Understanding variation in the efficacy of financial participation across Europe: the role of country-level factors

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Abstract

Little is known about variation in the efficacy of financial participation across countries. This article examines the relationship between two types of financial participation (profit sharing and employee share-ownership) and labour productivity across 29 European countries using a representative workplace survey. Consistent with theoretical expectations, profit-sharing is associated with superior labour productivity when it is open to all employees, whilst the evidence for employee share-ownership is more mixed. Analysis reveals considerable variation in the efficacy of both schemes across Europe. Country-level collective bargaining coverage has the greatest explanatory power in accounting for cross-country variation in efficacy. In countries with higher levels of collective bargaining coverage, profit-sharing performs less well, whereas employee share-ownership performs better, relative to countries with lower collective bargaining

coverage. These findings shed light on the comparative dimension of the of the financial participation-labour productivity link.

Key words

Financial participation; labour productivity; profit-sharing; employee share-ownership; Europe.

Word count

8,987

Introduction

Interest in financial participation has been revived in recent years (Blasi et al., 2013a). A large-scale project by the National Bureau of Economic Research (NBER), summarised in the book *Shared Capitalism at Work* (Kruse et al., 2010), makes the persuasive case for the potential benefits to American organisations in adopting "shared capitalism," or financial participation as it is known in Europe,[1] demonstrating that employees in workplaces engaging in financial participation generally have more positive attitudes than employees in workplaces that do not. In this book, the researchers provide probably the most comprehensive review of studies to date on the connection between financial participation and workplace performance, stating that "evidence from over 100 studies indicates a positive association on average between programs [sic] and company performance, but with substantial dispersion in results" (Blasi et al., 2010: 142). Although a recent literature has begun to examine variation in the *incidence* of financial incentive and participation across countries (Bryson et al., 2013), research on describing this *dispersion in effect sizes* with respect to workplace performance across countries lags behind (Freeman et al., 2009).

In this article, we contribute to the financial participation literature by presenting new evidence from a cross-national European workplace-level survey on the relationship between profit-sharing and employee share-ownership and workplace labour productivity. Consistent with theoretical expectations, we show that profit-sharing is most strongly associated with superior workplace labour productivity, especially when it is open to all employees within an establishment. We also show, however, that there exists

[1] "Shared capitalism" refers to the financial mechanisms that explicitly give employees an opportunity to receive a slice of organisational gains based on organisational performance (Bryson and Freeman et al. 2007; Kruse, Freeman, et al. 2010).

considerable *variation* across countries in the efficacy of both schemes, net of the different workplace compositions across countries, implying a role for country-level factors. We investigate three country-level factors that might account for some of this variation: country-level rates of financial participation, the extent of collective bargaining, and employment protection legislation. Out of these three factors, we find that country-level collective bargaining relates to the variation in the efficacy of financial participation most strongly, reducing the efficacy of profit-sharing, especially when it is only open to specific categories of employees, and enhancing the efficacy of employee share-ownership, especially when it is open to all workers in an establishment. By focusing on variation in efficacy across countries, our findings provide the first step into examining the comparative dimension to the financial participation and performance literature.

Financial participation and labour productivity

One reason why workplaces engage employees in sharing organisational gains, and often why governments support it, is the hope that by doing so, labour productivity should improve. The exact mechanisms as to why productivity might improve are quite numerous. The most basic theory is through a direct incentive effect inducing higher effort, as with any form of continent pay. This increased effort should also be directed towards activities that are aligned with the interests of the organisation in the form of profits or share prices. However, there are some potential shortcomings to any direct incentive effect. Being a collective incentive,they are exposed to the possibility of free-riding. There are also many factors other than effort influencing profits and share-prices (i.e. “the line of sight problem”) which could mitigate motivational effects. Against this, evidence from the US shows financial participation is associated with greater worker co-monitoring (Kruse et al., 2010) and, from the United Kingdom, a more efficient allocation of more difficult tasks to better performers (Burgess et al., 2010). Other mechanisms

include more committed and cooperative workers that are less likely to leave (Blasi et al., 2010; Harden et al., 2010). The research to date has also pointed to important interactions of financial participation with the presence of supportive HR practices such as employee involvement (Pendleton and Robinson, 2010), or company culture (Kruse et al., 2012). Different configurations of workplace arrangements across countries, then, could perhaps account for some within-country dispersion in effect sizes, but also between-countries too, and so workplace characteristics must be adequately controlled to isolate between-country variation.

Variation in efficacy across countries

A large literature has focused on the association between financial participation and various performance outcomes, mostly employee attitudes, financial performance, and labour productivity, the latter the focus of this study. By and large, effects are positive.[2] However, there is likely much variation depending on the type financial participation under consideration, the outcome measure, time period, and the country—with the latter not yet investigated in detail. UK evidence has been supportive of a positive connection with labour productivity, especially in terms of employee share-ownership (Conyon and Freeman, 2004; Bryson and Freeman, 2007; Oxera, 2007; Robinson and Wilson, 2006). Jones (2004) finds employee share-ownership is associated with improved productivity in several Eastern European countries too. These findings are in contrast to a recent panel study on Finish data that found no association of employee share-ownership on productivity there (Jones et al., 2010). Other more recent studies have focused on financial performance, for example, Poutsma and Braam (2012) use panel data to show

[2] We mainly focus on studies published in the 2000s and later, for earlier reviews that arrive at similar conclusions covering an array of countries including the countries we consider in this article, see Doucouliagos (1995), Jones and Pliskin (1997), and Kruse and Blasi (1997). Also see Blasi, Freeman, and Kruse (2013) for an up-to-date and detailed analysis of the US evidence.

positive financial effects in the Netherlands for profit-sharing and employee share-ownership, where productivity effects might be inferred. Nonetheless, it is difficult to conclude anything about the extent of variation in efficacy from single-country studies.

Probably the most complete review of the literature, of over 100 studies from the United States, Europe, and elsewhere, found that financial participation is positively associated with workplace performance – and importantly – also underlined that there is a substantial variation in effect sizes (Blasi et al., 2010: 142). It is this substantial dispersion – cross-national variation in particular – that we investigate in this article. Several studies have attempted to examine this using comparable cross-national workplace data, but they largely focused on understanding within-country relationships. Kalmi, Pendleton et al. (2005) using comparable data from four European countries found positive effects for employee share-ownership but not profit-sharing on financial performance. Poutsma, Brewster, et al. (2009) using the larger 2004 Cranet survey covering 32 countries, most of which were European, found that profit-sharing was associated with superior performance whereas employee share-ownership was not.

Although suggestive, the above studies do not examine variation in effect sizes across countries. How much does the efficacy of financial participation vary across countries? Where is financial participation associated with the largest and smallest effects? Can patterns of cross-country variation be adequately accounted for by variation in country-level factors? If so, which factors? How does variation differ between profit-sharing versus employee share-ownership? How does variation differ between schemes open to only specific categories of employee versus schemes open to all employees? These are important questions, especially in the European context, as the European Union has taken much interest in financial participation and made attempts to promote it through consultation with stakeholders and commissioning and disseminating reports such as the four “PEPPER” reports (Promotion of Employee Participation in Profit and Enterprise

Results) and through the European Economic and Social Committee and European Parliament (Pendleton and Poutsma, 2004). We next outline five hypotheses relating to expected patterns of variation.

Hypotheses

Although previous research suggests generally positive effects, it is also suggestive of considerable variation in effect sizes across scheme types and countries, which we aim to flesh out in this article. In terms of variation between profit-sharing and employee share-ownership schemes, reviews on the financial participation-labour productivity connection generally observe larger effect sizes for profit-sharing than for employee share-ownership (Doucouliagos, 1995; Kruse and Blasi, 1997). This is also consistent with more recent empirical work on Europe (Poutsma, Brewster, et al. (2009). Part of the reason could be because profit-sharing is more likely to have an effect on short-term outcomes related to effort, whereas employee share-ownership is more likely to have positive effects on longer-term outcomes related to commitment such as financial performance and retention. With productivity being a short-term outcome, and consistent with expectations from the previous evidence, we would expect profit-sharing to have larger overall effect sizes than employee share-ownership, and potentially therefore also exhibit less variation in efficacy across countries.

Hypothesis 1. Profit-sharing generally has stronger effects on labour productivity than employee share-ownership across countries

Another element of dispersion in effect sizes concern the design of the scheme itself. Although there are potentially many aspects in the design to consider, the one we are able to determine with the data we use is whether financial participation schemes are open to part or all the workforce within a workplace. We generally expect that the micro

mechanisms outlined above regarding the incentive/commitment effects and worker co-monitoring above to be stronger in contexts where the whole workplace is covered by the scheme simply because if more workers are covered, the greater the likelihood an effect will be observed in relation to labour productivity, which is measured at the workplace level. Pendleton and Robinson (2010) provide evidence for this logic, demonstrating stronger productivity effects for employee share-ownership when more workers are covered within a workplace in the UK. As such, we expect effects sizes to generally be larger when all employees are eligible for a scheme, and too, perhaps less complete coverage schemes will exhibit less variation across countries than schemes open to specific categories of employee.

Hypothesis 2. Financial participation generally has stronger effects on labour productivity when all employees in a workplace are covered across countries

Our main focus is on effect sizes across countries. A fairly recent literature has begun to examine the relationship between country-level factors and variation in the diffusion of financial participation across countries, in particular within Europe (Bryson et al., 2013; Kalmi et al., 2013; Pendleton and Poutsma, 2004; Pendleton et al., 2003), and to a lesser extent, variation in performance outcomes (Poutsma et al., 2009; Freeman et al., 2009). As well as accounting for incidence, country-level factors could account for variation in the relationship between financial participation and labour productivity through influencing the functioning of schemes once adopted. We identify three sets of country-level factors from the literature.

The first country-level factor we consider is country-level rates of financial participation. There are two reasons for examining this as a potential factor. First, the degree of country-level variation in propensity to adopt financial participation schemes could account for some degree of cross-sectional between-country variation in effect

sizes. Country-level financial participation rates can be viewed, partly, as an indicator of governmental encouragement for financial participation. Governments often offer tax breaks on payments made under financial participation schemes, or might encourage its use through other forms of regulation (Pendleton et al., 2001). In some countries, such as France, large organisations have historically been more or less compelled to adopt profit-sharing, and, further for it to apply to all employees through intéressement. In some Eastern European counties, indirect governmentally-supported diffusion of employee share-ownership stemmed from mass privatisation of former public enterprises, when many employees were given shares as part of this process, as was partly the cases in other European countries too (Poutsma et al., 2009). Similarly, some evidence demonstrates that rates of diffusion vary across countries depending on capital market development (Bryson et al., 2013). Governmental support and other country-level factors affecting diffusion could alter the potential operating costs of adopting profit-sharing or employee share-ownership in one country compared to another, and so could influence observed patterns in effect sizes on productivity across countries. In countries with greater levels of governmental diffusion, we might expect effect sizes to be smaller as the predicted positive association with labour productivity might be diluted by the adoption of financial participation by workplaces where it is least efficacious, because of the lower costs of adoption, such as through government support. Similarly, in countries with lower levels of diffusion, we might expect the observed effect sizes of financial participation on labour productivity to be larger partly because only those workplaces where the effects are likely to be most efficacious make use of it, and those workplaces where it is likely to be least efficacious are not compelled to adopt it. Thus we might expect the difference in labour productivity between workplaces that adopt financial participation and those that do not to be smaller in countries where rates of diffusion are higher, simply because of a greater heterogeneity with respect to productivity in the workplaces that adopt financial participation, partly reflecting different levels of self-selection across countries.

