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Agenda

Advancing economics in business

# Sharing the wealth: can employee share schemes improve company performance?

**Employee share schemes can be used to incentivise employees to align their efforts with those of company owners, and thereby encourage them to work more productively. Governments are also interested in such schemes as a way of improving productivity in the economy, and might be tempted to intervene by granting tax relief or other subsidies to encourage participation. Do share schemes work, and are the benefits of increased productivity large enough to justify costs to taxpayers?**

How can the owners of firms encourage employees to work in their interest? One answer is to give employees a share in the company and thereby make part of their remuneration dependent on firm performance. In theory, employee share schemes give employees a vested interest in the company they work for, incentivising them to work towards the same objectives as the owners, increase efforts, and deliver performance gains for the company overall. Indeed, theories of how labour markets operate suggest that employees may work less productively as a group if they perceive that the firm that they work for is making healthy profits and yet is not sharing these gains with the workforce—even in sectors where formal trade union bargaining does not exist. Thus there may be microeconomic benefits, at the firm level, of 'sharing the wealth'.

There may also be macroeconomic benefits. Governments are interested in such share schemes because they might be associated with increased productivity and employment in the economy as a whole. If share schemes are in the public interest, there may be a case for public intervention to encourage their take-up—eg, through granting tax benefits. However, such intervention would only seem appropriate from an economic point of view if the cost of these schemes, in terms of forgone tax revenue and administrative costs, is less than the net benefits to the economy from improved productivity.[1]

Drawing on an Oxera study for the UK's tax collection agency, HM Revenue & Customs (HMRC), on UK employee share schemes,[2] this article examines why governments might want to subsidise share schemes, whether schemes (and, in particular, government-subsidised schemes) actually increase productivity, and what factors may determine the effectiveness of share schemes.

## The case for tax benefits

HMRC has been investigating whether government intervention is appropriate to promote the take-up of employee share schemes. Share schemes differ, and the types of support depend on the particular scheme in question. Typically, the advantage to the employee is that government-supported schemes offer income tax or national insurance relief, although capital gains tax is incurred if shares are subsequently sold. Benefits may also accrue to the employer in the form of lower employer national insurance contributions and corporate tax reductions.

The total cost of the tax-advantaged schemes to the Treasury was estimated at around £800m per annum in tax and national insurance relief in 2002/03.[3] Despite this, such tax incentives were deemed warranted by government because it was considered that share schemes are associated with increased productivity and employment in the firms concerned. Indeed, employee share schemes have formed part of the government's wider policies aimed at promoting greater productivity and reducing the 'productivity gap' between the UK and other countries.

In its 1998 consultation on proposals to introduce new share schemes, the government set out the economic case for extending employee share ownership:

> Employee share ownership offers the prospect of bridging the gap between employees and

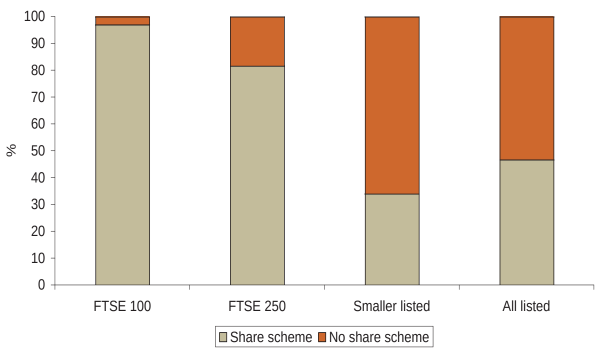
This article is based on the Oxera report 'Tax-advantaged Employee Share Schemes: Analysis of Productivity Effects', prepared for HM Revenue & Customs, August 2007. Available at www.oxera.com.

