

Do investments in human capital lead to employee share ownership?

Evidence from French establishments

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Abstract

Investments in human capital can create a hold-up problem whereby both employers and employees exploit the bargaining weaknesses of the other. Employee share ownership (ESO) can mitigate this hold-up problem because it can align interests, develop loyalty, signal good-will, and lock-in employees. Previous studies have shown positive relationships between company investments in human capital and the use of ESO consistent with this argument but have been unable to identify the direction of causality. Using panel data from the French REPOSE survey, the findings indicate that significant and continuous investments in human capital take place prior to the implementation of ESO.

Keywords

Employee share ownership; human capital; training; human resource management;
REPONSE survey

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Introduction

Recent research within the financial participation literature has highlighted complementarities between employee share ownership plans and employer-provided training (Robinson and Zhang, 2005). The primary argument underpinning this complementarity is that share ownership provides bonding mechanisms for both employer and employee, thereby constraining the training risks borne by each party. On the one hand, employers bear the risk that investments in training will be wasted by a failure of employees to engage or commit. In the worst case employees leave the firm, possibly to capitalize on the investments made by the employer. Where training takes a strong firm-specific form, employees may exploit the dependence of the firm on their skills to extract rents from the employer. On the other hand, employees bear the risk that the firm will expropriate the returns to the skills and competences that result from training. The proposition in the recent literature is that employee share ownership plans can mitigate these problems.

At a broader level, this complementarity may be located in the evolution of modern capitalism. It has been argued that long-term growth in employee share ownership schemes, observed in many advanced industrial nations, is related to the growth in importance of intangible human capital relative to tangible physical capital in the modern company (Rousseau and Shperling, 2003). Human capital cannot be tied to particular firms in the same way as physical capital, and getting human capital to work

effectively is more challenging than managing physical assets. These challenges have been highlighted by the resource-based view of the firm, emphasising the role of valuable, scarce, and inimitable resources in achieving competitive advantage (Barney, 1991). At the same time, some accounts have highlighted the challenges to securing employee commitment and human capital investments arising from employment insecurity (Blair, 1995; Rousseau and Shperling, 2003). Why should employees commit their human capital, and the development of it, to the firm, when the firm is unwilling to reciprocate? Blair has argued that employee ownership is a means of resolving this dilemma by giving employees return and governance rights within the firm.

Consistent with these perspectives, a several recent papers have found positive and significant correlations between employee share ownership and employer-provided training (Pendleton and Robinson, 2011; Robinson and Zhang, 2005). Other papers have found employee share ownership has effects which are conducive to training, such as lower labour turnover (Fakhfakh, 2004; Sengupta et al, 2007). By and large, this research has assumed that there is a sequential and temporal dimension to complementarity between training investments and employee share ownership plans but this has not been well-developed in the work published to date. An important part of the problem is that these papers are mainly based on cross-sectional data with the result that it is difficult to determine the timing of these initiatives and to evaluate the

direction of causality, if any, between the two. Which comes first: employee share ownership or training initiatives, or are they adopted simultaneously? Identification of the temporal relationship between share ownership plans and training will enhance our understanding of the nature of the posited complementarity between these two human resource management activities.

This paper is able to address this question by exploiting the panel element of the French workplace employment relations survey REPONSE. This survey, which is nationally representative of French establishments, is conducted periodically by DARES (the research arm of the Ministry of Labour): we use the panel element of the 1998 and 2004 surveys. As in other European countries, employee share ownership has been growing in France in recent years: we observe a near tripling of the use of plans in the six years after 1998. This means that there is a relatively large group of adopters within the sample, thereby facilitating analysis of the relationship between training and the introduction of employee share ownership plans. A novelty of the French context is that all companies with 20 or more employees are required to spend at least 1.5 per cent of their annual pay-bill on training, though not all companies do so. Many firms spend above this legal minimum and our interest is whether variations in training expenditure above this minimum are associated with the use of and adoption of employee share ownership plans. Our analysis focuses on listed companies because, as has been found elsewhere (Pendleton et al., 2001), share ownership plans are mainly found in this type

of company. As in other studies, we first mount a cross-sectional analysis to identify the strength of associations between levels of training and the presence of a share ownership plan in 2004. We then refine this by inserting training data from 1998 into the 2004 cross-section. Finally, we utilise training data from both 1998 and 2004 to determine whether training has any association with the adoption of share ownership between 1998 and 2004. Our results are consistent with studies conducted elsewhere (eg. in Britain), but also provide some novel findings that advance our knowledge of the relationship between training and financial participation. In our presence models there are statistically significant associations between high levels of training and employee share ownership plans in 2004. We find much stronger relationships between high levels of training in 1998 and the presence of share ownership in 2004, thereby suggesting that a high commitment to training leads to the use of employee share ownership plans. Then, a set of adoption models shows associations between high levels of training in 1998 and subsequent adoption of employee share ownership, though only if high levels of training are maintained after 1998. Where high levels of training decline after 1998 the relationship with ESO adoption is insignificant suggesting that, where firms do not maintain training investments, the need to adopt share ownership plans no longer arises.

By highlighting the potential sequencing of training and share ownership plans, this research adds to our understanding of this particular form of complementarity. It provides further evidence that employee share ownership plans are conducive to training, and more importantly provides some empirical support for the proposition that share ownership plans are used in response to training investments. The paper adds to the very small segment of the financial participation literature which focuses on factors determining the adoption (rather than presence) of financial participation and, in an advance on this previous literature (eg. Kruse, 1993), shows that certain human resource practices (training) are associated with the probability of adopting financial participation. More generally, the results provide support for the view, still rarely tested, that the adoption of complementary human resource and high involvement work practices occur in a piecemeal and sequential fashion (Pil and Macduffie 1996). They are consistent with the implications from resource dependency theory (Pfeffer and Salancik, 1978) and from theories of ownership (Grossman and Hart, 1986) that sharing ownership and access to control can mitigate resource dependencies and efficiency losses where there are asset specificities. The paper suggests that there are (mutual) benefits to be gained from the reallocation of some residual rights to employees to overcome potential opportunism.

The article is organized as follows. The next section considers theory and evidence in the literature on human capital, and highlights the potential role of employee share

ownership in dealing with the hold-up problem that can arise from investments in human capital. This section develops the hypotheses used to guide the empirical study. The following section describes the sample, variable construction, and methodology. This is followed by a presentation of the results. The final section concludes by considering the implications of the findings for the literature, and discusses limitations and possibilities for future research.