The second and related reason for including country-level rates of diffusion is that it is an important country-level control when considering other country-level factors. Controlling for country-rates of diffusion at the country-level changes the interpretation of other country-level factors as being net of the general country-level propensity to adopt financial participation, some of which may be due to government support, but also some of which might be due to other unmeasured country-level factors such as country-level culture and other long-term historical factors affecting diffusion. In terms of the correlation between financial participation effect sizes, the foregoing implies a negative correlation between country-level rates of diffusion and effect sizes across countries.

Hypothesis 3. Country-level rates of financial participation are negatively correlated with the efficacy of financial participation on labour productivity.

The second country-level factor we consider is country-level collective bargaining coverage. Previous studies have focused on how between-country differences in industrial relations arrangements, in particular the extent to which pay is determined via collective bargaining within a country affects the diffusion of types of contingent pay, including financial participation. Kalmi et al. (2013) find empirical support for a model with 32 countries in the CRANET survey. The model predicts that profit-sharing and employee share-ownership should be more common in countries with more centralised bargaining as most firms are tied to industry or national agreements that limit pay flexibility, whereas in decentralised countries, firms can exercise wage flexibility more straightforwardly through base pay as they are not tied to higher-level agreements. Moreover, even if a particular workplace in a country with high-levels of collective bargaining is not formally part of a higher-level agreement, more rigid pay norms may exist (Western and Rosenfeld, 2011) limiting pay flexibility relative to countries with much lower rates of collective bargaining (Traxler et al., 2008). As such, the effect of country-level collective bargaining extends beyond workplaces that are formally part of

the process. Bryson et al. (2013) also report patterns with respect to country-level collective bargaining and incidence of incentives for the EU15 and the US.

Since country-level collective bargaining alters the propensity to implement financial participation, we might expect financial participation to generally have larger productivity effect sizes in less unionised settings because organisations are generally freer to adopt such schemes or not – and decide on their payment systems in general depending on the expected effects, in a way similar to country-level diffusion through adjusting potential costs and benefits of adopting financial participation. However, once controlling for country-level incidences, which is considered as a separate factor in itself, collective bargaining coverage could still affect the *functioning* of financial participation. In countries where collective bargaining is more widespread in setting pay, and in influencing pay norms more generally, although financial participation may well be more common, incentives generally make up a smaller proportion of overall pay in countries with higher levels of collective bargaining (Boeri, 2014). Moreover, in such countries, incentive schemes offer less scope for lower wages when performance is poor, due to wage floors in collective agreements (Boeri, 2014: 17). Evidence also suggests incentive schemes are less responsive to performance in countries with higher levels of collective bargaining in that they offer less scope for higher wages due to wage constraints set out in agreements, with case study evidence demonstrating that incremental pay increases are often converted into a form of financial participation (Traxler et al., 2008). This implies that the effect of financial participation on productivity should be weaker in countries where collective bargaining plays a greater role in pay-setting because not only do financial incentives make up a lower proportion of pay, they are more weakly related to performance, reducing motivational effects on employees. We expect financial participation to have larger effect sizes in countries where collective bargaining coverage is lower and weaker simply because establishments have more control over whether to

implement financial participation, but also more control over its functioning once adopted, offering proportionately greater payments that are more sensitive to performance as workplaces are not as constrained by collective agreements.

Hypothesis 4. Collective bargaining coverage is negatively correlated with the efficacy of financial participation on labour productivity.

The third country-level factor we derive from the literature concerns employment protection. Marsden and Belfield (2010), comparing the United Kingdom and France, argue that the greater use of contingent pay in France is due to the more stringent employment protection relative to the UK. They argue workplaces in the United Kingdom, with its weaker employment protection, are less likely to use financial incentives because they can more easily use the threat of dismissal as a disciplining device. In countries with stricter employment protection, workforce adjustments through dismissal are more costly, and so making use of financial incentives as a motivating device are relatively less costly. Thus without controlling for country-level diffusion of financial participation, we expect financial participation to have smaller effect sizes in countries with higher levels of employment protection because of the greater heterogeneity in workplaces that make use of it and stronger self-selection with respect to the productivity-enhancing effects in countries with lighter employment protection.

Once country-level rates of diffusion are controlled, however, we expect employment protection to still be negatively correlated with the efficacy of financial participation because even though workplaces might be more likely to adopt financial participation, the effects of schemes on attracting, retaining, and motivating high ability workers might be reduced when employment protection is high (Bryson et al., 2013). In other words, since employment is more secure, the effects of incentives on productivity

in countries with high levels of employment protection will be smaller simply because there is less need to illicit commitment and retention of high ability employees.

Even still, we recognise this final hypothesis is quite hypothetical, primarily because not much literature has investigated this. The association between employment protection and the efficacy of financial participation could run the other way. In countries with higher levels of employment protection, the effects of financial participation may be stronger because they are a longer-term incentive than piece rates and short-term bonuses, where a steady workforce will actually complement its functioning, as a high performance HRM literature suggesting employment guarantees as part of the parcel would predict (MacDuffy, 1995; Ichniowski et al., 1997; Becker and Huselid, 1998). In countries with lower levels of employment protection, the efficacy may therefore be weaker because the mechanisms by which financial participation (effort, commitment, monitoring, etc.) leads to higher productivity might work less well when employment is less secure because of a less stable workforce and incentives eliciting little extra effort over and above the higher threat of dismissal. Nonetheless, given the previous findings regarding incidence and our data are cross-sectional, we tentatively predict that efficacy should be weaker in countries with greater levels of employment protection.

Hypothesis 5. Employment protection legislation is negatively correlated with the efficacy of financial participation on labour productivity.

Data and Analytical Strategy

The European Company Survey

Data from the 2009 European Company Survey (ECS) – a representative survey of workplaces with 10 or more workers for all 28 European Union member states and two candidate countries (Macedonia and Turkey) commissioned by the European Foundation

for Improvement of Living and Working Conditions (Eurofound, 2010). The ECS presents several advantages for our purposes. First, the country coverage is large, including many countries often not studied. Second, the sample is representative. The ECS contains around *N*=27,000 observations of unparalleled cross-country comparable information on workplace practices and outcomes. Workplace information was collected via a telephone survey based on a random stratified sample of workplaces with 10 or more employees drawn from workplace population registers, meaning our estimates pertain the whole population workplaces with 10 or more employees in each country (Eurofound, 2010). Third, since it is an employer survey, responses, particularly on financial participation, are likely to be more accurate and complete than from employee surveys. Indeed, findings from an employee survey, the European Working Conditions Survey 2005, indicate about a 10 per cent refusal rate for many countries on financial participation questions (Eurofound, 2007: 15). Furthermore, research in the United States found that even when employees respond to such questions the degree of misclassification is nonignorable. About one in five employees in the NBER study incorrectly reported that they are not covered by profit-sharing, with about one in seven incorrectly reporting that they are not covered by share-ownership (Budd, 2010). Being a workplace survey, the ECS also contains a rich set of workplace controls.

The key independent variables are profit-sharing and employee share-ownership. The ECS contains information on whether the workplace offers these schemes as well as whether the schemes are open to all or specific categories of employees.[3] Question wording for these variables can be found in Table A1 in the Appendix. We restrict our sample to private sector workplaces outside of public service delivery (some of which are

[3] We were only able to investigate the binary categories of the proportion of workforces covered by each scheme, but there are other areas of schemes that would be useful to have information on the size of the prize relative to usual pay, the frequency of payments, time horizon of payments, and the criteria determining pay out.

private sector). We also exclude Portugal from the analysis due to problems with the employee share-ownership variables.[4] We also exclude 81 cases with missing data. We are left with around 16,000 observations with a mean sample size in each country of *N*=905 (*SD*=398).

Measuring workplace labour productivity

Our productivity measure is based on a subjective rating made by the manager participating in the survey. Managers were asked: "Compared with other establishments in the same sector of activity, how would you assess the labour productivity in your establishment? Is it a lot better, somewhat better, about average, or below average for this sector?" We collapse the first two categories to one category and the latter two to another to create a binary dependent variable indicating whether relative productivity is above average (see Table A1).[5]

The subjective nature of this variable could be viewed as a disadvantage. However, more objective measures of performance such as profit or value-added often suffer from their own problems such as high nonresponse in large-scale surveys because financial information is seen as confidential (even though surveys are confidential and anonymised), or refers to the organisation rather than particular establishments.

[4] Descriptive statistics reveal an implausibly high incidence of employee share-ownership in Portugal – 21.1 per cent – twice as high as the next country, Denmark. Misclassification might be the problem here, rather than sampling bias (the figure reported here is with sampling weights – without weights, it is still implausibly high). In the descriptive analysis for the official Eurofound *European Workplace Survey 2009* document, for the analysis of employee share ownership it states "Portugal is not included in this analysis due to lack of comparable data" (Figure 38, p. 41). We therefore exclude Portugal from all analysis. Country estimates for all other countries, especially their rankings, closely resemble other available sources (Bryson et al. 2013; www.worker-participation.eu).

[5] We do this because of ease of presentation of Figures 1 to 3. Using the 4-point measure and ordinal logit regressions that yields separate average partial estimates for each level of response relative to the reference category results in many graphs. Our qualitative results are unaffected by whichever modelling strategy we use.

Furthermore, the data for the ECS was collected via a telephone survey, where item non-response for this kind of information may be higher as managers may not have the requisite information readily at hand. Another advantage of subjective assessments is that they are more straightforward to compare across industries and especially across countries where differences in accounting procedures and quality may compromise the comparability of finance-based measures.

The robustness of the subjective assessments of the economic outcomes in the ECS were checked with a validation exercise based on a separate postal questionnaire requesting specific financial information on representative samples drawn from a subset of countries, each representing a critical case for the main regions of Europe (Finland, Germany, Poland, Spain, and the UK). The study concluded "there is a good correlation between the subjective estimates and the actual situation".[6] Besides, similar subjective performance measures have been validated to a reasonable degree in the authoritative British Work Employment Relations Surveys (WERS) (Kersley et al., 2006: 294-303; Wall et al., 2004; Forth and McNabb, 2008).

Analytical strategy

Our analysis consists of two main steps. In the first step, we estimate the within-country effect sizes of financial participation on productivity, pooling all countries together. In this step, the aim is to establish whether there is a statistically significant association, net of controls and country fixed effects. In the second step (described in more detail in the next section), we explicitly model between-country variation in effect sizes. In both stages, we separately examine the effects of within-workplace coverage of both schemes

[6] http://www.eurofound.europa.eu/surveys/ecs/2009/financial.htm [accessed 10th November 2012].

(whether some workers or all workers are covered by a scheme) as an additional source of variation in effect sizes.

