.009
product innovation	0.002	-0.008	-0.009***	-0.007	-0.017	-0.009
	[0.011	[0.007	[0.000]	[0.007	[0.01	[0.014
process innovation	0.007	0.005	0.007***	0.006	-0.006	0.007
	[0.011	[0.007	[0.000]	[0.007	[0.011	[0.014
foreign market	-0.011	-0.018**	-0.015***	-0.011**	-0.015	-0.015
	[0.012	[0.007	[0.000]	[0.006	[0.01	[0.014
year 2010	-0.039***	-0.023***	-0.043***	-0.031***	-0.049***	-0.043***
	[0.009]	[0.006]	[0.000]	[0.005]	[0.009]	[0.009]
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
constant	8.982***	9.147***	9.239***	9.347***	9.414***	9.239***
	[0.103	[0.058	[0.001	[0.04	[0.067	[0.304
Pseudo R2	0.635	0.729	0.766	0.707	0.616	
N. of firms (panels)	3314					
N of obs	5839					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 7: Quantile fixed effects, family firms, Panel B

	Dep. Var. : ln (wages)					
	q10	q25	q50	q75	q90	FE
PRP	0.022***	0.012***	0.006***	0.003	-0.008	0.006
	[0.007]	[0.004]	[0.000]	[0.004]	[0.008]	[0.016]
New hirings (share)	0.090***	0.079***	0.099***	0.103***	0.123***	0.099***
	[0.022]	[0.012]	[0.000]	[0.013]	[0.023]	[0.026]
White collars (share)	0.430***	0.300***	0.294***	0.231***	0.229***	0.294***
	[0.044]	[0.029]	[0.001]	[0.023]	[0.034]	[0.054]
Blue collars (share)	0.407***	0.296***	0.289***	0.230***	0.230***	0.289***
	[0.044]	[0.029]	[0.001]	[0.022]	[0.033]	[0.055]
Females (share)	0.006	0.015**	0.018***	0.012*	0.025**	0.018
	[0.012	[0.006	[0.000]	[0.007	[0.012	[0.046
Fixed-term contracts (share)	-0.417***	-0.342***	-0.364***	-0.340***	-0.302***	-0.364***
	[0.029	[0.014	[0.000]	[0.016	[0.021	[0.033
Trained workers (share)	-0.003	[0.000]	-0.004***	-0.003	0.003	-0.004
	[0.007	[0.004	[0.000]	[0.005	[0.007	[0.011
15<n of employees<100	-0.113***	-0.123***	-0.138***	-0.150***	-0.162***	-0.138***
	[0.006	[0.004	[0.000]	[0.004	[0.006	[0.014
99<n of employees<250	-0.160***	-0.180***	-0.201***	-0.220***	-0.242***	-0.201***
	[0.007	[0.005	[0.000]	[0.004]	[0.006]	[0.027]
n of employees>249	-0.221***	-0.206***	-0.231***	-0.258***	-0.248***	-0.231***
	[0.025	[0.013	[0.000]	[0.011	[0.033	[0.067
Ln Kpc	0.038***	0.037***	0.038***	0.036***	0.036***	0.038***
	[0.001]	[0.001	[0.000]	[0.001]	[0.001]	[0.005]
produc innov	0.000	0.003	0.002***	0.002	-0.002	0.002
	[0.006	[0.004	[0.000]	[0.004	[0.006	[0.008
process innov	0.004	-0.007*	-0.007***	-0.013***	-0.01	-0.007
	[0.006	[0.004	[0.000]	[0.004	[0.006	[0.008
foreign market	0.001	0.004	-0.003***	-0.006	-0.001	-0.003
	[0.006	[0.003	[0.000]	[0.004	[0.007	[0.008
year 2010	0.057***	0.059***	0.057***	0.061***	0.052***	0.057***
	[0.004	[0.003	[0.000]	[0.003	[0.005	[0.005
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
constant	9.386***	9.594***	9.635***	9.768***	9.837***	9.635***
	[0.046]	[0.029]	[0.001]	[0.023]	[0.038]	[0.18]
Pseudo R2	0.5043	0.5389	0.5584	0.5025	0.4318	
N. of firms (panels)	3319					
N of Obs	5872					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 7: Quantile fixed effects, family firms, Panel C