Theoretical background and literature review

A challenge for firms is to acquire and utilize valuable, scarce and inimitable resources in order to obtain a sustained competitive advantage over competitors (Barney, 1991). These resources include assets, capabilities, organizational processes, information, and knowledge that enable firms to develop and implement strategies that improve firm performance. These various resources that can be classified in three categories (Barney, 1991): physical capital resources (Williamson, 1975), human capital resources (Becker, 1964), and organizational capital resources (Tomer, 1987). In this article we focus on human capital, defined as ‘the knowledge, information, ideas, skills, and health of individuals’ (Becker, 1964). Human capital has become an important source of corporate success as the business environment has become more and more competitive (Hitt et al., 2001). A variety of human resources practices to manage this human capital,

identified by Huselid (1995) as ‘High Performance Work Systems’, consistently present a positive relationship with firm performance, as demonstrated in a large number of empirical studies (Combs et al., 2006). An important element of this is that firms should invest in training and retain employees if they are to enhance their stock of human capital. Indeed, an important issue for firms is to control critical resources upon which it has come to depend (Pfeffer and Salancik, 1978). Compared to other types of resources (financial capital, physical capital), the peculiarity of human capital of course is that it is inseparable from employees. This confers greater risk for the employer: if an employee leaves the firm, they take with them their knowledge, ideas, and skills. As a result, investments by employers in developing these skills and knowledge may be wasted. It is even more problematic because ‘an individual possesses his (*sic*) knowledge in a direct and absolute manner. He is the sole arbiter of its use by others’ (Pfeffer and Salancik, 1978: 46).

Other theoretical perspectives, such as transaction cost economics (Williamson, 1979) also highlight the vulnerability of the firm to its human capital. Investments in training are at the heart of a potential ‘hold-up’ problem for both the firm and its employees (Ben-Ner et al., 2000; Blair, 1995), since either party may expropriate from the other their share of the surplus stemming from these investments. On the one hand, workers bear the risk that the employer tries to capture all the rents generated from investments

in firm-specific skills (that have little or no value for employees outside of the firm). Even investments in general skills may give rise to employer opportunism because employers often finance general skills development, with general skills often having a quasi-firm-specific character because of the verification costs facing alternative employers (Katz and Ziderman, 1990; Acemoglu and Pischke, 1998). On the other hand, employers take the risk that employees do not use the acquired skills to create a competitive advantage for the benefit of the firm, or else bargain for rents based on the costs of substituting them by new employees. Expenses incurred in providing training by the firm do not then generate returns on the investment. Either party may exploit the bargaining weakness of the other to secure returns at the expense of the other. This hold-up problem arises not only where skills are firm-specific but also where they have a more general character because general skills can be quasi-firm-specific due to the costs for new firms of evaluating workers' skills.

It is therefore necessary to have mechanisms to manage the risk of hold-up and promote the development of a long-term employment relationship so that investments in training bear fruit. This can mitigate the problem of the control of human capital as a critical resource. One solution could be to write contracts that define precisely the investment of employers and employees along with the distribution of rents resulting from training. However, the writing, implementation, monitoring, and enforcement of such contracts

are likely to be expensive (Williamson, 1979). Moreover, there is nearly always contractual incompleteness in the employer-employee relationship. Many details of the job to be carried out are left to the employer discretion. In other words, the employer has many of the residual rights of control (Grossman and Hart, 1986). Because of employee risk aversion arising from the hold-up problem, the employer may have to hand over some control to employees in order that they acquire and use new skills. This can be done by giving employees some ownership rights (Grossman and Hart, 1986) by, for instance, introducing employee share ownership (ESO). ESO can help to mitigate employer and employee opportunism by making employees residual claimants (Blair, 1995). If the employees are shareholders, they have some rights of control that can limit employer opportunism, and rights to residual income. Based on Grossman and Hart's (1986) analysis of costs and benefits of ownership, the positive effects of ESO on employees' attitudes and behaviours -including fidelity- are greater than the adverse consequences for managers of the loss of residual rights of control. ESO adoption can therefore be seen as a means for the firm to preserve critical resources in order to avoid uncertainty and to reduce its vulnerability (Pfeffer and Salancik, 1978).

The employee share ownership plans that we focus on in the paper are typically open to all or most employees, though actual participation rates may be lower, and generally make available to employees a small proportion of the company's equity (typically 1-5

per cent). They provide participating employees with return rights (dividends and capital gains) and some control and information rights. Given that employees between them secure a small minority share, the control rights are usually fairly limited in practice. The loss of residual control to other owners (and managers) from sharing residual rights is therefore a limited cost in any evaluation of the costs and benefits of sharing ownership (Grossman and Hart, 1986).

A recent paper in this journal identified two specific sets of benefits of employee share ownership (Pendleton and Robinson, 2011). Although these benefits are not unique to employee share plans, these authors argued that in combination they provide strong support for and reinforcement of firm-provided training. The two benefits are the creation of an identity of interests between employee and employer, and a mechanism that locks-in employees and provides benefits that tend to rise with job tenure.

The posited identity of interests has both governance and psychological dimensions, with the latter of greater importance. Focusing on governance first, employee owners in France have the same rights of information and the same rights of expression as the other shareholders. They are thus members of the annual general meeting, have the right to ask questions to the management (although this is rare in practice, even when the employee shareholders are grouped in an association), and have a right to vote on

company resolutions. Furthermore, according to French legislation, employees have the right to elect a representative to the board of directors when they hold more than 3 percent of the capital of the company (see Ginglinger et al., 2011). A further specific governance right in French company law is the requirement that changes to the capital base of a listed company (ie further share offers) must be accompanied by a proposal to shareholders at a general meeting that employees be included in the share offer ('augmentation de capital réservée aux salariés'). In our sample 59 per cent of those responding to a question on the nature of the share plan indicated that shares had been passed to employees by this means. A further legal requirement in France is that every three years in companies where employees hold less than 3 per cent of the company's shares, the general meeting of shareholders must consider a proposal that company shares should be allocated to employees joining the company savings plan (PEE). However, it is important to note that these legal requirements do not mandate share ownership plans, merely that the shareholders must periodically consider the introduction or extension of employee share ownership. Thus, employee share ownership plans, and the control and information rights associated with them, are entirely voluntary.