Since our data are cross-sectional, this poses challenges to the causal claims we can make about whether effect sizes of financial participation on labour productivity are causal. There is no definitive way to deal with these issues with our data. We take several steps to help mitigate against them. We control for a battery of confounders, some of which are intended to get a handle on longer term performance of workplaces. We are able to control for the general "economic situation" of the establishment based on a subjective rating by management (whether very good, quite good, neither good nor bad, quite bad, or very bad), which can be loosely interpreted as profitability or capacity to share gains. We include two further variables as an indicator of longer-term workplace health. First, we include a control for employment growth over the three year period preceding the survey (whether it increased, stayed the same, or decreased). Second, we control for productivity growth over the last three years (whether it increased considerably, slightly increased, stayed the same, or decreased). Thus our results can be read as the association between financial participation and workplace productivity, net of current general workplace health and its recent variability (see Table A1 in Appendix for question wording for these three controls). These three subjective indicators were also validated by the same report referred to earlier (Gensicke et al., 2009). We also include a control variable in all our models for recent organisational change relating to changes to the remuneration system that should capture, if crudely, whether financial participation had been recently introduced.

In addition, we control for many factors that should correlate strongly with many possible omitted variables relating to workforce composition in all our models, for example the proportion of the workforce that is highly skilled, female, part-time, and on temporary contracts. There could be workplace practices that influence productivity that

are highly correlated with financial participation too. As a well-established human resource literature suggests, financial participation is complementary to high performance workplace and high-involvement work practices (MacDuffy, 1995; Ichniowski et al., 1997; Becker and Huselid, 1998). We control for the presence of teamworking, the presence of self-managed teams, whether training is given to perform new tasks, whether training needs are checked periodically, the proportion of employees entitled to flexible working, the presence of workgroup performance-related pay, and the presence of individual performance-related pay. Although previous US research on financial participation finds it is complementary with employee involvement (Levine and Tyson, 1990) but European evidence is somewhat less supportive (Poutsma et al., 2006; Pendleton et al., 2001), we control for presence of a union and presence of joint consultative committees. We also control for workplace size, whether the workplace is foreign-owned, industrial sector, and for a set of country dummies. Finally, we also conduct a matching procedure and test the sensitivity of the estimates to the presence of unobserved heterogeneity.

Modelling variation in effect sizes across countries

We investigate three country-level factors: country-level incidence of financial participation, collective bargaining coverage, and employment protection legislation. Country-level rates of financial participation are captured by the proportion of workplaces in a given country participating in each financial participation scheme.[7] Collective bargaining coverage is captured from the ECS data too. It is simply the proportion of

[7] We also experimented with an alternative measure – the country-level fixed effects of propensity of adopting a particular financial participation scheme, net of all our workplace control variables – but country rankings barely altered using this alternative measure, nor did it affect our substantive results by substituting rates with this measure.

workplaces covered by collective bargaining agreements in each country.[8] We prefer this measure rather than data from external sources such as the ICTWSS database (Visser, 2013) because of limited availability in external databases of country-level collective bargaining coverage for the private and public sectors separately (our focus is private sector workplaces only), and the unit of analysis tends to be workers, not workplaces. Finally, employment protection legislation comes from the OECD employment protection legislation index for 2008, which is essentially a measure of ease of dismissal. Data for some non-OECD countries were collated from other sources that have constructed comparable indices (Laporšek and Primož, 2011; Eamets and Masso, 2005; Nesporova, 2011).

To model the relationship between these country-level factors and variation in effect sizes of financial participation on workplace labour productivity across countries, we adopt a two-stage multilevel approach (Lewis and Linzer, 2005). In the first step, we estimate the coefficients of each financial participation scheme on productivity by country, controlling for all the workplace-level factors mentioned in the previous section. These coefficients of particular financial participation schemes by country become the dependent variables for the second step (i.e. the effect sizes of financial participation, net of workplace-level controls). In the second step, the three country-level factors are the independent variables predicting the effect sizes of the different financial participation schemes across countries, correcting for the error in coefficients from the first step using feasible generalized least squares.[9] We also present graphs of bivariate associations to

[8] Results are insensitive to using the proportion of workers or workplaces as country rankings barely change across indicators.

[9] The two-step procedure was conducted using the *edvreg* program in Stata 13.0 available from http://svn.cluelessresearch.com/twostep/trunk/edvreg.ado [accessed 20th June 2013].

facilitate interpretation of the relationships, the regressions inform us on their statistical significance when controlling for the other country-level factors. A multivariate strategy is necessary as to identify which country-level factor are driving the results, as they are likely to be correlated according to models of political economy clustering (Hall and Soskice, 2001).

Results

The incidence of financial participation across Europe

Table 1 shows the incidence of profit-sharing and employee share-ownership by country in the ECS. We present estimates of the proportion of workplaces in each country that have either financial participation scheme, as well as the proportion of workplaces where schemes are open to all employees. To get a better feel for incidence of financial participation, in the last five columns, we also present the estimates in the first five columns again but using an employee weight included in the ECS (instead of the establishment weight which is used in all other analysis) which weights estimates to pertain to the population of employees working in workplaces with 10 or more employees.

[Table 1 about here]

About 1 in 5 workers in the 29 European countries we examine are covered by at least one of the two schemes (and about one in six workplaces), which is slightly larger than the estimates in the literature (Bryson et al., 2013), probably due to our estimates being several years more recent and these schemes have been growing quite rapidly. These figures suggest about 1 in 5 workers work in a profit-sharing workplace and just fewer than 1 in 10 work in a workplace that offers employee share-ownership. As is documented in the incidence literature, there is a fair amount of variation in financial

participation across countries, as indicated by the coefficient of variation in country-level proportions in each column. Some countries' levels are equivalent to the United States such as Sweden or Finland. Others are much greater such as France with respect to profit-sharing. In several others, mainly Southern and Eastern European countries, financial participation is generally less well-developed.

Multivariate analyses of financial participation and labour productivity

The main pooled estimates are reported in Table 2.[10] Here we model workplace labour productivity as a function of the incidence of both financial participation schemes (Panel A) and, separately, coverage (Panel B). To deal with country clustering, in Columns 1 and 2, we use logit models with country fixed effects correcting standard errors for country clustering. In Column 3, we fit mixed effect logit models where effect sizes are free to vary across countries (Snijders and Bosker, 2012) to test the sensitivity of the fixed effects assumption. To give coefficients a probability interpretation, we report average partial effects (APEs) instead of raw logit coefficients.

Column 1 of Panel A reports the relationship between the incidence of the two financial participation schemes, controlling for only country and industry fixed effects (the presumed reference categories against which productivity judgements are based). Column 2 includes the battery of workplace controls in addition to the fixed effects. In both columns, we find that profit-sharing has a statistically significant and positive effect on labour productivity, whilst employee share-ownership has no detectable effect. Once the effects of the two schemes are allowed to vary across countries we find that the significant effect of profit-sharing is slightly attenuated, indicating that there is some dispersion in effect sizes across countries (Column 3). The fact that profit-sharing is

[10] Full results are in Table A2.

associated with higher labour productivity in these models supports the prediction made in Hypothesis 1.

The effects uncovered in Panel A could mask important features regarding the design of both schemes, as detailed in Hypothesis 2. In Panel B, we repeat the analysis in Panel A, but this time examining their within-workplace coverage i.e. whether they are offered to specific categories of worker or whether they are offered to all employees.[11] When workplace factors are not controlled (Panel B, Column 1), profit-sharing open to specific categories and profit-sharing open to the whole workforce within workplaces are both found to have a statistically significant and positive relationship with productivity relative to workplaces with no profit-sharing. However, once other workplace factors are controlled (Columns 2), only profit-sharing with complete coverage remains significant, indicating that the effect of profit-sharing open to specific categories is explained by the workplace controls. Employee share-ownership remains unrelated to productivity – whether it is open to specific categories – or whether it covers the whole workforce. Thus we find support for Hypothesis 2, but only with respect to profit-sharing. When the financial participation variables are entered as random variables in a mixed effect logit, as with incidence, we find the significant effect of profit-sharing with complete coverage is attenuated slightly, again indicating dispersion in effect sizes across countries.

[Table 2 about here]

As a final check on the robustness of this main result, we shift to a matching approach (Rubin, 1974). The two key advantages of matching methods over standard regression-based approaches are that they overcome the standard parametric assumptions

[11] Unfortunately, the ECS does not give proportions of employees covered by both these schemes: only whether they are open to either all employees, or specific categories of employee.

and we can also implement tests to gauge the extent of the threat of unobserved heterogeneity on differences in outcome means between groups, given our data are cross-sectional. Here, we treat each financial participation scheme as the "treatment" to estimate an average treatment effect for the treated (ATT) on labour productivity. The ATT shows the difference in average productivity for workplaces that have the scheme relative to a counterfactual if they did not have it. We match workplaces using the control variables listed underneath Table 2 using a recently developed algorithmic search method called "genetic matching." The advantages of genetic matching over conventional methods are that it specifically creates matches that optimise balance and uses an algorithmic approach to achieve this, minimising common support issues (Diamond and Sekhon, forthcoming; Sekhon, 2011). Here, we present results for the same binary labour productivity coding of productivity ratings using the full set of controls.[12] The results are reported in Column 4 of Table 2. They results show the pooled results still hold using this alternative approach. In Table 3, we present results from a Rosenbaum sensitivity test to examine whether the statistically significant ATTs for profit-sharing are sensitive to any potential sources of unobserved heterogeneity. The test shows how much the probability of receiving the "treatment" needs to change to affect the statistical significance of the estimate of being "treated". The lowest gamma value at which point a significant ATT stopped being significant at the 10 per cent level was 1.4 i.e. even if the odds of the presence of profit-sharing were 1.4 times higher due to some unobserved factors, the ATT would still remain significant at the 10 per cent level in the worst-performing model, indicating our key finding is robust.

[Table 3 about here]

[12] Results using the four-category version of the dependent variable reveal qualitatively similar results for all of our analyses (available on request).

In sum, of the four variants of financial participation we investigate, Table 2 indicates that profit-sharing is associated with better labour productivity but only when *all* workers are covered. No detectable effects for employee-share ownership are found once workplace factors are controlled.[13] Main effects in pooled models may mask considerable and interesting dispersion across countries, and we now turn to examine the variation in effect sizes across countries.