	Dep. Var. : Ln(productivity wage) gap					
	q10	q25	q50	q75	q90	FE
PRP	0.035**	0.028***	0.041***	0.046***	0.031*	0.041*
	[0.017]	[0.006]	[0.001]	[0.007]	[0.016]	[0.023]
New hirings (share)	0.018	0.001	-0.018***	-0.024*	-0.02	-0.018
	[0.028]	[0.013]	[0.001]	[0.013]	[0.029]	[0.037]
White collars (share)	0.220***	0.184***	0.168***	0.124***	0.167***	0.168**
	[0.064	[0.044	[0.006	[0.027	[0.051	[0.077
Blue collars (share)	0.286***	0.215***	0.190***	0.134***	0.146***	0.190**
	[0.061	[0.043	[0.006	[0.026	[0.05	[0.078
Females (share)	0.016	0.041***	0.031***	0.030***	0.048***	0.031
	[0.017]	[0.009]	[0.001]	[0.009]	[0.017]	[0.066]
Fixed-term contracts (share)	0.106***	0.130***	0.124***	0.105***	0.099***	0.124***
	[0.024	[0.015	[0.001	[0.012	[0.026	[0.047
Trained workers (share)	0.003	0.004	-0.002***	-0.002	-0.017*	-0.002
	[0.011	[0.006	[0.001	[0.006	[0.009	[0.016
15<n of employees<100	0.045***	0.021***	0.011***	-0.008*	-0.025***	0.011
	[0.008	[0.004	[0.000]	[0.004	[0.007	[0.02
99<n of employees<250	0.062***	0.044***	0.028***	0.010*	-0.009	0.028
	[0.011	[0.005	[0.001	[0.006	[0.01	[0.039
n of employees>249	0.104***	0.107***	0.103***	0.095***	0.089***	0.103
	[0.026	[0.013	[0.001	[0.02	[0.033	[0.098
Ln Kpc	0.007***	0.016***	0.019***	0.023***	0.030***	0.019***
	[0.002	[0.001	[0.000]	[0.001	[0.003	[0.007
produc innov	-0.011	-0.012**	-0.014***	-0.012***	-0.013	-0.014
	[0.01	[0.005	[0.000]	[0.005	[0.008	[0.012
process innov	0.024***	0.016***	0.014***	0.007	0.008	0.014
	[0.009	[0.004	[0.001	[0.005	[0.009	[0.012
foreign market	-0.016*	-0.011**	-0.013***	-0.013**	-0.014	-0.013
	[0.01	[0.005	[0.000]	[0.005	[0.01	[0.012
year 2010	-0.091***	-0.080***	-0.102***	-0.085***	-0.105***	-0.102***
	[0.008	[0.005	[0.001	[0.004	[0.008	[0.007
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
constant	-0.492***	-0.410***	-0.360***	-0.297***	-0.270***	-0.36
	[0.071	[0.046	[0.006	[0.029	[0.059	[0.257
Pseudo R2	0.6238	0.7274	0.7693	0.7081	0.5987	
N. of firms (panels)	3314					
N of Obs	5839					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 8 :Quantile fixed effects, non family firms, Panel A

	Dep. Var. : Ln (labour productivity)					
	q10	q25	q50	q75	q90	FE
PRP	-0.026	-0.001	-0.004***	-0.014	0.021	-0.004
	[0.029]	[0.013]	[0.001]	[0.013]	[0.025]	[0.047]
New hirings (share)	0.208***	0.202***	0.170***	0.103**	0.136*	0.17
	[0.074]	[0.046]	[0.006]	[0.046]	[0.072]	[0.117]
White collars (share)	0.039	-0.015	-0.069***	-0.073	-0.109	-0.069
	[0.129	[0.072	[0.007	[0.068	[0.151	[0.265
Blue collars (share)	-0.009	-0.064	-0.133***	-0.136**	-0.188	-0.133
	[0.127	[0.069	[0.006	[0.067	[0.135	[0.28
Females (share)	0.313***	0.313***	0.295***	0.288***	0.256***	0.295
	[0.044	[0.025	[0.003	[0.028	[0.055	[0.189
Fixed-term contracts (share)	-0.313***	-0.216***	-0.185***	-0.169***	-0.15	-0.185
	[0.111	[0.056	[0.007	[0.047	[0.137	[0.158
Trained workers (share)	0.011	-0.002	-0.001	0.001	0.002	-0.001
	[0.028	[0.015	[0.001	[0.018	[0.033	[0.043
15<n of employees<100	-0.073**	-0.093***	-0.102***	-0.116***	-0.130***	-0.102
	[0.035	[0.018	[0.002	[0.016	[0.037	[0.063
99<n of employees<250	-0.02	-0.077***	-0.118***	-0.160***	-0.240***	-0.118
	[0.033	[0.017	[0.002	[0.014	[0.038	[0.101
n of employees>249	-0.034	-0.097***	-0.138***	-0.189***	-0.289***	-0.138
	[0.046	[0.024	[0.002	[0.017	[0.047	[0.166
Ln Kpc	0.072***	0.089***	0.092***	0.094***	0.112***	0.092***
	[0.008]	[0.004]	[0.000]	[0.003]	[0.007]	[0.022]
produc innov	-0.001	-0.005	-0.006***	0.004	-0.002	-0.006
	[0.025	[0.015	[0.001	[0.012	[0.023	[0.035
process innov	-0.004	-0.012	-0.040***	-0.041***	-0.054***	-0.04
	[0.024	[0.013	[0.001	[0.013	[0.019	[0.035
foreign market	-0.072**	-0.033**	-0.052***	-0.053***	-0.024	-0.052
	[0.029	[0.015	[0.001	[0.012	[0.024	[0.036
year 2010	-0.005	-0.012	-0.018***	0.008	-0.031	-0.018
	[0.025	[0.01	[0.001	[0.012	[0.02	[0.021
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
constant	9.850***	9.886***	10.037***	10.097***	10.169***	10.037***
	[0.136	[0.085	[0.009	[0.086	[0.164	[0.39
Pseudo R2	0.3923	0.4983	0.5801	0.5402	0.4627	
N. of firms (panels)	856					
N of Obs	1453					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 8 :Quantile fixed effects, non family firms, Panel B