The psychological dimension is the potential for employee share ownership to support favourable employee attitudes to the firm, such as high commitment, engagement, and

citizenship behaviour. A rich stream of research on share ownership and employee attitudes over many years has shown that ESO can generate intrinsic satisfaction from owning shares (Pendleton et al., 1998), extrinsic satisfaction from the financial benefits it conveys (Buchko, 1993; French and Rosenstein, 1984), and instrumental satisfaction based on involvement in decision-making (Long, 1980). Under certain conditions, workers with ownership may experience psychological ownership (Pierce et al., 1993). In addition to the many empirical studies that have highlighted attitudinal effects of employee share ownership, Caramelli and Briole (2007) explore the theoretical foundations of these effects and conceptualize the ways in which employee ownership may affect work satisfaction, work motivation, and affective commitment. These authors suggest that French legislation on ESO favours the development of a 'consciousness of being stockholder' which in turn may have a positive effect on affective organizational development.

The other main benefit of employee share ownership plans identified in the recent literature is 'lock-in'. By helping firms to retain employees, ESO may limit the potential for the benefits of training to be dissipated by employee exits (Rousseau and Shperling, 2003). Share ownership plans typically embody both formal lock-in requirements and also provide incentives to remain in employment with the firm. For example, French legislation requires that free allocations of shares cannot be sold by

employees for four years, and, as is common in other countries, employees are required to retain shares in the company plan for a minimum period for the tax benefits to be secured. REPONSE data indicates employee investment in company shares comes about through the Plan d'Epargne d'Entreprise (PEE) in 55 per cent of cases: French law requires that profit share awards made into the PEE (the typical source of contributions to the PEE) must be retained within the plan for five years to secure income tax and social security benefits. In the literature, the 'lock-in' outcomes of ESO are demonstrated by empirical studies which show that employee share ownership reduces turnover (Buchko, 1993; Sengupta et al., 2007; Wilson and Peel, 1991).

On the basis of these arguments, it is proposed that employee share ownership is conducive to the provision of training by companies. It can do so by encouraging an identity of interests which reduces employee propensity to hold-up the employer through exploiting its scarce skills, and by providing protections for employees against employer expropriation of rents. The lock-in characteristics of employee share plans further encourage employees to commit to the firm. So far, the empirical evidence is consistent with this posited complementarity. Some recent studies from Britain have found significant statistical associations between the use of employee share ownership and relatively high levels of training (Pendleton and Robinson, 2011; Robinson and Zhang, 2005). There is also some US evidence, albeit not consistently strong, that

specificity of human capital is associated with a high probability of ESOP presence (Ben-ner et al., 2000).

Unfortunately, a weakness of these studies, as indeed of most studies of complementary HR practices, is that their empirical basis is cross-sectional: they record use of ESO and high levels of training at a particular moment in time. As a result, we gain few insights into how this complementarity develops over time. An important question is which comes first – ESO or high levels of training – or are both adopted simultaneously? An answer to this question potentially provides important insights into how ESO may resolve the hold-up problem identified earlier.

There is no clear theoretical basis for predicting precise time lags between implementing training programmes and introducing employee share ownership plans (or vice versa), reflecting a broader problem in assessing causality in management research (Mitchell and James, 2001). Nor, to the best of our knowledge, is there any empirical work on this issue. Indeed, there is very little empirical work on the wider issue of the phasing of HR innovations, since nearly all research in this area takes a cross-sectional form. The same is broadly true of evaluations of the effectiveness of human resource and high involvement work practices (Wall and Wood, 2005). However, as argued by Pil and Macduffie (1996), some theoretical guidance on the phasing of change can be

derived from evolutionary economics. This literature suggests that organisations make significant and comprehensive changes to their routines infrequently, with most changes typically taking an incremental form (Nelson and Winter, 1982). Organisational changes are often introduced in a ‘trial and error’ way, and with experimentation hampered by inertia and reluctance to change organisational routines. Organisations rarely adopt comprehensive and simultaneous introduction of a range of new work or HR practices, and the adoption of new practices will depend on the perceived performance of past practices.

It seems likely that high levels of training will precede the adoption of employee share ownership plans because, where used, training will be seen as directly necessary for more or less immediate operational and business success whereas the anticipated benefits of ESO are less tangible. Managers typically highlight the potential effects of ESO on commitment, identity with the firm, and a sense of involvement as reasons for introducing schemes (Poole, 1988). Furthermore, enhancing training may be viewed as an incremental change to existing work practices whereas introduction of a share scheme is a more ‘revolutionary’ change since it changes the distribution of residual control and income rights within the firm. In the French case, it is mandatory that firms with more than 20 employees spend at least 1.5 per cent of their pay-bill on training. Spending in excess of this, and at higher levels than the norm, will typically involve

incremental changes to existing practices. By contrast, the introduction of employee share ownership plans has substantial and time-consuming additional administrative requirements which place considerable demands on existing routines. These include the need to secure shareholder approval, the issue of communications to employees, the acquisition or issue of shares, the establishment of legally-mandated holding bodies such as trusts. Prior to this there is usually extensive deliberation within companies as to whether these direct costs can be justified by the apparently intangible intermediate benefits, such as enhanced employee commitment. The implications of these differences between training expenditure and the introduction of ESO is that the former is easier to implement first, and that there may be a substantial time lag between initially incurring high levels of training expenditure (and discovering threats to the effectiveness of this) and the implementation of ESO.

Hypotheses

Investments in training, whether for specific skills or general skills, are a potential source of a competitive advantage for the firm but need to be protected. But they are at the heart of a hold-up problem, since the employer as well as the employees can try to capture the rents resulting from training. If each is afraid that the other will opportunistically expropriate all of the gains of training, the risk is that neither the employer nor the employees will invest in training. ESO is a way to mitigate this risk of

hold-up, by passing control and return rights to employees, by aligning employees' interests with those of the firm, and by promoting a long-term employment relationship. At the same time, it protects the employer in the ways outlined earlier. On this basis, and in line with the argumentation in the preceding section, we propose Hypothesis 1. This proposes a simultaneous complementarity between share ownership plans and relatively high training investments, and replicates the proposition found in the recent literature referred to.

Hypothesis 1: Relatively high investments in training are associated with the use of employee share ownership.