Variation in the effect sizes of financial participation schemes across Europe

We use a two-stage procedure to investigate dispersion in APEs across countries and their correlation with three substantively important country-level factors. In the first stage, we estimate the APEs of the financial participation variables for each country, controlling for the battery of workplace controls (results listed in Table A3). In the second stage, we regress the country APEs of the efficacy of the all four variants of the financial participation variables on the three country-level factors. To being with, we descriptively analyses variation in the effect sizes on productivity of all four variants of financial participation, ranking countries by their APEs. A visual inspection of Figure 1, where within-country effect sizes are plotted by country and scheme type, along with the means and coefficients of variation of effect sizes, reveals that profit-sharing with complete coverage has on average the largest APEs across countries with the least variation (hence its significance in pooled models). Figure 1 generally reveals considerable variation in effect sizes, as well as revealing that all four variants of financial participation are

[13] As mentioned, much of the previous research on employee share-ownership and employee attitudes and performance often finds important interaction effects, even if main effects are not always significant, as is the case here. We investigated many such interactions effects, for instance, with presence of training, teamworking, self-managed teams, and workplace climate – but none were significant (available on request). We are grateful to an anonymous reviewer for making this point. Full regression results for Column 2 are reported in the Appendix A2.

associated with either no or positive APEs across countries, although negative effect sizes can be found in a few instances.[14]

[Figure 1 about here]

The results of the two-stage multivariate procedure are reported in Table 4 (profit-sharing) and Table 5 (employee share-ownership). In each table, we examine each country-level factor on its own (Columns 1 to 3 for partial coverage and Columns 5 to 7 for complete coverage) and together (Columns 4 and 8). To facilitate interpretation, we also plot the bivariate relationships of the country-level variables and the financial participation variants in Figure 2 (profit-sharing) and Figure 3 (employee share-ownership).

[Table 4 about here]

[Figure 2 about here]

Beginning with country-level rates of profit-sharing (Table 4), we find a positive but statistically nonsignificant association with country-level efficacy – whether the scheme is restricted to certain categories (Column 1) or open to all workers within a workplace (Column 5). The coefficients are reduced but still in the same direction when the other two country-level factors are controlled (Columns 4 and 8). Examining the bivariate plots in Panel A of Figure 2 reveals that part of the nonsignificance could be partly due to the considerable variation in country-level APEs. The graph reveals that in countries with very low levels of profit-sharing, the positive effect sizes are larger (mostly

[14] Full regression results by country are found in Table A3.

Eastern and Southern European countries) than in countries with high rates of profit-sharing (Scandinavian and Continental countries), where effect sizes are still positive, but smaller. There is also a cluster of countries with moderate levels of profit-sharing (Continental countries) where the effect sizes are mostly nonsignificant, or in the case of a small number of countries, negative. Thus the relationship between country-level rates of profit-sharing and the efficacy of profit-sharing is actually more u-shaped than linear, but with a degree of dispersion around this trend, only partially supporting the expectation of Hypothesis 3 that effects sizes will be larger in countries with lower rates of diffusion.

The fact we observe some relatively larger effect sizes in countries with lower levels of country-level profit-sharing could indicate that these APEs are inflated somewhat by self-selection, as predicted. In countries with higher levels of profit-sharing where self-selection is likely to be less severe, particularly in France in the case of complete coverage of profit-sharing is mandatory for large organisations, we still find positive, albeit smaller, effect sizes. In summary, we find relatively smaller effect sizes in those countries where there is greater coercion or financial incentives to make use of profit-sharing. Effect sizes are generally larger and positive in countries where profit-sharing is not as widespread, where self-selection into profit-sharing is more likely to be endemic, perhaps inflating effect sizes. The confidence intervals are also larger in such countries, so in the two-stage estimations in Table 4, they are given less weight. Panel A in Figure 2 reveals the efficacy of profit-sharing is generally more positive than negative and that positive effects are observed in more countries for complete coverage than is the case with partial coverage, as predicted by Hypotheses 1 and 2.

Turning to the relation between country-level rates of employee share-ownership in Table 5, we find country-level rates have a positive and nonsignificant correlation with the efficacy partial coverage of employee share-ownership. In the case of complete coverage, however, a negative and also nonsignificant correlation (Columns 4 and 8) is

found. The bivariate plots in Panel A of Figure 3 reveal that part of the reason for nonsignificance is due to the dispersion in effect sizes across countries, but in contrast to profit-sharing, also much wider confidence intervals of country-level estimates of the APEs of share-ownership on productivity, particularly in those countries with lower levels of employee share-ownership with complete coverage, partly due to small numbers of workplaces engaging in employee share-ownership in countries.

[Table 5 about here]

[Figure 3 about here]

Generally, we find larger effect sizes in countries where overall levels of employee share-ownership are low for both partial and complete coverage – where self-selection is likely to be more endemic – but find less evidence of positive effect sizes in countries with high levels of employee share-ownership in terms of point estimates as compared to profit-sharing. The bivariate plots support the general finding in Table 2 that we find mostly no detectable effect on productivity in most countries, with many confidence intervals crossing zero on the x-axis. Importantly though, overall, we find little evidence of a negative association across countries. Overall, we generally, if anything, find more of a u-shaped trend between country-level rates of diffusion and efficacy than an overall negative correlation, in contrast to the predictions made by Hypothesis 3.

In terms of collective bargaining coverage, Table 4 reveals a statistically significant and negative relationship for the efficacy of profit-sharing when it is restricted to specific categories of employees. The negative effect of collective bargaining coverage for the efficacy of partial profit-sharing finding still holds when country-level profit-sharing and employment protection are held constant (Table 4, Column 4). Panel B of Figure 2, reveals generally positive and significant effect sizes in countries with low and

medium levels of collective bargaining coverage, and some significant and even negative effects in countries with high levels of collective bargaining coverage (Continental countries), with a smaller number of important exceptions (Slovenia and Finland).[15] When profit-sharing is workplace-wide, country-level collective bargaining coverage is too found to be negatively related with efficacy, but the correlation is nonsignificant in this case. Panel B of Figure 2 reveals that for countries with higher levels of collective bargaining coverage, the effect sizes of workplace-wide profit-sharing are less dispersed, but mostly nonsignificant. Taken together, these findings indicate that in countries with low collective bargaining coverage, where establishments generally have a freer choice in their payment systems, effect sizes of profit-sharing are generally greater. In countries with higher collective bargaining coverage, where establishments have less discretion over payment systems, even if the establishment itself is not covered by an agreement because of stronger pay norms (Western and Rosenfeld, 2011; Traxler et al., 2008; Boeri, 2014). As hypothesised, even when country-level rates of profit-sharing are controlled, we still find a generally negative relationship as predicted. We thus find some evidence of a negative effect sizes, especially in the case of profit-sharing that is open to only specific categories of employee where a significant relationship is found, providing some support for Hypothesis 4.

In terms of collective bargaining coverage and the efficacy of employee share-ownership, Table 5 reveals a statistically significant but positive relationship when it is open to all employees, and even when country-level employee share-ownership is controlled. We also find a positive relationship between the efficacy of employee share-

[15] Interestingly, when the relationship between collective bargaining and the efficacy is investigated at the workplace-level, no association with collective bargaining is found. The same is true if we repeat the analysis with level of the collective agreement (establishment or higher) and found the same results.

ownership schemes that are open to specific categories and country-level collective bargaining coverage, but the effect is nonsignificant. When examining the plots in Panel B of Figure 3, the effects of employee share-ownership when it is open to specific categories of employee are mostly small and nonsignificant across countries, whereas in the case of when it is open to all employees, we find some strongly significant and large effects in some countries with high levels of collective bargaining coverage (Austria, Finland), which drive the overall positive correlation. The generally positive relationship between country-level collective bargaining coverage and efficacy of employee share-ownership is in contrast to the prediction made by Hypothesis 4. We discuss some reasons we find contrasting results with respect to county-level collective bargaining and profit-sharing and employee share-ownership in the next section. Overall, with respect to both types of financial participation, we do find that at least for three of the four variants of financial participation, collective bargaining coverage explains the largest share in the variance of APEs for three of the four variants of financial participation that we examine, meaning that it has greatest explanatory power in accounting for dispersion of efficacy across Europe.

In terms of variation in efficacy according to strictness of employment protection, Table 4 reveals that effect sizes for profit-sharing (both partial coverage and complete coverage) are generally larger in countries with stricter employment protection, although this overall positive correlation between country-level protection and efficacy is nonsignificant. Panel C in Figure 2 reveals that there is much dispersion around this trend line, and the positive correlation is weak. In terms of variation in the efficacy of employee share-ownership, a negative but nonsignificant correlation, is found (Table 5). Even excluding the outliers of the UK and Ireland with respect to employment protection, to the left of the graph (Panel C, Figure 3), does not change the association in this case. Thus our tentative predictions of a negative association are supported only for the case of

employee share-ownership, whereas a (weakly) positive association is found for the case of profit-sharing. Thus, Hypothesis 5 is only weakly supported overall.

Nonetheless, we did note potentially countervailing predictions with respect to employment protection because in countries with higher levels of employment protection, financial participation may play a smaller role in attracting, retaining, and motivating employees because employment is generally more secure across all workplaces – which our results suggest is more the case for employee share-ownership. On the other hand, we also stated that financial participation may have stronger effects in countries with higher levels of employment protection, because ultimately, financial participation are a longer-term incentive and so positive efficacy is more likely to be realised in countries with more stables workforces – which our results suggest is more the case for profit-sharing. Perhaps because of these countervailing effects, the model fit for employment protection in accounting for variation in efficacy across countries for all four variants of financial participation in Tables 4 and 5 is very poor, and this does not change using alternative measures of strictness of employment. [16]

Discussion

The recent financial participation literature has begun to document the correlates of incidence of incentives and financial participation across countries (Bryson et al., 2013; Kalmi et al., 2013). This article extends this literature examining variation in effect sizes of financial participation on labour productivity across 29 European countries, and their

[16] Using alternative indices such as the World Bank's rigidity of employment index or the Frasier Institute's ease of hiring and firing index yielded qualitatively similar results. We report the EPL as it is the most widely used index.

correlates with three country-level factors. When examining Europe as a whole in pooled models, we find that profit-sharing is most consistently associated with superior workplace productivity, especially when it covers all workers in a workplace. Employee share-ownership is found to generally have mostly no statistically significant effect on productivity across countries. Importantly, however, with all four variants of financial participation we consider, we find much variation across countries in efficacy, net of differences in workplace composition across countries. When we model this variation with three substantively important country-level variables, we find strongest support for the extent of country-level collective bargaining coverage as a key variable in accounting for variation in cross-country efficacy.

Several key findings emerge. First, underlying findings from single-country studies, we find more support for positive effects of profit-sharing than employee share-ownership across countries. The main difference between these two schemes is that with employee share-ownership workers normally have to hold onto shares for a period of time to achieve returns, and so a longer-term dependent variable might be a more appropriate measure and perhaps the reason we were unable to find much support when considering pooled estimates of Europe as a whole. Additionally, workers are often not gifted shares, which is normally the case with profit-sharing. Workers often have to give up something to obtain them, and this could have important implications for mechanisms such as gift-exchange. More importantly, the employee share-ownership literature often finds that its productivity-enhancing effects come about through interactions with HR policies, such as high performance work systems or company culture, rather than through main effects (Blasi et al., 2013b; Kruse et al., 2012; Pendleton and Robinson, 2010). Perhaps partly because of this, we also find greater dispersion in effect sizes for employee share-ownership than for profit-sharing leading to fewer significant effects. Second, the distinction between the schemes being open to certain categories of employee versus the

whole workplace is revealed to be a pertinent one in understanding variation in efficacy of financial participation. We find that positive effects are more likely to be observed when *all* workers are covered across a range of countries, echoing empirical evidence from single-country case studies (Pendleton and Robinson, 2010).