> shareholders, to the long-term benefit of employees, managers, and outside investors. By aligning more closely the interests of the workforce and the owners of the company, employee ownership can help increase cooperation. Over time, employees with a stake in the business have an incentive to contribute more actively to the development of the business of raising productivity. If the majority of employees have such an ownership stake, then individual efforts may become mutually reinforcing, and employees have an interest in the work of their colleagues.
>
> Once they have become shareholders, employees are more likely to feel greater commitment to the company for which they work. This in turn can help companies in their recruitment and retention, and enable them to obtain a better return from their investment in employee training. Finally, employees who are also shareholders may better understand the risks faced by the company and its investors, which in turn can encourage recognition of the case for pay responsibility.[4]

This led to two new share schemes—the Share Incentive Plan and Enterprise Management Incentive—which were introduced in the Finance Act 2000, either to phase out (in the case of the Approved Profit Sharing scheme) or complement (in the case of the Save as You Earn share scheme and the Company Share Option Plan) existing schemes. The new schemes were introduced to promote wider take-up of performance-sharing, spreading the benefits to more employees in more companies. Indeed, by 2003, more than 6,070 companies had at least one tax-advantaged share scheme in place. Take-up is concentrated among listed firms, particularly the larger ones—as shown in Figure 1, 97% (82%) of FTSE 100 (FTSE 250) companies having at least one scheme in place.[5]

However, if schemes do indeed enhance productivity, why would firms not readily pursue them anyway? Put another way, why would tax advantages be required, given that firms would find it in their interest to implement such schemes even in the absence of government support?[6]

**Figure 1 Companies with tax-advantaged employee share schemes, April 2003**




Source: Oxera analysis of HMRC data.

In this regard, the extra benefit of government support is more likely when it is targeted at cases involving 'market failures'. In this vein, government intervention may be justified if the take-up is deemed sub-optimal among firms, or sub-sets of firms, due to particular issues that hinder the efficient operation of the market. For example, large companies may have sufficient capacity to administer and effectively implement share schemes themselves, and may not warrant government support. However, smaller—particularly unlisted—companies with fewer resources, may find the costs of introducing share schemes too high, and may not do so unless they receive some form of tax advantage.

## Factors influencing employee share scheme effectiveness

Whether schemes are effective in improving performance depends in part on their design. It also depends on the characteristics of both the firms implementing the schemes and the employees to which they are offered, as well as the circumstances under which the schemes are implemented.

### Employee characteristics

The more risk-averse employees are, the less they will value the benefits of a share scheme offered to them by their employer (which provides for returns in the far and uncertain future) compared with a fixed-wage benefit ('here and now'). Therefore, the expected reward of an employment contract with variable remuneration linked to company performance may need to be greater for those employees than the rewards under a fixed-wage contract.

The less effort-averse employees are, and the less they dislike work, the higher the optimal profit-sharing rate. Such employees will be less likely to prefer fixed remuneration alone as a key source of income, and instead will be more willing to have remuneration systems based on variable performance-based arrangements, which allow them to take a share in the upside of company performance.

### Firm characteristics

Firms may be more likely to implement shared-compensation schemes if the nature of their activity implies that, when incentivised, employees can have a significant effect on output. Put another way, there is little point in subjecting individuals to incentives in areas of performance over which they exert little control. This is why such schemes are often targeted at relatively senior managers.

The analysis of UK share schemes by industry sector reveals that around 80% of all share schemes are concentrated in four broad sectors (manufacturing; real estate, renting and business activities; wholesale and retail trade; and financial intermediation). When taking into account the total size of each industry, companies belonging to the electricity, gas and water supply, mining and quarrying, financial intermediation, and manufacturing sectors are shown to be most likely to operate a share scheme.

If a firm is listed it is much easier for participating employees to monitor profits and to see the value of their shares, and to opt in or out of the share scheme by buying and selling their share options. This suggests that both participation and effectiveness of share schemes may be greater in listed firms. The analysis of UK share schemes shows that schemes are indeed concentrated among listed firms. On average, across all industries and years examined, 36% of companies with schemes are listed. The number of listed companies with a scheme has increased over time to almost 50% in 2001/02. Between 38% (mining and quarrying) and 74% (manufacturing) of all listed companies across industries operate a share scheme.

### The free-rider problem

One criticism of profit-sharing schemes is that group incentives, as opposed to individual performance incentives (such as higher wages or bonuses for good performers), may be an inefficient way of motivating individuals. For example, under a group performance profit-sharing scheme with ten employees, the additional effort of an individual worker results in the award of a 10% share of profits for that worker. The financial reward for an individual worker's extra effort decreases as the number of employees participating in the scheme increases. Consequently, employees may choose not to make additional effort, and instead free-ride on the contributions of other employees.

### Firm size

The relationship between firm size and scheme effectiveness could go either way. Larger firms are more likely to have a dedicated human resources (HR) team, and HR managers in larger firms may be more experienced in employee relations and, therefore, better placed to coordinate profit sharing with other policies. However, if free-riding behaviour is prevalent, schemes may be more effective in smaller firms where the results of individuals' efforts are more easily observed.