The implementation of an employee share-ownership plan is an expensive process. The firm has to define the characteristics of the plan, choose the fund manager, negotiate with union representatives, introduce the project in the annual general meeting, communicate to the employees, etc. ESO also generates legal obligations that managers may perceive as constraints: the right to information of employee shareholders, the right to participate in general meetings, the right to vote, the obligation for the managers to convene a general meeting every three years in order to present a project of capital increase reserved for the employees if they do not already own 3 percent of the share capital of the firm, presence of employee shareholder representatives on the board if they have more than 3 percent of the share capital, etc. Despite a favourable fiscal

framework, these constraints are brakes on the implementation of an employee share ownership plan. Based on evolutionary theory, ESO plans require a major change to organisational routines and practices, and thus take some time to be implemented (Nelson and Winter, 1972). And, as argued by Grossman and Hart (1986), passing ownership to other parties can ensure that they engage in the relationship, but the loss of residual rights of control generates constraints for the first party. The problem is that the benefits can be intangible and hard to measure (eg. diffuse feelings of identification with the firm), so managers are likely to be cautious in adopting ESO as a means of protecting investments in human capital development. They also have to evaluate the effectiveness of training investments before implementing an employee share ownership plan. The obstacles to training effectiveness, and potential hold-up problems, are also likely to emerge slowly. Thus, ESO is likely to be adopted some time after the allocation of substantial resources to training. On this basis we propose Hypothesis 2.

Hypothesis 2: ESO is adopted following significant investments in training.

Methodology and data

Data

We use data from versions of the French REPONSE (Relations Professionnelles et Négociations d'Entreprise) survey, conducted in 1998 and 2004 by the research centre

of the French Ministry of Labour (DARES). This is a nationally representative establishment-level survey with many similarities to the British Workplace Employment Relations Survey (WERS). The employment and workplace issues covered are very similar: labour organization, establishment changes, job management, worker involvement, pay systems, and conflicts (Conway et al., 2008). Like WERS, REPONSE includes questions on training and on employee share ownership. We primarily use the element of the 2004 cross-section that forms a panel with a sub-section of the 1998 survey. Our choice of 1998 and 2004 as our points of observation is obviously determined by data availability and the question arises as to whether 6 years is an appropriate gap between the two sets of observations given the hypotheses to be tested. There is no clear theoretical guidance from the literature but, as outlined earlier, the extent of the procedures required to implement ESO, coupled with existing knowledge about evolutionary change, suggests that it is not too long a gap. If it is too short, this is likely to be reflected in insignificant results in our adoption models. The only other study that considers sequential use and introduction of high involvement work practices also utilises a similar gap (five years) between observation points (Pil and Macduffie, 1996).

The 2004 sample includes 2930 private sector establishments of 20 workers, excluding the agricultural sector. To test the hypotheses outlined above, we limit our sample to

listed company establishments that are in REPOSE in 1998 and 2004. The rationale for this is that, as elsewhere, employee share ownership is highly concentrated in the listed company sector. The benefit of using the panel within REPOSE is, as Kruse puts it, ‘compared with cross-sectional data, the use of panel data to examine the adoption decision can [...] provide heightened confidence about the relationship and causality’ (1996: 533). Company establishments whose employees are the primary class of shareholders, as in workers’ co-operatives, and those where a small number of employees are significant shareholders, as often occurs in LBOs, are removed from the sample because these types of ownership are distinct from typical all-employee share ownership plans. The final sample size is 195. Our analysis first uses the 2004 panel element of the cross-section, and then incorporates variables from 1998. Whilst this analysis focuses on the *use* of employee share ownership plans, in the latter stages we exploit the panel dimension to investigate the *adoption* of share ownership plans. Before doing this we provide further information on our variables.

Employee share ownership variable

The main question in REPOSE asks whether employees hold shares in the company. As workers’ co-operatives and companies where a small number of employees are significant shareholders (eg. as in leveraged buy-outs) are removed from the sample, and as stock options are excluded from consideration, we can be confident that the ESO

variable is consistent with the definition of employee share ownership of the French Commercial Code. Comparison of the two data points reveals strong growth in ESO between 1998 and 2004. In 1998 13 per cent of establishments report having ESO (n = 25/195). By 2004 35 per cent (n = 69) of establishments have some of the company owned by employees. From these two variables (ESO 1998 and ESO 2004), three others were built to observe: 1) the absence of ESO in 1998 and in 2004, 2) the presence of ESO in 1998 and in 2004, 3) the implementation of ESO between 1998 and 2004. More than 22 per cent of establishments implemented ESO between 1998 and 2004, whilst 65 per cent remain without ESO in 2004.

Human capital variables

The investments in human capital are measured first of all by the amount of the spending of training for 1998 and 2004. There is a six-category question, with each category corresponding to an amount of training expenses (expressed as a percentage of the establishment payroll). The median category of training expenses is then calculated for each business sector in 1998 and 2004. The training expenses of each establishment are then compared against this sector median to estimate its relative level of investment in human capital. New variables were constructed to show the evolution of this relative level of investment in human capital across both years. Every establishment has training expenses that are either: lower than the median in 1998 and in 2004 (44 per cent), lower

than the median in 1998 but higher in 2004 (16 per cent), higher than the median in 1998 and in 2004 (26 per cent), or higher than the median in 2004 but lower in 1998 (15 per cent). Another measure of the range of human capital is a variable that measures how long it takes for a new employee to do his job as well as an established employee. This four category variable is converted into three dummies for the regression analysis. These variables provide a measure of training needs, and may also be seen as a proxy for firm-specific skills.

Control variables

The use of ESO is potentially also influenced by other factors (Kruse, 1996; Pendleton, 1997; Kruse et al., 2010) that must be controlled for in our analysis. ESO is frequently associated with high performance work and employment practices (Addison and Belfield, 2000; McNabb and Whitfield, 1998). Dummies for the presence of quality circles, briefing groups, regular meetings with employees, sharing the business project with employees, job autonomy, and profit sharing plans are included. Workforce controls are included in order to control for the presence of temporary employment, the percentage of fixed-term employees, the level of qualification, and the presence of union representatives. Finally, there are a set of controls for employment numbers and the characteristics of the establishment: dummies record the independence of the establishment, the multi-site localisation, the fact to face strong competition, and others

are included for the different industries. Appendix 1 describes the variables and provides descriptive statistics.

In the first step we use probit regression models to estimate the probability of various factors being associated with the presence of ESO in 2004. A second step analyses the lagged effects of 1998 training expenses on the use of ESO in 2004. Finally, the third step is to estimate the effects of movements in training expenses between 1998 and 2004 on the probability of ESO being introduced between these dates. For this third step we use a reduced sample of firms that did not have ESO in 1998, and then undertake an adoption model (Kruse, 1996).