Third, and most importantly, we demonstrate that there exists considerable variation in effect sizes of both schemes across Europe, net of workplace composition controls. Very little is known so far about what might explain this variation. Of the three country-level factors we consider, country-level collective bargaining coverage seems to play the largest role and indeed generally has the greatest explanatory power in accounting for variation in effect sizes of financial participation on labour productivity across Europe (at least judging by the *R*-squares in Tables 4 and 5). The two main findings that emerge in this regard are, first, effect sizes of partial profit-sharing are generally smaller in countries with greater collective bargaining coverage relative to countries with lower rates of coverage, and this relationship is statistically significant in the case of profit-sharing open to specific categories of employee. Second, larger effect sizes for employee share-ownership is observed in countries with greater levels of collective bargaining coverage, and this relationship is statistically significant in the case of employee share-ownership being open to all employees.

The negative relation of country-level collective bargaining coverage with profit-sharing might be due to a wider prevalence of collective agreements where incentives generally make up a lower proportion of overall pay and are less sensitive to short-run locations in profits or share values (Traxler et al., 2008; Boeri, 2014), especially downwardly given pay floors set by collective agreements. However, our findings do suggest that country-level bargaining coverage plays a somewhat positive role in the functioning of employee share-ownership schemes, especially when open to all

employees within a workplace, which contrast with our predictions which are consistent in the case of profit-sharing.

One reason for the positive relationship between country-level collective bargaining coverage and employee share-ownership might be due to complementarity between country-level traditions of collective attitudes and democratic working practices and the productivity-enhancing mechanisms of financial participation, such as through commitment and worker co-monitoring. These mechanisms are particularly pertinent for employee share-ownership, a longer-term incentives. Countries with greater levels of collective bargaining generally have more extensive and formalised employee voice channels which negotiate over aspects of work other than pay, for instance, and these channels, reflected in country-level collective bargaining coverage, may well be complementary to the underlying mechanisms connecting employee share-ownership and productivity. Although European evidence is generally somewhat unsupportive of a relationship between the *incidence* of representative voice channels and financial participation (Poutsma et al., 2006; Pendleton et al., 2001), there may be complementary *performance* effects (Poutsma et al., 2009; Levine and Tyson, 1990). Because we control for presence of joint consultative committees (JCCs) at the workplace-level in the analyses we present here (an indicator of representative voice), in other analyses (not shown) we do indeed find a positive interaction effect between the presence of a JCC and employee share-ownership and productivity, but not for profit-sharing. We leave this potentially facilitating effect of higher levels in country-level of collective bargaining for employee share-ownership for future research to investigate.

Conclusions

In this article, we examined dispersion in effect sizes of profit-sharing and employee share-ownership on workplace labour productivity across countries and the extent to which variation can be accounted for by three substantively-important country-level factors. Ignoring variation across countries can lead to simplistic conclusions about the efficacy of financial participation schemes in pooled models where interesting country-level variation is "controlled". We therefore reinforce that cross-country variation is important. Focusing on effect sizes across countries gives insight into the possible role of country-level factors in determining efficacy.

Of course, our results are tentative since our causal claims are limited by the cross-sectional data and more longitudinal or randomised research is needed. This article provides the first step by simply estimate the variation in effect sizes of financial participation on labour productivity with a rich data source covering many more country contexts than is often studied, giving insight into how country-level factors may account for variation. We find most explanatory power for differences in levels of collective bargaining coverage across countries in this regard. Effect sizes are generally larger in countries with greater collective bargaining coverage in the case of employee share-ownership, but are smaller in the case of profit-sharing. We interpret this as consistent with evidence that demonstrates incentives are less sensitive to short-run fluctuations in performance (e.g. profits) in countries with higher levels of collective bargaining coverage, but that the collective attitudes and employee voice channels related to country-level collective bargaining facilitates the efficacy of employee share-ownership somewhat, but not profit-sharing, because it is a longer-term incentive. We hope that our contribution will stimulate more research in this area.

Overall, we find the efficacy of both financial participation types are generally positive or nonsignificant across the many countries we examine, with very little evidence of negative effects. For concerns of fairness and growing inequality, it is important to

establish that forms of financial participation do not worsen workplace performance. To that we add, given European-level encouragement of financial participation, it is also important to map efficacy across countries too given the varied institutional landscapes.

REFERENCES

Becker B and Huselid MA. (1998) High Performance Work Systems and Firm Performance: A Synthesis of Research and Managerial implications. In: Ferris GR (ed) *Research in Personnel and Human Resources Management.* 53-102.

Blasi JR, Freeman RB and Kruse D. (2013a) *The Citizen's Share : putting ownership back into democracy,* New Haven: Yale University Press.

Blasi JR, Freeman RB and Kruse D. (2013b) Evidence. In: Blasi JR, Freeman RB and Kruse D (eds) *The Citizen's Share : putting ownership back into democracy.* New Haven: Yale University Press, 293 pages.

Blasi JR, Freeman RB, Mackin C, et al. (2010) Creating a Bigger Pie? The Effects of Employee Ownership, Profit Sharing, and Stock Options on Workplace Performance. In: Kruse DL, Freeman RB and Blasi JR (eds) *Shared capitalism at work : employee ownership, profit and gain sharing, and broad-based stock options.* Chicago: The University of Chicago Press, 139-165.

Boeri T. (2014) Two-Tier Bargaining. Berlin: IZA.

Bryson A and Freeman R. (2007) *Doing the right thing? : does fair share capitalism improve workplace performance?,* London: Department of Trade and Industry.

Bryson A, Freeman R, Lucifora C, et al. (2013) Paying for Performance: Incentive Pay Schemes and Employees' Financial Participation. In: Boeri T, Lucifora C and Murphy KJ (eds) *Executive Remuneration and Employee Performance-Related Pay.* Oxford: Oxford University Press.

Budd JW. (2010) Does Employee Ignorance Undermine Shared Capitalism? In: Kruse DL, Freeman RB and Blasi JR (eds) *Shared capitalism at work : employee ownership, profit and gain sharing, and broad-based stock options.* Chicago: The University of Chicago Press, 291-316.

Burgess S, Propper C, Ratto M, et al. (2010) Smarter Task Assignment or Greater Effort: The Impact of Incentives on Team Performance*. *The Economic Journal* 120: 968-989.

Conyon MJ and Freeman R. (2004) Shared Modes of Compensation and Firm Performance. In: Card DE, Blundell R and Freeman RB (eds) *Seeking a premier economy : the economic effects of British economic reforms, 1980-2000.* Chicago ; London: University of Chicago Press, 109-146.

Diamond A and Sekhon JS. (forthcoming) Genetic Matching for Estimating Causal Effects: A General Multivariate Matching Method for Achieving Balance in Observational Studies. *Review of Economics and Statistics*.

Doucouliagos C. (1995) Worker participation and productivity in labor-managed and participatory capitalist firms: A meta-analysis. *Industrial and Labor Relations Review* 49: 58-77.

Eamets R and Masso J. (2005) The Paradox of the Baltic States: Labour Market Flexibility but Protected Workers? *European Journal of Industrial Relations* 11: 71-90.

Eurofound. (2007) *Financial participation of employees in the European Union: Much ado about nothing?*: European Foundation for Improvement of Living and Working Conditions.

Eurofound. (2010) *European Company Survey 2009 Overview,* Dublin: European Foundation for the Improvement of Living and Working Conditions.

Forth J and McNabb R. (2008) Workplace Performance: A Comparison of Subjective and Objective Measures in the 2004 Workplace Employment Relations Survey. *Industrial Relations Journal* 39: 104-123.

Freeman RB, Kruse D and Blasi J. (2009) Labor Practices and Outcomes across Countries: Analysis of a Single Multinational Firm. In: Freeman RB and Shaw KL (eds) *International Differences in the Business Practices and Productivity of Firms.* Chicago: University of Chicago Press.

Gensicke M, Hajek K and Tschersich N. (2009) Extension of the European Company Survey 2009 by financial performance information Munich: TNS Infratest Sozialforschung, on behalf of Eurofound.

Hall P and Soskice D. (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage,* Oxford: Oxford University Press.

Harden EE, Kruse DL and Blasi JR. (2010) Who Has a Better Idea? Innovation, Shared Capitalism, and Human Resource Policies. In: Kruse DL, Freeman RB and Blasi JR (eds) *Shared capitalism at work : employee ownership, profit and gain sharing, and broad-based stock options.* Chicago: The University of Chicago Press, 225-253.

Ichniowski C, Shaw K and Prennushi G. (1997) The Effects of Human Resource Management Practices on Productivity: A Study of Steel Finishing Lines. *American Economic Review* 38: 291-313.

Jones DC. (2004) Ownership and Participation: A Review of the Evidence for Transition Economics. *Advances in the Economic Analysis of Participatory & Labor-Managed Firms* 8: 171-209.

Jones DC, Kalmi P and Makinen M. (2010) Productivity effects of selective and broad-based stock option schemes: Evidence from Finland. *Journal of Productivity Analysis* 33: 67-80.

Kalmi P, Pendleton A and Poutsma E. (2005) Financial paticipation and performance in Europe. *Human Resource Management Journal* 15: 54-67.

Kalmi P, Pendleton A and Poutsma E. (2013) Bargaing regimes, variable pay and financial participation: some survey evidence on pay determination. *International Journal of Human Resource Management* 23: 1643-1659.

Kersley B, Alpin C, Forth J, et al. (2006) *Inside the Workplace: First Findings from the 2004 Workplace Employment Relations Survey,* London: DTI.

Kruse D and Blasi J. (1997) Employee Ownership, Employee Attitudes and Firm Performance National Bureau of Economic Research (NBER).

Kruse DL, Blasi JR and Freeman RB. (2012) Does Linking Worker Pay to Firm Performance Help the Best Firms Do Even Better? *National Bureau of Economic Research Working Paper Series* No. 17745.

Kruse DL, Freeman RB and Blasi JR. (2010) *Shared capitalism at work : employee ownership, profit and gain sharing, and broad-based stock options,* Chicago: The University of Chicago Press.

Laporšek S and Primož D. (2011) The analysis of flexicurity in EU member states. *Transylvanian Review of Administrative Sciences* 32: 125-145.

Levine D and Tyson A. (1990) Participation, productivity and the firm's environment. In: Blinder A (ed) *Paying for Productivity: A Look at the Evidence.* Washington DC: Brookings Institution, 185-237.

Lewis JB and Linzer DA. (2005) Estimating regression models in which the dependent variable is based on estimates. *Political Analysis* 13: 345-364.

MacDuffy J. (1995) Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review* 48: 197-221.

Marsden D and Belfield R. (2010) Institutions and the Management of Human Resources: Incentive Pay Systems in France and Great Britain. *British Journal of Industrial Relations* 48: 235-283.

Nesporova A. (2011) *Employment Recovery and job quality in Eacern Europe and Central Asia,* Geneva: ILO.

Oxera. (2007) Tax-advantage Employee Share Schemes: Analysis of Productivity Effects. *HM Revenue and Customs Rsearch Report No. 33.*

Pendleton A and Poutsma E. (2004) Financial Participation: The Role of Governments and Social Partners. Dublin: European Foundation for the Improvement of Living and Working Conditions.