	Dep. Var. : ln (wages)					
	q10	**q25**	**q50**	**q75**	**q90**	**FE**
PRP	0.043***	0.040***	0.049***	0.030***	0.042***	0.049*
	[0.01]	[0.006]	[0.002]	[0.006]	[0.01]	[0.029]
New hirings (share)	0.118***	0.106***	0.111***	0.101***	0.090***	0.111
	[0.043]	[0.024]	[0.007]	[0.014]	[0.033]	[0.071]
White collars (share)	-0.136***	-0.113***	-0.127***	-0.145***	-0.141**	-0.127
	[0.051]	[0.036]	[0.01]	[0.037]	[0.055]	[0.161]
Blue collars (share)	-0.186***	-0.166***	-0.191***	-0.211***	-0.192***	-0.191
	[0.049	[0.033	[0.008	[0.033	[0.055	[0.17
Females (share)	0.102***	0.116***	0.109***	0.104***	0.133***	0.109
	[0.021	[0.014	[0.003	[0.012	[0.023	[0.114
Fixed-term contracts (share)	-0.533***	-0.484***	-0.513***	-0.466***	-0.466***	-0.513***
	[0.055	[0.03	[0.006	[0.034	[0.047	[0.097
Trained workers (share)	0.003	-0.001	-0.008***	-0.01	-0.019*	-0.008
	[0.012	[0.008	[0.002	[0.007	[0.012	[0.026
15<n of employees<100	-0.073***	-0.083***	-0.088***	-0.090***	-0.087***	-0.088**
	[0.013	[0.008	[0.002	[0.007	[0.012	[0.038
99<n of employees<250	-0.241***	-0.258***	-0.280***	-0.279***	-0.300***	-0.280***
	[0.012	[0.009	[0.002	[0.008	[0.013	[0.061
n of employees>249	-0.217***	-0.236***	-0.262***	-0.264***	-0.280***	-0.262***
	[0.02	[0.012	[0.003	[0.012	[0.02	[0.098
Ln Kpc	0.058***	0.058***	0.060***	0.058***	0.057***	0.060***
	[0.003	[0.002	[0.000]	[0.002	[0.003	[0.013
product innovation	-0.002	0.004	0.010***	0.002	0.004	0.01
	[0.011	[0.006	[0.002	[0.006	[0.011	[0.021
process innovation	-0.014	-0.005	-0.007***	-0.01	0.005	-0.007
	[0.011	[0.008	[0.002	[0.007	[0.01	[0.021
foreign market	0.019	0.021***	0.024***	0.013**	0.017*	0.024
	[0.012	[0.007	[0.002	[0.005	[0.01	[0.022
year 2010	0.038***	0.050***	0.045***	0.056***	0.040***	0.045***
	[0.01	[0.006	[0.002	[0.005	[0.01	[0.013
macro regions	yes	yes	yes	yes	yes	yes
sector	yes	yes	yes	yes	yes	yes
constant	9.962***	9.975***	10.027***	10.106***	10.150***	10.027***
	[0.053	[0.039	[0.01	[0.038	[0.068	[0.237
Pseudo R2	0.5996	0.6797	0.7384	0.7177	0.6541	
N. of firms (panels)			860			
N of Obs			1465			