Results

Table 1 reports the estimates of the first six models. Varying measures of company investments in human capital are used in these models. Models 1 and 2 use a set of dummies that records training expenses relative to payroll expenditure, Model 3 uses the relative level of investment in human capital, and Model 4 uses dummies to record the typical time taken for employees to acquire the skills necessary to be effective. Models 5 and 6 add this time to the amount of training expenses and to the relative level of investments in human capital respectively. The baseline model (Model 1) shows that

training expenses above 3.1 per cent of payroll (at least double the legal requirement) have significant and sizeable marginal effects on the probability of ESO being in use. It is notable that the marginal effects of the highest training category (4.1 per cent and above) remain more or less unchanged when the full range of controls are inserted. Similarly, the marginal effects of the relative level of investment in human capital on the probability of ESO being present are significant after the controls are inserted (the marginal effects of this variable when inserted alone are 0.197 (significant at the 1 per cent level) (Model 3). However, there is no statistically significant relationship between the probability of ESO and the time required for employees to become fully operational (Model 4), contrary in particular to the results of Robinson and Zhang (2005). Although this measure might be seen to be a useful measure of firm-specific human capital, its limitation in this context is that it does not actually record whether the employer invests in training to develop appropriate employee skills and competencies. Furthermore, the question ‘how long on average do you think it takes a beginner to become fully operational (from an adequate initial level of training)?’ relates to the category of employees that are most numerous in the firm, not necessarily those that are the primary bearers of the human capital that generates competitive advantage. Given this, our view is that training expenses is a better proxy of the firm’s investments in human capital, whether specific or general, because it records the level of financial resource that the firm actually invests in training. These results are confirmed when training expenses

(or the relative level of investment in human capital) and time required to become fully operational are both included in the regression models (Models 4 and 5). Therefore the results recorded in Table 1 provide strong support for our first hypothesis that significant investments in training are associated with the presence of employee share ownership.

In terms of controls, the evidence of linkages between ESO and direct employee involvement is mixed. ESO is significantly related to regular meetings with employees but, perhaps surprisingly, negatively associated with quality groups. Similarly, in the case of French firms, the presence of ESO is not associated with the presence of profit sharing schemes. This is perhaps because profit sharing is so widespread amongst French listed firms whereas ESO is found only amongst a much smaller sub-set of companies. A relatively high proportion of managers and professional workers is not significantly related to the probability of observing ESO: we experimented with an alternative measure (not shown) of the proportion of blue collar employees in the workforce but this is also insignificant in all models and makes very little change to model fit. Unsurprisingly, given results elsewhere, the size of the company is positively associated with the presence of ESO: the larger the firm, the more likely it has ESOⁱ.

Table 1 here

Although significant training expenses in 2004 are associated with the presence of ESO in 2004, we cannot conclude on the basis of these results that training expenses are a cause of the use of ESO. However, we can investigate causality further by exploiting the panel element of the REPOSE dataset. The use of data that provide information on establishments in 1998 and in 2004 allows us to introduce a temporal dimension into the study of the links between human capital and ESO. The second step of our analysis, therefore, is to analyse the lagged effect of training expenses of 1998 on the likelihood of ESO in 2004. As indicated earlier, the six year lag is viewed as a reasonable one given the time taken to establish an ESO scheme. Table 2 reports the estimates of models 7 to 10 which, aside from the use of training variables from 1998, are otherwise identical to models 2, 3, 5 and 6 in Table 1. A version of the Table 1, Model 4 is omitted because the key relationships of interest were found to be non-significant.

Table 2 here

The pseudo-R² of the Table 2 models are somewhat superior to those of the first set of models (by around 5 percentage points), indicating that Models 7 to 1-0 explain the probability of ESO in 2004 better than when we use 2004 training expenses. The estimates for the training expenses of 1998 and the relative level of investment in human capital are strongly significant with substantial marginal effects. It is also worth noting that the marginal effects are somewhat larger than when the 1998 training expenses and relative level of investments in human capital are entered without controls (not shown). These estimates are robust to the inclusion of the dummies for skills acquisition. The marginal effects and significance of the controls are more or less the same as in Table 1, with quality circles (-), independent firm (+) and multi-site establishment (+) having notable and sizeable marginal effects. Overall, the findings in Table 2 are supportive of the view that a high commitment to training in period 1 will be associated with the use of ESO in period 2. But the workplaces with ESO in 2004 may be of two sorts: 1) those establishments which had ESO in 1998 and continued to use it six years later, and 2) those which did not have ESO in 1998 and implemented it during the period

To pinpoint the potential role of training expenses as an influence on the introduction of ESO, it is desirable to focus on the sub-set of establishments that implemented (or not) ESO between 1998 and 2004. Two situations are possible for these establishments: 1)

there is ESO in neither 1998 nor 2004; 2) ESO is adopted between 1998 and 2004. Drawing on the methodology used by Kruse (1996), we run a set of adoption models to test our second hypothesis according to which significant investments in training precede the implementation of employee share ownership. In these models, the sample is restricted to those establishments without ESO in 1998, thereby reducing the n by 24 cases.

Table 3 here

In Table 3 the models for the adoption of ESO between 1998 and 2004 consider the role of training expenses in 1998, training expenses in 2004, and the combination of training expenses in both 1998 and 2004. In Model 11 training expenses for 1998 are inserted whilst in Model 12, the relative level of investment in human capital is used. Models 13 and 14 repeat these two models using 2004 training investments. Finally, Model 15 captures movements in training expenses between 1998 and 2004. Four categories are derived based on whether establishments had high (or low) relative levels of human capital investments in 1998 and 2004, with the sub-sample split at the median. The results provide strong evidence of an association between high training investments in 1998 and subsequent adoption of ESO. There is a significant link between the adoption