Pendleton A, Poutsma E, Van Ommeren J, et al. (2001) Employee Share Ownership and Profit Sharing in the European Union. In: Eurofound (ed). Luxembourg.

Pendleton A, Poutsma E, Van Ommeren J, et al. (2003) The incidence and determinants of employee share ownership and profit sharing in Europe. *Advances in the Economic Analysis of Participatory & Labor-Managed Firms (Advances in the Economic Analysis fo Participatory & Labor-Managed Firms, Volume 7).* Emeral Group Publishing Limited, 141-172.

Pendleton A and Robinson A. (2010) Employee Stock Ownership, Involvement, and Productivity: An Interaction-Based Approach. *Industrial and Labor Relations Review* 64: 3-29.

Poutsma E and Braam G. (2012) Financial Participation Plans and Firm Financial Performance: Evidence from a Dutch Longitudinal Panel. *Advances in the Economic Analysis of Participatory & Labor-Managed Firms* 13: 139-183.

Poutsma E, Brewster C and Ligthart P. (2009) Employee Participation and Performance: a cross national study. *IIRA 15th World Congress.*

Poutsma E, Kalmi P and Pendleton A. (2006) The Relationship between Financial Participation and Other Forms of Employee Participation: New Survey Evidence from Europe. *Economic and Industrial Democracy* 27: 637-667.

Robinson A and Wilson N. (2006) Financial Participation and Productivity: Insights from Stochastic Frontier Estimation. *Economic and Industrial Democracy* 27: 609-635.

Rubin DB. (1974) Estimating causal effects of treatments in randomized and nonrandomized studies. *Journal of Educational Psychology* 66: 688-701.

Sekhon JS. (2011) Multivariate and Propensity Score Matching: Software with Automated Balance Optimization: The Matching Package for R. *Journal of Statistical Software* 42: 1-52.

Snijders TAB and Bosker RJ. (2012) *Multilevel analysis: An introduction to basic and advanced multilevel modeling (Second Edition),* London: Sage.

Traxler F, Arrowsmith J, Nergaard K, et al. (2008) Variable Pay and Collective Bargaining: A Cross-National Comparison of the Banking Sector. *Economic and Industrial Democracy* 29: 406–431.

Visser J. (2013) *ICTWSS: Database on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts in 34 countries between 1960 and 2012,* Amsterdam Institute for Advanced Labour Studies (AIAS), University of Amsterdam.

Wall T, D., Michie J, Patterson M, et al. (2004) On the Validity of Subjective Measures of Company Performance. *Personnel Psychology* 57: 95-118.

Western B and Rosenfeld J. (2011) Unions, Norms, and the Rise in U.S. Wage Inequality. *American Sociological Review* 76: 513-537.

TABLES

TABLE 1. Incidence of financial participation across Europe

	% of workplaces with…					% of labour force working in a workplace with…				
	Any PS	100% PS	Any ESO	100% ESO	Any PS or ESO	Any PS	100% PS	Any ESO	100% ESO	Any PS or ESO
Austria	8.0	4.0	2.1	1.0	9.2	19.4	10.7	6.1	3.5	22.2
Belgium	14.6	9.7	11.5	7.4	18.8	15.6	11.2	11.5	8.2	23.2
Bulgaria	9.2	6.5	7.1	6.0	13.5	11.2	7.5	7.1	4.9	14.4
Croatia	4.6	2.1	2.8	2.0	6.3	7.2	2.4	9.7	8.4	12.6
Cyprus	5.6	2.3	3.5	1.1	8.4	9.9	4.9	7.1	2.2	13.5
Czech Rep.	17.4	8.3	1.1	0.9	16.8	22.2	10.5	3.5	2.7	23.7
Denmark	14.1	10.5	13.0	8.9	24.3	15.5	11.8	20.2	14.6	31.9
Estonia	17.8	9.9	2.6	1.4	19	21.1	7.9	5.7	1.6	25.5
Finland	22.8	17.0	5.0	2.0	25.5	33.2	28.4	9.5	2.5	38.6
France	35.0	32.5	4.7	3.5	35.1	57.5	55.6	8.4	6.4	57.8
Germany	14.1	8.3	2.8	2.3	15.6	18.9	12.7	5.8	5.4	22.1
United Kingdom	8.3	5.1	6.2	2.2	12.7	11.0	6.7	10.3	6.3	18.1
Greece	4.4	1.9	1.6	0.2	5.6	8.3	2.5	4.4	1.6	9.7
Hungary	13.8	7.5	3.6	1.9	16.4	14.2	8.1	5.9	3.1	17.9
Ireland	11.3	4.2	6.4	3.5	16.4	16.8	11.4	23.4	19.2	32.9
Italy	3.4	1.5	3.9	1.4	6.0	7.1	3.6	5.4	2.5	10.3
Latvia	10.3	5.1	3.9	1.5	13.5	13.2	5.7	5.4	3.4	17.4
Lithuania	7.9	3.3	3.1	1.2	8.7	15.1	8.1	2.0	0.7	15.9
Luxembourg	9.4	6.8	3.7	2.3	12	9.6	6.0	3.7	2.0	12.3
Macedonia Rep.	15.9	10.8	5.2	3.3	18	16.0	8.5	9.7	7.1	20.1
Malta	4.3	1.5	2.9	0.1	6.3	8.9	1.5	1.1	0.2	9.7
Netherlands	28.0	22.5	5.6	0.7	31	32.7	27.7	8.5	3.0	37.4
Poland	7.4	4.5	4.3	3.8	10.3	10.6	5.6	5.3	3.5	14.0
Portugal	16.3	10.2	-	-	16.3	17.2	10.0	-	-	17.2
Romania	7.3	3.7	11.5	2.6	13.9	10.8	5.8	12.4	4.8	18.0
Slovak Rep.	16.6	8.7	2.7	1.8	16.7	21.7	12.1	2.9	6.2	22.4
Slovenia	13.9	10.0	7.0	4.7	18.6	11.0	8.2	13.0	2.3	21.9
Spain	16.9	11.7	3.4	2.1	18.9	17.4	11.2	5.8	8.1	20.8
Sweden	24.1	18.7	11.2	5.1	29.5	28.9	22.6	14.8	4.1	37.0
Turkey	5.3	2.3	4.8	0.2	9.1	6.3	2.3	3.9	6.9	9.2
Europe as a whole	13.6	9.5	4.6	2.4	16.3	20.1	15.2	7.6	5.1	24.3
Mean (across countries)	12.9	8.4	5.1	2.6	15.7	17.0	11.0	8.0	5.0	21.6
Coefficient of variation × 100 (across countries)	57.9	82.2	61.7	81.9	47.8	61.4	96.6	63.5	80.9	49.9

Source: European Company Survey 2009.

Notes: Private sector establishments with 10 or more employees; estimates weighted using appropriate survey weights. PS = profit-sharing at establishment; ESO = employee share-ownership at establishment.

TABLE 2. Financial participation and APEs of reaching above average relative labour productivity

	No workplace controls (1)	Workplace controls (FE) (2)	Workplace controls (RE) (3)	Matching (ATT) (4)
Panel A: Incidence				
Profit-sharing	.0865***	.0655***	.0445***	.0608***
	(.02166)	(.0159)	(.0110)	
Share-ownership	.0250	.0021	.0070	.0059
	(.0176)	(.0217)	(.0162)	
Pseudo-R^2 / ICC	.0290	0.119	.030	
N	16,141	16,141	16,141	16,141
Panel B: Coverage				
Profit-sharing (ref. none)				
Specific categories	.0716***	.0329	.0479	.0084
	(.0135)	(.0275)	(.0277)	
100% coverage	.0953***	.0829***	.0418***	.0631***
	(.0297)	(.0205)	(.0131)	
Employee share-ownership (ref. none)				
Specific categories	.0602	.0297	-.0150	.0248
	(.0314)	(.0287)	(.0236)	
100% coverage	-.0111	-.0253	.0239	-.0724
	(.0311)	(.0331)	(.0212)	
Pseudo-R^2 / ICC	.029	.119	.034	
N	16,114	16,114	16,114	16,114

Source: European Company Survey 2009.

Notes: Columns 1-3 use country fixed effects (29 dummies) and industry fixed effects (5 dummies) with a standard error correcting procedure, clustering on country. Column 3 specifies country effects as random variables and financial participation as random coefficients. Column 4 uses genetic matching to match workplaces to calculate the average effect of being treated on the treated (ATT) i.e. the difference in mean productivity between workplaces that make use of financial participation and the counterfactual productivity if they had not. Matching is based on all the variables listed below in addition to country and industry. ICC refers to the intra-class correlation coefficient which can be interpreted as the variation across countries.

Workplace controls: Economic situation of establishment (5 dummies), employment growth (3 dummies), productivity growth (4 dummies), recent organisational change (5 dummies), proportion temporary workers (3 dummies), majority foreign-owned dummy, proportion part-time (7 dummies), per cent female (7 dummies), workplace size (5 dummies), proportion highly-skilled (3 dummies), teamworking important dummy, presence of self-managed teams dummy, JCC dummy, union presence dummy, collective pay agreement level (3 dummies), individual performance-related pay dummy, group performance-related pay dummy, training to perform new tasks dummy, training needs checked periodically dummy, proportion entitled to flexible working (4 dummies). Standard errors in parentheses.

Statistical significance: * p <.05; ** p<.01; *** p<.001

TABLE 3. Rosumbaum sensitivity analysis of 100% profit-sharing ATT

Gamma value	Lower bound *p*-value	Upper bound *p*-value
1.0	.000	.001
1.1	.000	.011
1.2	.000	.025
1.3	.000	.033
1.4	.000	.078
1.5	.000	.104

TABLE 4. Country-level factors and the effect size of profit-sharing

	Specific categories profit-sharing				100% profit-sharing coverage			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Country-level profit-sharing	.0258			.0313	.0074			.0144
	(.0319)			(.0317)	(.0249)			(.0294)
Collective bargaining coverage		-.0731**		-.0621**		-.0148		-.0287
		(.0291)		(.0307)		(.0278)		(.0334)
Employment protection legislation			.0113	.0258			.0113	.0154
			(.0236)	(.0315)			(.0293)	(.0305)
Adjusted R^2	.024	.190	.001	.216	.003	.019	.006	.039
N	29	29	29	29	29	29	29	29

Source: European Company Survey 2009.
Notes: APEs obtained from a two-stage regression, see text. Standard errors in parentheses.
Statistical significance: * p <.05; ** p<.01; *** p<.001

TABLE 5. Country-level factors and the effect size of employee share-ownership

	Specific categories employee share-ownership				100% employee share-ownership coverage			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Country-level employee share-ownership	.0585			.0383	-.0344			-.0296
	(.0298)			(.0314)	(.0211)			(.0224)
Collective bargaining coverage		.0242		.0187		.0495**		.0579*
		(.0347)		(.0326)		(.0170)		(.0294)
Employment protection legislation			-.0135	-.0128			.0135	-.0619
			(.0308)	(.0276)			(.0292)	(.0332)
Adjusted R^2	.248	.019	.008	.283	.099	.239	.008	.353
N	29	29	29	29	29	29	29	29