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

Table 8 :Quantile fixed effects, non family firms, Panel C

	Dep. Var. : Ln(productivity-wage) gap					
	q10	**q25**	**q50**	**q75**	**q90**	**FE**
PRP	-0.039*	-0.042***	-0.051***	-0.047***	-0.055***	-0.051
	[0.02]	[0.01]	[0.002]	[0.009]	[0.019]	[0.041]
New hirings (share)	0.066	0.04	0.040***	0.015	0.028	0.04
	[0.06]	[0.036]	[0.005]	[0.033]	[0.069]	[0.103]
White collars (share)	0.164	0.074	0.073***	0.057	0.062	0.073
	[0.114	[0.055	[0.009	[0.047	[0.092	[0.233
Blue collars (share)	0.141	0.03	0.022***	0.009	-0.031	0.022
	[0.107	[0.054	[0.007	[0.044	[0.092	[0.246
Females (share)	0.179***	0.199***	0.178***	0.163***	0.148***	0.178
	[0.039]	[0.019]	[0.003]	[0.019]	[0.04]	[0.166]
Fixed-term contracts (share)	0.289***	0.263***	0.305***	0.290***	0.225***	0.305**
	[0.068]	[0.044]	[0.008]	[0.035]	[0.078]	[0.139]
Trained workers (share)	0.012	0.01	0.012***	0.009	-0.002	0.012
	[0.019]	[0.011]	[0.002]]	[0.012]	[0.025]	[0.038]
15<n of employees<100	0.03	0.014	0.002	-0.021	-0.002	0.002
	[0.034	[0.016	[0.002	[0.013	[0.028	[0.055
99<n of employees<250	0.160***	0.117***	0.095***	0.057***	0.035	0.095
	[0.035	[0.015	[0.002	[0.013	[0.025	[0.089
n of employees>249	0.127***	0.077***	0.052***	0.008	-0.016	0.052
	[0.038	[0.017	[0.003	[0.016	[0.028	[0.145
Ln Kpc	0.041***	0.048***	0.053***	0.058***	0.071***	0.053***
	[0.005	[0.003	[0.000]	[0.003	[0.006	[0.019
produc innov	-0.01	-0.016	-0.011***	-0.008	-0.019	-0.011
	[0.022	[0.011	[0.001	[0.009	[0.019	[0.031
process innov	0.012	-0.002	-0.023***	-0.023**	-0.025	-0.023
	[0.02	[0.011	[0.002	[0.009	[0.018	[0.031
foreign market	-0.072***	-0.065***	-0.076***	-0.079***	-0.067***	-0.076**
	[0.023	[0.01	[0.001	[0.012	[0.023	[0.032
year 2010	-0.059***	-0.066***	-0.073***	-0.051***	-0.055***	-0.073***
	[0.017]	[0.008]	[0.002]	[0.01]	[0.017]	[0.018]
macro regions	Yes	Yes	Yes	Yes	Yes	Yes
sector	Yes	Yes	Yes	Yes	Yes	Yes
constant	-0.370***	-0.215***	-0.182***	-0.147***	-0.127	-0.182
	[0.124]	[0.062]	[0.008]	[0.05]	[0.126]	[0.343]
Pseudo R2	0.2241	0.2903	0.3713	0.3207	0.2651	
N. of firms (panels)	856					
N of Obs	1453					

Notes: .*** significant at .01 level; ** significant at .05 level; *significant at .10 level. Omitted categorical variables: Executives (Share); n of employees<15; boostrapped standard errors with 100 replications in square brackets.

APPENDIX

Table A.1 Description of the Variables

Variable	Definition
PRP	Dummy variable that equals 1 if the firm adopts a PRP scheme, 0 otherwise.
FF	A dummy variable that equals 1 if the firm is owned and or controlled by a family (FF) and 0 otherwise (NFF)
FM	A dummy variable that equals 1 if the family firm is managed by family management (FM) and 0 otherwise (NFM)
Ln (LP)	Log of value-added per employee (source AIDA) deflated by the value added deflator (source ISTAT)
Ln (W)	Log of wage bill per employee (source AIDA) deflated by the consumer price index for blue and white collar workers (source ISTAT)
Ln (LP) - Ln (W)	Proxy of competitiveness of the firms
Ln (KPC)	Log of capital stock per employee (source AIDA) deflated by the investment deflator (source ISTAT)
Executives (share)	Percentage of managers and supervisors
White collars (share)	Percentage of white collar workers
Blue collars (share)	Percentage of manual workers
Females (share)	Percentage of women among total workers
Fixed-term contracts (share)	Percentage of fixed-term workers
New hirings (share)	Number of hired workers
Trained workers (share)	Percentage of trained workers
Process Innovation	Dummy variable that equals 1 if the firm adopted process innovations in the last three years, 0 otherwise
Product Innovation	Dummy variable that equals 1 if the firm originated new products in the last three years, 0 otherwise
Foreign market	Dummy variable that equals 1 if the firm exported in the last three years, 0 otherwise
North- West	Dummy variable that equals 1 if the firm is localised in North-Western regions, 0 otherwise
North-East	Dummy variable that equals 1 if the firm is localised in North-Eastern regions, 0 otherwise
Centre	Dummy variable that equals 1 if the firm is localised in Central regions, 0 otherwise
South	Dummy variable that equals 1 if the firm is localised in Southern regions, 0 otherwise
Sectors	Dummy variable that equals 1 if the firm is localised in sector shown in table1, 0 otherwise