of ESO and the importance of training expenses of 1998 (Models 11 and 12) but not with those of 2004 (Models 13 and 14). When we examine movements in human capital investments, the results indicate that a continuing high level of investment has a significant relationship with the adoption of ESO. A high level of training expenses in 1998 and 2004 has sizeable and significant marginal effects on the probability of ESO being adopted by 2004, relative to those workplaces with low levels of training throughout. An increase from a low level of training investment in 1998 to a high level in 2004 is, however, apparently insufficient to lead to the adoption of ESO. It must be borne in mind that, as the data is based on two points in time, we do not know at what point the training investments increase. If these investments increase only shortly before 2004 it is not surprising that the establishment has not yet implemented ESO. Although we cannot be certain of the precise temporal relationships, this insignificant result is broadly supportive of our contention that the time lag between the two points of observation is not inappropriate, bearing in mind the extended time taken for ESO to be implemented from initial managerial decision through shareholder approval to share allocations to employees. Where establishments reduce their training investment between 1998 and 2004 (ie. from high levels of training investments to low levels), the variable recording this has an insignificant relationship with the introduction of ESO. This is consistent with the argument that either training becomes less important to the establishment for whatever reason, or that training has been found to be ineffective and

hence is scaled-back by the establishment. Either way, ESO is not necessary to reinforce training investments, and hence there is an insignificant relationship with the adoption of ESO. Overall, these results are interesting because they show for the first time the importance of the temporal dimension to the relationship between investment in human capital and the implementation of ESO. The results indicate that ESO is implemented where establishments make sustained efforts to invest in human capital. Hypothesis 2 is partially supported in that high levels of training investments precede the introduction of ESO but it needs to be refined to propose that these high levels need to be sustained over time for ESO to be adopted.

Conclusion

Investments in human capital are at the heart of a hold-up problem, in which the employer and the employees may attempt to capture rents generated from these investments. (Blair, 1995; Ben-Ner et al., 2000). This perspective draws on a broader literature on the ownership and boundaries of the firm (Grossman and Hart, 1986; Williamson, 1979) that, deriving from the seminal work of Ronald Coase (1937), highlights the role of opportunism and the boundaries to control where two or more parties share investments and these investments are worth more within the relationship between these parties than outside. In recent years, this perspective has been drawn

upon to analyse employment relationships given that the assets of firms increasingly take a human or intangible rather than physical form (Blair, 1999; Rousseau and Sperling, 2003). Employee ownership has been proposed as a means for resolving problems arising from the governance of and returns to human capital investments (see Pendleton and Robinson, 1999). The role of ESO can be viewed as consistent with Grossman and Hart's claim that there can be costs to control, in this case the allocation of control rights to owners. ESO schemes, as considered in this paper, share ownership to a limited extent as a means of enhancing the returns to owners. According to this theoretical perspective, employee share ownership should mitigate the potential 'hold-up' problem and the costs of ownership, by aligning the interests of the firm and the employees, and by developing loyalty of the latter. This view is also consistent with the implication of resource dependency theory that a solution to dependency is to co-opt important resource-holders (employees) into the dependent organisation (by sharing ownership rights).

The financial participation literature has recently begun to operationalise these claims by considering relationships between training and the use of employee share ownership schemes. However, whilst earlier work has been supportive it has lacked a longitudinal dimension. (Ben-ner et al., 2000; Pendleton and Robinson, 2011; Robinson and Zhang, 2005). A contribution of this paper is that, by using panel data in REPOSE 1998 –

2004, the temporal dimension to this relationship is considered. The important findings are that investments in training pre-date the implementation of ESO, that establishments do not implement ESO at the same time as they increase their investments in human capital, and that continuous investments in human capital are conducive to the adoption of ESO. The lag between training investments and ESO adoption is consistent with the theoretical claims about the relationship between human capital investments and use of financial participation. Support for this perspective also comes from a recent Canadian study of profit sharing which is also able to use a temporal dimension: the authors suggest that establishments with a high investment in human capital use profit sharing to share rents with employees (Fang and Long, 2012: 921).

The results also make some broader contributions to the financial participation and HRM literatures. Most studies of the factors associated with the use of financial participation take a cross-sectional form, and inevitably suffer from questions about the direction of causality. Those studies that are able to consider adoption of schemes have tended to focus on profit sharing, and have tended to primarily use financial measures drawn from company accounts data (Carstensen et al., 1995; Kruse, 1993). The results also contribute to the HRM literature on complementary practices. Much of this literature draws on cross-sectional examinations of clusters of practices, and is unable to consider the dynamic aspects of complementarity (Pils and Macduffie, 1996). The

temporal staging of complementarity observed in our study is supportive of the claim that organisations will tend to adopt the easier to use practices first.

There are several possible explanations for this temporal difference. The results are consistent with the view that establishments wait to see if their strategies of investment in human capital are effective. The implementation of ESO is a cumbersome and (in France) near-irreversible process, which generates a number of constraints for managers owing to the fact that employees become shareholders (if only in terms of distribution of information). This could explain why it is only when establishments invest in a significant and long-lasting way in human capital (and thus their performance become dependent on human capital), that they decide to implement ESO in order to align interests and to retain employees. The findings are consistent with the view from theories of evolutionary change that organisations adopt innovations in a piecemeal fashion and are slow to implement changes that revolutionise organisational routines.

This paper inevitably has a number of limitations. Based on the theoretical background outlined above, it is claimed that employers fear that employees will capture the rents generated by enhancements to human capital. But, as we do not observe employees directly, we know very little about employee views. More generally, future research should be conducted to examine what they expect from the firm in exchange for their

commitment to undergo training. Furthermore, this research analyses the existence and the implementation of ESO but the use of dummies for ESO does not provide any information about the importance of the capital held by employees. This is important both in terms of the profits that employees can make (and thus the fact that ESO aligns more or less strongly the interest of the employer and the employees), that as regards the constraints for the employer (voting rights held by salaries). It would therefore be useful to have this information in future research. Finally survey data of this sort, used for secondary analysis, do not allow us to throw light on the question as to why and how decisions adopted by organizations are actually made. Implementation of ESO can be seen as a competitive and institutional isomorphism. As pointed out by Oliver (1997) 'firms may mimic their rivals in the use of practices, they may react to coercive pressures to conform to legislation and informal rules, or they may uphold and follow certain normative employment practices and professionalization in the company and business in general' (quoted in Poutsma et al., 2012: 1514). The question of intention must be asked. Do managers take a rational, considered decision to implement ESO in order to protect human capital, or are human capital investments and ESO 'best practices' that managers implement in a mimetic way without full consideration of the costs and benefits? Future research, perhaps conducted using case studies, should help to clarify this point.

In spite of these limitations, this paper provides new evidence highlighting that investments in human capital are associated with the use of employee share ownership. In so doing it enables us to better understand why organisations use employee share ownership. As such the paper may generate benefits to policy-makers and company practitioners, as well as scholars of financial participation. Clearly, the weight of recent evidence on this particular topic suggests that human capital-financial participations are a fruitful area for further consideration.