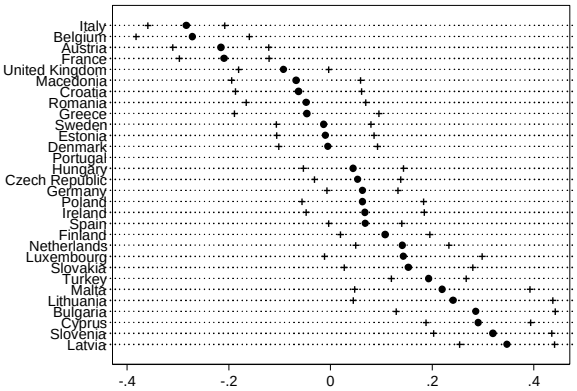
Source: European Company Survey 2009.
Notes: APEs obtained from a two-stage regression, see text. Standard errors in parentheses.
Statistical significance: * p <.05; ** p<.01; *** p<.001

FIGURES

FIGURE 1. Dispersion in APEs for profit-sharing and employee share-ownership across countries of achieving "better" or "a lot better" labour productivity

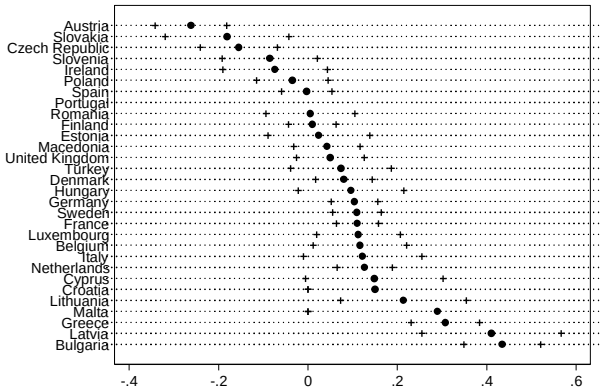
Panel A. Profit-sharing

Specific categories



Mean (coefficient of variation) of APEs: .051 (3.356).

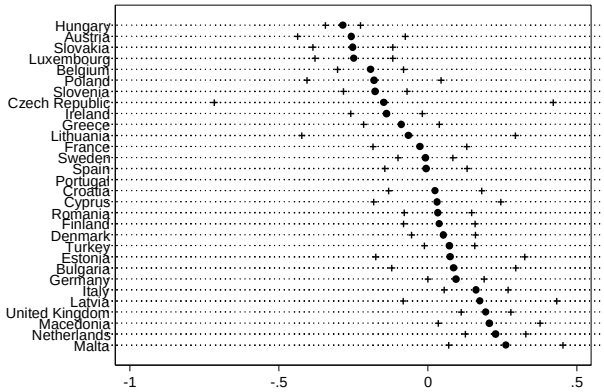
100% coverage



Mean (coefficient of variation) of APEs: .081 (1.947).

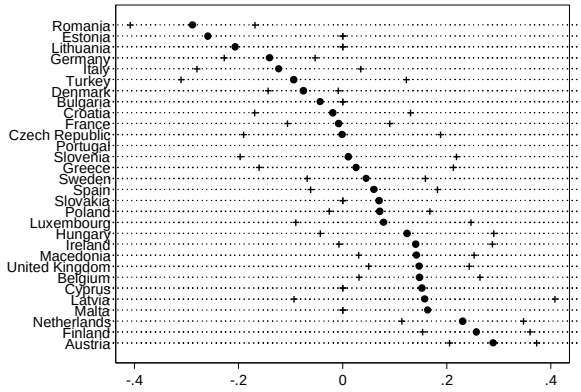
Panel B. Employee share-ownership

Specific categories



Mean (coefficient of variation) of APEs: -.012 (13.524).

100% coverage



Mean (coefficient of variation) of APEs: .037 (4.147).

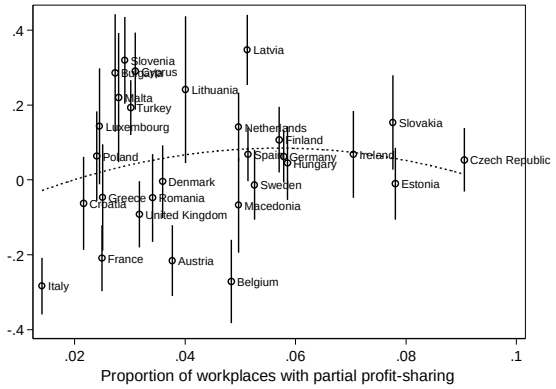
Source: European Company Survey 2009.

Notes: Dots are Average Partial Effects (APEs) obtained from within-country logit regressions with controls. Controls listed in notes under Table 2. Plus signs are 95% confidence intervals.

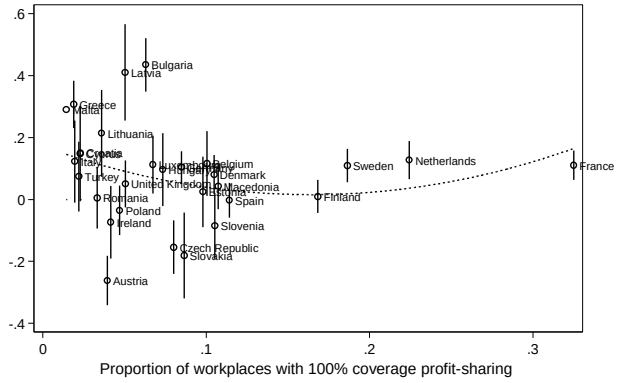
FIGURE 2. Variation in APEs of profit-sharing on achieving “better” or “a lot better” labour productivity

Panel A. Country-level support

Specific categories

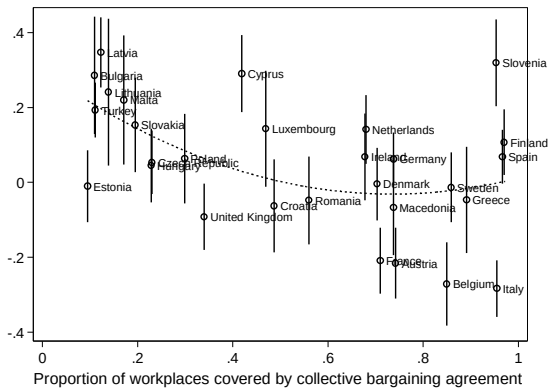


100% coverage

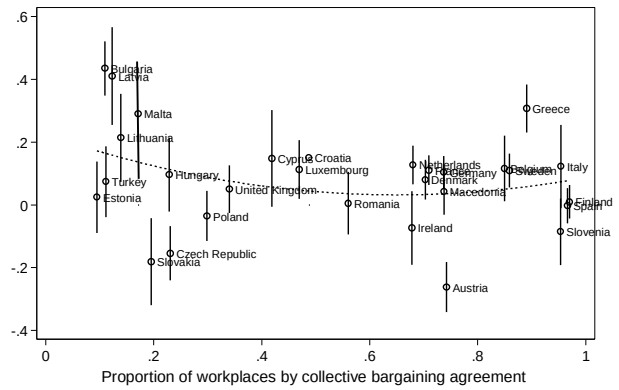


Panel B. Collective bargaining coverage

Specific categories

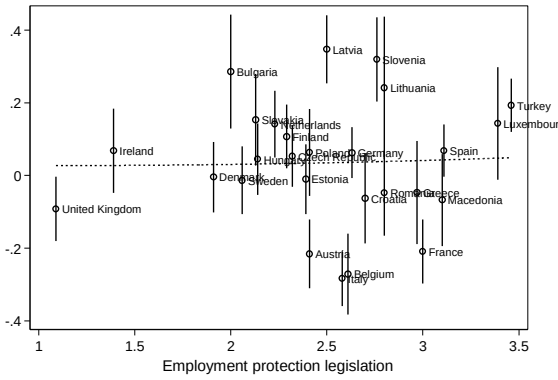


100% coverage

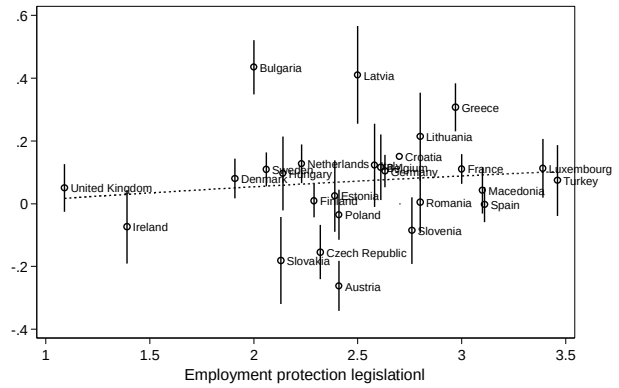


Panel C. Employment protection legislation

Specific categories



100% coverage



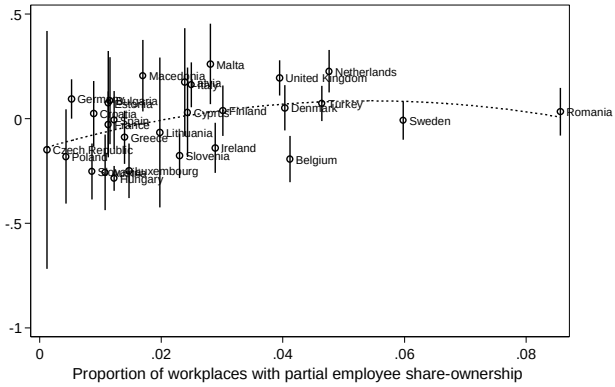
Source: European Company Survey 2009.

Notes: Dots are Average Partial Effects (APEs) obtained from within-country logit regressions with controls. Controls listed in notes under Table 2. Vertical lines are 95% confidence intervals.