Oxera's analysis of UK share schemes indicates that, in practice, larger companies are more likely to operate schemes and are also more likely to operate multiple schemes.

### Market conditions

Share schemes may fail to correctly link employee effort with reward in certain instances. For example, where the prevailing economic conditions (such as a recession) mean that the value of shares is falling, and where this is unrelated to the performance of the particular firm, employees may not perceive the benefit of their efforts. In addition, volatility in financial markets may make participation in share schemes relatively risky compared with wages.

In this regard, Oxera's analysis of UK share schemes indicates that companies are indeed more likely to introduce schemes under favourable economic conditions.

## Do employee share schemes increase productivity?

The above has considered the willingness or otherwise of different types of firm, at the micro level, to implement share schemes. In some cases share schemes may not make sense, but in others market failures may hinder the introduction of schemes (eg, smaller firms lacking in scale). Arguably, intervention should be targeted at the latter cases.

However, intervention would also be justifiable only if share schemes in that particular target group of companies improved performance at the macro level. In order to test whether employee share schemes actually increase productivity, the HMRC database of existing share schemes of UK companies was merged with company financial accounts data available from the FAME (Financial Analysis Made Easy) database. This generated a dataset containing information about whether and when a company has implemented a share scheme, the type of scheme implemented, and detailed information about the financial and other characteristics of companies.

Unlike previous studies that have focused on UK manufacturing or listed companies, the dataset allowed for a comprehensive analysis of the effect of share schemes on the UK economy, covering companies in all industry sectors listed on a UK stock market plus a large number of unlisted companies. The dataset held a panel of 7,633 companies over seven years, with an average of three years of data for each company.

The analysis was undertaken using panel data econometric techniques,[7] controlling for the characteristics of firms and the economic environment, to estimate the effect of share schemes on productivity. It examined both share schemes that incur a tax advantage and that are supported financially by the government, and those that are not supported by government (ie, non-tax-advantaged).

The main findings of the analysis were that having any type of share scheme increases productivity by around 6.1% in the long run, but that, on average (across the economy as a whole), there appears to be no significant effect from having a tax-advantaged share scheme over and above any other type of share scheme. However, there were positive productivity effects from tax-advantaged schemes in certain industries (eg, manufacturing). The effect of a tax-advantaged share scheme appears to increase as company size increases, with firms only in the upper quartile (ie, those with an annual turnover of greater than £36.3m) experiencing a statistically significant productivity effect.

## Summary

Share schemes in general tend to increase productivity. However, the evidence suggests that, for the economy as a whole, there is no productivity difference between the impact of schemes with a tax benefit and those without. This raises questions regarding whether tax-advantaged schemes are worth the cost for the extra productivity gain—when firms wish to implement share schemes, they often do so anyway in the absence of state support. Nonetheless, there is evidence of the incremental benefit of government support in the case of larger firms, with productivity being higher than it would otherwise have been in the absence of tax advantages.

If a firm is going to implement a share scheme, it is most likely to see positive benefits if it is relatively large or listed, and when individual employees can have a direct impact on the performance of the firm. However, a share scheme's ability to incentivise employees may be negatively affected by a recession or stock market uncertainty.

It is not clear whether subsidising share schemes is a good use of public money, and whether the tax incentives could be better targeted to those firms where positive effects on productivity performance are more likely.

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[1] Employee share schemes may also be seen as consistent with the promotion of other public interest objectives such as the redistribution of income and wealth, since the schemes imply that enterprises share the profit and wealth created with their employees, and the promotion of economic democracy, since the schemes involve employee ownership.
[2] Oxera (2007) 'Tax-advantaged Employee Share Schemes: Analysis of Productivity Effects—Report 2: Productivity Measured Using Gross Value Added', prepared for HM Revenue & Customs, August.
[3] Based on data provided by HM Revenue & Customs.
[4] HM Treasury (1998), 'Consultation on Employee Share Ownership'.
[5] Data from HM Revenue & Customs.
[6] See Dilnot, A., Emmerson, C. and Simpson, H. (2001), 'The IFS Green Budget: January 2001'.
[7] Panel data techniques utilise data both across firm observations and over time.