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Appendix 1

Definition of variables and descriptive statistics

<i>Variable</i>	<i>Description</i>	<i>Mean</i>	<i>Standard error</i>
<i>Employee Share Ownership</i>			
ESO 1998	Employees hold shares of the company in 1998. (0,1)	0.13	0.02
ESO 2004	Employees hold shares of the company in 2004. (0,1)	0.35	0.03
ESO neither in 1998 nor in 2004	Employees do not hold shares either in 1998 or 2004. (0,1)	0.65	0.03
Implementation of ESO between 1998 and 2004	Employees do not hold shares in 1998 but in 2004 (0,1)	0.23	0.03
ESO in 1998 and in 2004	Employees hold shares in 1998 and in 2004 (0,1)	0.13	0.02
<i>Human capital</i>			
<i>1998 training expenses:</i>			
lower than 1.5% of payroll	The training expenses of the establishments in 1998 are lower than 1.5% of payroll. (0,1)	0.07	0.02
between 1.5% and 2% of payroll	The training expenses of the establishments in 1998 are between 1.5 and 2% of payroll. (0,1)	0.17	0.03
between 2.1% and 3% of payroll	The training expenses of the establishments in 1998 are between 2.1% and 3% of payroll. (0,1)	0.30	0.03
between 3.1% and 4% of payroll	The training expenses of the establishments in 1998 are between 3.1% and 4% of payroll. (0,1)	0.16	0.03
between 4.1% and 6% of payroll	The training expenses of the establishments in 1998 are between 4.1% and 6% of payroll. (0,1)	0.22	0.03
higher than 6% of payroll	The training expenses of the establishments in 1998 are higher than 6% of payroll. (0,1)	0.07	0.02
1998 relative level of investment in human capital	The training expenses of the establishment in 1998 are higher than the median of the others establishments of the same industry. (0,1)	0.48	0.04
<i>2004 training expenses:</i>			
lower than 1.5% of payroll	The training expenses of the establishments in 2004 are lower than 1.5% of payroll. (0,1)	0.04	0.01
between 1.5% and 2% of payroll	The training expenses of the establishments in 2004 are between 1.5 and 2% of payroll. (0,1)	0.21	0.03
between 2.1% and 3% of payroll	The training expenses of the establishments in 2004 are between 2.1% and 3% of payroll. (0,1)	0.28	0.03
between 3.1% and 4% of payroll	The training expenses of the establishments in 2004 are between 3.1% and 4% of payroll.	0.26	0.03

between 4.1% and 6% of payroll	(0,1) The training expenses of the establishments in 2004 are between 4.1% and 6% of payroll.	0.17	0.03
higher than 6% of payroll	(0,1) The training expenses of the establishments in 2004 are higher than 6% of payroll. (0,1)	0.03	0.01
2004 relative level of investment in human capital	The training expenses of the establishment in 2004 are higher than the median of the others establishments of the same industry. (0,1)	0.52	0.04
<i>Evolution of the relative level of investment in human capital:</i>			
Low level 1998 – Low level 2004	The training expenses are lower than the median of the others establishments of the same industry in 1998 and in 2004. (0,1)	0.44	0.04
Low level 1998 – High level 2004	The training expenses are lower than the median of the others establishments of the same industry in 1998 but higher in 2004. (0,1)	0.16	0.03
High level 1998 – High level 2004	The training expenses are higher than the median of the others establishments of the same industry in 1998 and in 2004. (0,1)	0.26	0.03
High level 1998 – Low level 2004	The training expenses are higher than the median of the others establishments of the same industry in 1998 but lower in 2004. (0,1)	0.15	0.03
<i>Skills acquisition:</i>			
< 1 month	A new employee needs less than 1 month to do his job as well as established employee. (0,1)	0.14	0.02
1-6 months	A new employee needs between 1 and 6 months to do his job as well as established employee. (0,1)	0.54	0.04
6 months -1 year	A new employee needs between 6 months and 1 year to do his job as well as established employee. (0,1)	0.19	0.03
> 1 year	A new employee needs more than 1 year to do his job as well as established employee. (0,1)	0.12	0.02
<hr/> <i>Workforce and establishment controls</i> <hr/>			
Autonomy	The work for the most numerous category of employees is defined by setting overall objectives. (0,1)	0.31	0.03
Quality circles	The establishment uses of quality circle or similar. (0,1)	0.65	0.04
Briefing groups	The establishment uses briefing groups. (0,1)	0.28	0.03
Regular meetings with employees	There are regular team meetings. (0,1)	0.92	0.02
Project teams	Management seeks to encourage employee participation by sharing the business project	0.48	0.04

	with employees. (0/1)		
Profit-sharing	There is a profit-sharing scheme in the establishment. (0/1)	0.70	0.04
% of fixed-term contracts	Percentage of fixed-term contracts (%)	13.38	7.56
Temporary employees	The establishment employs temporary employees. (0/1)	0.74	0.03
Skills ratio	Managers and engineers are the most numerous category of employees. (0/1)	0.12	0.02
Union representative	There is at least one union representative in the firm. (0/1)	0.91	0.02
Size	Natural logarithm of total number of employee of the firm (Ln)	1.53	0.03
Independent firm	The firm is independent. (0/1)	0.07	0.02
Multisite establishment	The company has several establishments. (0/1)	0.67	0.03
Competition	The flexibility of the establishment to set its sale price is low or zero. (0/1)	0.37	0.03
Industry	The establishment operates in the industrial sector (0/1)	0.68	0.03
Retail sector	The establishment operates in the retail sector (0/1)	0.09	0.02
Transport sector	The establishment operates in the transport sector (0/1)	0.08	0.02
Services sector	The establishment operates in the services sector (0/1)	0.15	0.03

Table 1. Effect of 2004 training expenses on 2004 ESO
probit regression, reporting marginal effects