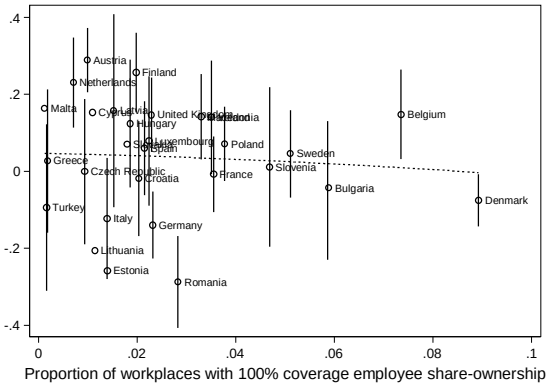
FIGURE 3. Variation in APEs of employee share-ownership on achieving "better" or "a lot better" labour productivity

Panel A. Country-level support

Specific categories

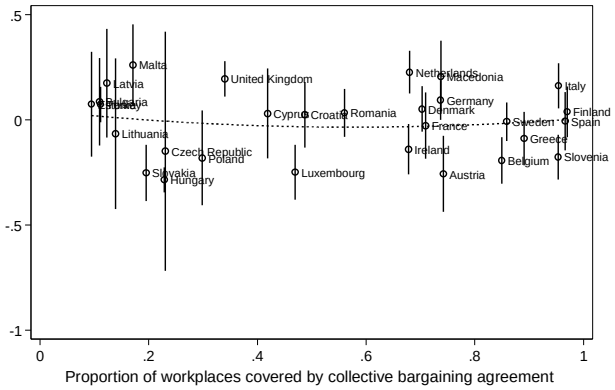


100% coverage

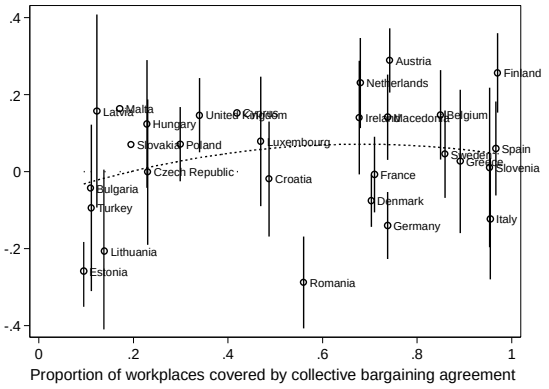


Panel B. Collective bargaining coverage

Specific categories

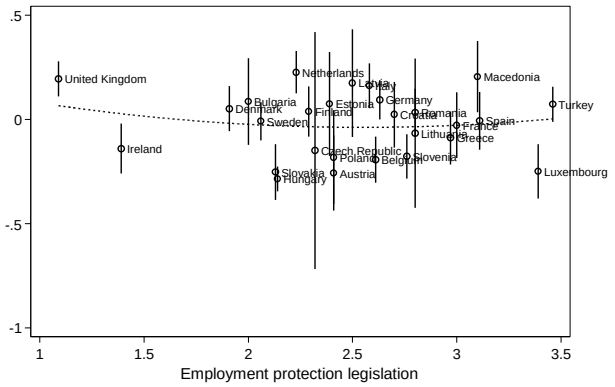


100% coverage

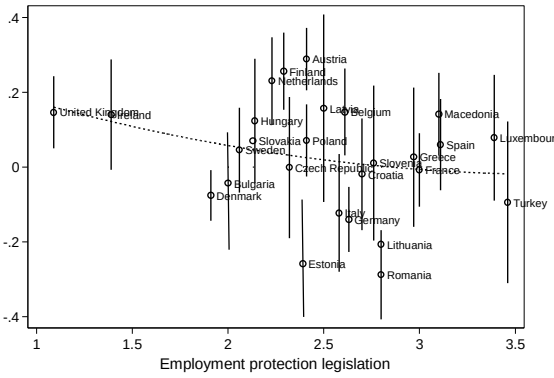


Panel C. Employment protection legislation

Specific categories



100% coverage



Source: European Company Survey 2009.

Notes: Dots are Average Partial Effects (APEs) obtained from within-country logit regressions with controls. Controls listed in notes under Table 2. Vertical lines are 95% confidence intervals.

APPENDIX

TABLE A1. Definition of key variables

Variable name	Survey question	Coding	Mean (SD)
Dependent variable			
Labour productivity	Compared with other establishments in the same sector of activity, how would you assess the labour productivity in your establishment? Is it a lot better, somewhat better, about average, or below average for this sector?	First two categories = 1; latter two categories = 0	.49 (.50)
Financial participation variables			
Profit-sharing	Is there any profit sharing scheme offered at this establishment?	1 = yes; 0 = no	See Table 1
Profit-sharing coverage	Is this offered to all employees of your regular workforce or is it offered to employees in specific positions only?	1 = not offered; 2 = specific categories; only 3 = all employees	See Table 1
Employee share-ownership	Is there any share-ownership scheme offered in this establishment?	1 = yes; 0 = no	See Table 1
Employee share-ownership coverage	Is this offered to all employees of your regular workforce or is it offered to employees in specific positions only?	1 = not offered; 2 = specific categories; only 3 = all employees	See Table 1
Workplace health controls			
Economic situation	How would you rate the economic situation of this establishment? Is it very good, quite good, neither good nor bad, quite bad, or very bad?	5 categories, reverse coded.	3.51 (.89)
Labour productivity growth	And if you compare your establishment's labour productivity to the situation 3 years ago. Has it increased considerably, has it slightly increased, has it remained about the same, or has it decreased since then?	4 categories, reverse coded	2.62 (.99)
Employment growth	Has the total number of employees in your establishment increased, decreased, or stayed about the same over the past 3 years?	1 = decreased; 2 = stayed same; 3 = increased	2.07 (.79)

TABLE A2. Financial participation and above average relative labour productivity (full results)

	Incidence	Coverage
	(1)	(2)
Profit-sharing	.0655***	
	(.0159)	
Share-ownership	.0021	
	(.0217)	
Profit-sharing: Specific categories		.0329
		(.0275)
Profit-sharing: 100% coverage		.0829***
		(.0205)
Share-ownership: Specific categories		.0297
		(.0287)
Share-ownership: 100% coverage		-.0253
		(.0331)
Economic situation good or very good	.0417	.0440
	(.0665)	(.0655)
Productivity slightly increased or increased considerably	.0404*	.0410*
	(.0269)	(.0269)
Increase in employment	.0189	.0192
	(.0290)	(.0289)
Workplace climate is good or very good	.1515***	.1515***
	(.0353)	(.0361)
High absenteeism	.0417	.0418
	(.0491)	(.0490)
HR problems	-.0156	-.0156
	(.0096)	(.0097)
Workplace size (ref. 10-19)		
20 – 49	.0080	.0080
	(.0130)	(.0132)
50 – 249	-.0187	-.0183
	(.0276)	(.0274)
250 – 499	.0234	.0236
	(.0209)	(.0207)
500+	.0200	.0199
	(.0308)	(.0302)
Proportion of skilled workers (ref. none)		
<49%	-.0169	-.0166
	(.0146)	(.0144)
>40%	.0509**	.0509**
	(.0168)	(.0166)
Presence of teamworking	.1030***	.1032***
	(.0230)	(.0230)
Presence of self-managed teams	.0202	.0208
	(.0128)	(.0130)
JCC	.0065	.0059
	(.0154)	(.0151)
Union presence	-.0679*	-.0678*
	(.0343)	(.0338)
Collective agreement	.0396***	.0387***
	(.0102)	(.0101)
Some group pay	.0114	.0125
	(.0148)	(.0142)
Some individual PRP	.0247	.0247*
	(.0127)	(.0126)
Training checked regularly	.0056	.0052
	(.0119)	(.0121)
Training to do new tasks	-.0026	-.0018
	(.0105)	(.0108)
Flexible working	.0138	.0135
	(.0179)	(.0179)
Some temporary workers	-.0104	-.0102
	(.0143)	(.0143)
Foreign-owned	.0360*	.0369*
	(.0150)	(.0147)
Part-time workers	.0061	.0062
	(.0205)	(.0202)
Majority female workers	.0365	.0358
	(.0297)	(.0299)
Recent organisational change	.0234*	.0233*
	(.0091)	(.0091)

Source: European Company Survey 2009.
Notes: Average Partial Effects (APEs) obtained from logit regressions with controls and country dummies. Controls listed in notes under Table 2. Standard errors in parentheses.
Statistical significance: * p <.05; ** p<.01; *** p<.001

TABLE A3. APEs of financial participation and above average relative labour productivity by country

Country	Profit-sharing		Employee share-ownership	
	Specific categories	100% coverage	Specific categories	100% coverage
Austria	-0.216*	-0.262**	-0.257	0.289**
	(0.094)	(0.080)	(0.181)	(0.083)
Belgium	-0.271*	0.116	-0.192	0.147
	(0.112)	(0.105)	(0.111)	(0.116)
Bulgaria	0.286	0.435***	0.087	-0.043
	(0.157)	(0.086)	(0.208)	(0.043)
Croatia	-0.063	0.150	0.025	-0.019
	(0.124)	(0.981)	(0.156)	(0.150)
Cyprus	0.291*	0.148	0.031	0.152
	(0.103)	(0.154)	(0.213)	(0.174)
Czech Republic	0.053	-0.154	-0.148	-0.001
	(0.085)	(0.086)	(0.569)	(0.189)
Denmark	-0.005	0.080	0.052	-0.076
	(0.097)	(0.063)	(0.108)	(0.068)
Estonia	-0.010	0.024	0.075	-0.259**
	(0.096)	(0.114)	(0.250)	(0.080)
Finland	0.107	0.010	0.038	0.257*
	(0.088)	(0.053)	(0.120)	(0.103)
France	-0.209*	0.111*	-0.027	-0.008
	(0.088)	(0.047)	(0.157)	(0.098)
United Kingdom	-0.092	0.050	0.195*	0.147
	(0.088)	(0.076)	(0.084)	(0.097)
Germany	0.063	0.104	0.094	-0.140
	(0.070)	(0.052)	(0.094)	(0.087)
Greece	-0.047	0.307***	-0.089	0.026
	(0.142)	(0.076)	(0.127)	(0.186)
Hungary	0.045	0.096	-0.285***	0.124
	(0.098)	(0.118)	(0.059)	(0.166)
Ireland	0.068	-0.074	-0.139	0.140
	(0.116)	(0.117)	(0.120)	(0.147)
Italy	-0.283**	0.122	0.161	-0.123
	(0.075)	(0.132)	(0.107)	(0.157)
Latvia	0.347**	0.410*	0.175	0.157
	(0.093)	(0.156)	(0.258)	(0.251)
Lithuania	0.241	0.214	-0.065	-0.206
	(0.196)	(0.141)	(0.358)	(0.175)
Luxembourg	0.143	0.113	-0.249	0.078
	(0.155)	(0.093)	(0.131)	(0.168)
Macedonia Rep.	-0.068	0.043	0.206	0.141
	(0.127)	(0.074)	(0.171)	(0.111)
Malta	0.220	0.290	0.262	0.164
	(0.172)	(0.785)	(0.192)	(0.191)
Netherlands	0.141	0.127	0.227*	0.230
	(0.092)	(0.062)	(0.101)	(0.117)
Poland	0.063	-0.035	-0.181	0.071
	(0.120)	(0.080)	(0.225)	(0.097)
Romania	-0.048	0.005	0.033	-0.288*
	(0.117)	(0.100)	(0.113)	(0.119)
Slovakia	0.153	-0.181	-0.252	0.070
	(0.126)	(0.139)	(0.134)	(0.181)
Slovenia	0.319*	-0.086	-0.177	0.011
	(0.116)	(0.106)	(0.106)	(0.207)
Spain	0.068	-0.003	-0.006	0.060
	(0.072)	(0.056)	(0.138)	(0.122)
Sweden	-0.013	0.109	-0.008	0.045
	(0.093)	(0.054)	(0.092)	(0.113)
Turkey	0.193*	0.074	0.073	-0.094
	(0.073)	(0.113)	(0.084)	(0.216)

Source: European Company Survey 2009.

Notes: Average Partial Effects (APEs) obtained from within-country logit regressions with controls. Controls listed in notes under Table 2. Standard errors in parentheses.

Statistical significance: * p <.05; ** p<.01; *** p<.001