	Probit (likelihood of ESO in 2004)					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Training expenses lower than 2% of payroll	Ref.	Ref.	.		Ref.	
Training expenses between 2.1% and 3% of payroll	0.104	0.079			0.088	
Training expenses between 3.1% and 4% of payroll	0.306***	0.219*			0.222*	
Training expenses higher than 4.1% of payroll	0.270***	0.265**			0.259*	
Relative level of investment in human capital			0.143*			0.142*
Skills acquisition less < 1 month				Ref.	Ref.	Ref.
Skills acquisition 1-6 months				0.030	0.015	0.025
Skills acquisition 6 months -1 year				0.141	0.085	0.120
Skills acquisition > 1 year				-0.018	-0.063	-0.046
Autonomy		0.106	0.110	0.097	0.088	0.085
Quality circles		-0.198**	-0.181*	-0.156*	-0.190*	-0.171*
Briefing groups		0.145	0.137	0.099	0.137	0.127
Regular meetings with employees		0.168	0.188*	0.224**	0.184	0.205*
Project teams		0.097	0.091	0.111	0.104	0.099
Profit-sharing		0.092	0.122	0.127	0.094	0.121
% of employees on fixed-term contracts		-0.001	-0.001	-0.001	-0.001	-0.001
Temporary employees		0.102	0.091	0.089	0.088	0.073
Skills ratio		0.104	0.089	0.113	0.124	0.037
Union representative		0.028	0.036	0.025	0.002	-0.013
Size		0.454***	0.473***	0.464***	0.448***	0.468***
Independent firm		0.325*	0.336*	0.354**	0.348*	0.362**
Multisite establishment		0.076	0.070	0.087	0.085	0.080
Competition		0.003	0.010	0.001	0.003	0.005
Industry dummies		Yes	Yes	Yes	Yes	Yes
Log likelihood	-120.24	-88.549	-89.788	-90.707	-88.051	-89.105
Pseudo R ²	0.046	0.258	0.247	0.240	0.262	0.253
N	185	185	185	185	185	185

*Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

Table 2. Effect of 1998 training expenses on 2004 ESO
probit regression, reporting marginal effects

	Probit (likelihood of ESO in 2004)			
	Model 7	Model 8	Model 9	Model 10
Training expenses lower than 2% of payroll	Ref.	.	Ref.	
Training expenses between 2.1% and 3% of payroll	0.242*		0.239	
Training expenses between 3.1% and 4% of payroll	0.465***		0.471***	
Training expenses higher than 4% of payroll	0.460***		0.462***	
Relative level of investment in human capital		0.305***		0.313***
Skills acquisition less < 1 month			Ref.	Ref.
Skills acquisition 1-6 months			-0.031	0.015
Skills acquisition 6 months -1 year			0.027	0.104
Skills acquisition > 1 year			-0.109	-0.093
Autonomy	0.118	0.110	0.103	0.087
Quality circles	-0.174**	-0.226**	-0.168*	-0.216**
Briefing groups	0.139	0.120*	0.136	0.114
Regular meetings with employees	0.183*	0.212**	0.195*	0.226**
Project teams	0.109	0.116	0.112	0.123
Profit-sharing	0.114	0.138*	0.118	0.143*
% of fixed-term contracts	-0.001	-0.001	-0.001	-0.001
Temporary employees	0.112	0.114	0.102	0.094
Skills ratio	0.053	-0.024	0.084	-0.056
Union representative	0.017	-0.018	-0.012	-0.057
Size	0.367**	0.393***	0.355**	0.383**
Independent firm	0.482**	0.393**	0.501***	0.423**
Multisite establishment	0.131	0.124	0.141	0.134
Competition	0.069	0.074	0.060	0.066
Industry dummies	Yes	Yes	Yes	Yes
Log likelihood	-84.094	-84.747	-83.575	-83.833
Pseudo R ²	0.295	0.290	0.299	0.297
N	185	185	185	185

*Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

Table 3. Relative investments in human capital and adoption of ESO
probit regression, reporting marginal effects

	Probit (likelihood of ESO in 2004)				
	Model 11	Model 12	Model 13	Model 14	Model 15
Training expenses lower than 2% of payroll (1998)	Ref.				
Training expenses between 2.1% and 3% of payroll (1998)	0.223*				
Training expenses between 3.1% and 4% of payroll (1998)	0.440*				
Training expenses higher than 4% of payroll (1998)	0.296**				
Relative level of investment in human capital 1998		0.201**			
Training expenses lower than 2% of payroll (2004)			Ref.		
Training expenses between 2.1% and 3% of payroll (2004)			0.033		
Training expenses between 3.1% and 4% of payroll (2004)			0.162		
Training expenses higher than 4% of payroll (2004)			0.156		
Relative level of investment in human capital 2004				0.110	
Relative level of investment in human capital:					
Low level 1998 – Low level 2004					Ref.
Low level 1998 – High level 2004					0.057
High level 1998 – High level 2004					0.265**
High level 1998 – Low level 2004					0.192
Skills acquisition less < 1 month	Ref.	Ref.	Ref.	Ref.	Ref.
Skills acquisition 1-6 months	-0.002	0.027	0.004	0.020	0.030
Skills acquisition 6 months -1 year	0.097	0.151	0.127	0.152	0.144
Skills acquisition > 1 year	-0.046	-0.025	-0.019	-0.004	-0.026
Autonomy	0.136	0.111	0.109	0.113	0.110
Quality circles	-0.101	-0.153*	-0.130	-0.121	-0.157*
Briefing groups	0.108	0.081	0.105	0.103	0.092
Regular meetings with employees	0.104	0.133*	0.097	0.106	0.124
Project teams	0.098	0.105	0.079	0.082	0.098
Profit-sharing	0.118*	0.141**	0.122*	0.132**	0.140**
% of fixed-term contracts	-0.001	-0.001	-0.001	-0.001	-0.001
Temporary employees	0.109	0.097	0.092	0.086	0.092
Skills ratio	0.076	0.021	0.064	0.046	0.021
Union representative	-0.020	-0.071	-0.046	-0.039	-0.077
Size	0.196	0.239*	0.278**	0.289**	0.251**
Independent firm	0.573***	0.450**	0.400**	0.414**	0.444**

Multisite establishment	0.062	0.059	0.017	0.018	0.046
Competition	0.113	0.115	0.073	0.079	0.115
Industry dummies	Yes	Yes	Yes	Yes	Yes
Log likelihood	-65.062	-65.937	-67.422	-67.950	-65.637
Pseudo R ²	0.279	0.269	0.253	0.247	0.273
N	161	161	161	161	161

*Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

ⁱ In a set of models not reported here, we also test whether financial performance has any relationship with the use of ESO. The results are never significant at $p < 0.05$. These results are not reported in the paper because there is some sample attrition when the financial performance variable is included.