

Study of the impact of the Enterprise Investment Scheme (EIS) and Venture Capital Trusts (VCTs) on company performance

Executive Summary

Marc Cowling
Peter Bates
Nick Jagger
Gordon Murray (SOBE, University of Exeter)

HM Revenue & Customs Research Report 44

Published by:

INSTITUTE FOR EMPLOYMENT STUDIES

Mantell Building

University of Sussex

Falmer

Brighton BN1 9RF

UK

Tel. + 44 (0) 1273 686751

Fax + 44 (0) 1273 690430

<http://www.employment-studies.co.uk>

Crown Copyright © 2008

Copyright in the typographical arrangement and design rests with the crown. This publication may be reproduced free of charge in any format or medium provided that it is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright with the title and source of the publication specified.

The views expressed in this report are those of the authors' and do not necessarily represent those of HM Revenue & Customs.

Published by HM Revenue & Customs.

www.hmrc.gov.uk

Executive Summary

Background and objectives of the study

The Institute for Employment Studies (IES) was commissioned in early 2007 by HM Revenue & Customs (HMRC) to evaluate econometrically the impact of the Enterprise Investment Scheme (EIS) and Venture Capital Trust scheme (VCT) on recipient companies.

The Government's introduction of the Enterprise Investment Scheme (EIS) and the Venture Capital Trust (VCT) programmes were practical policy responses to a perceived market failure in the provision of sufficient amounts of risk capital for smaller and younger UK companies with growth potential. Accordingly, the purpose of both of these publicly financed schemes is to encourage informal and private (i.e. non-institutional) investors to provide greater sums of seed, start-up and early growth risk capital finance by altering the nature of the risk-return ratio in favour of equity investors.

The aim of policy evaluation is to assess ex post the impacts of EIS and VCT tax relief on the UK economy and whether these interventions have been worthwhile overall. In this context, the present study has sought to ascertain the nature of the benefits of EIS and VCTs by reference to a control group of matched, non-recipient companies, using a panel data approach over the period 1994 to 2005. This report presents new empirical evidence on EIS and VCT drawing on HM Revenue & Customs' own administrative data which was then complemented with financial information. This provided a rich dataset of thousands of relevant companies tracked over a maximum of eleven years thereby allowing a quantitative, and methodologically robust, assessment of the impact of the schemes on recipient company development.

Companies in receipt of EIS and/or VCT support have been assessed in terms of standard criteria of economic and financial performance against matched, non-recipients of these two sources of finance. Outcome measures used in the comparative assessment included: trading performance (profitability and sales); capital structure

(fixed assets, debt gearing, capital formation); factor utilisation (labour productivity); and survival.

In particular, this research has three primary aims:

- to compare the performance of UK companies that have received funding through the EIS and/or VCT schemes¹ against the performance of similarly matched companies that have not received such funding
- to compare the performance of recipient companies dynamically, i.e. before and after receiving initial EIS or VCT investment, and
- to quantify the effect on business performance indicators for each scheme of key variables including, for example, company age, size and sector.

Setting the context for this study

While there is a considerable body of empirically based, evaluation research looking at the impact of publicly supported interventions in the market for small company debt finance, comparatively little evidence is available for *equity* based schemes similarly targeted at smaller and younger companies. Much the same can be said regarding the dearth of broader research looking at the effects of financial structure on the performance of SMEs and particularly young, innovative companies. This present research is thus capable of providing new insights into the relationship between improved access to equity based finance and the subsequent performance of recipient companies when compared to unsupported companies. However, before we review the findings of our econometric analysis, it is pertinent to outline some of the caveats that must be born in mind when considering our results:

- Due to the nature of the dataset used, the impact of other publicly supported schemes which respondent companies may have accessed cannot be examined. This may lead to the estimated effects of EIS and VCT being biased.
- Again, due to the dataset used, many potentially important company characteristics are not available for inclusion in our analysis. For example, we hold no data on the experience and quality of the entrepreneurs involved. These unknown characteristics may influence the demand for equity based finance and/or the inability of a particular company to raise equity through conventional (i.e. unsupported capital market) means. As our estimates of EIS and VCT effects cannot capture these company characteristics, this may also represent an area of potential bias.

¹ Some companies are in receipt of funds through both schemes.

-
- The company accounts data drawn down for both our EIS and VCT recipient companies and our control group from industry databases has substantial variability in terms of missing data across key variables. Databases dealing with small and medium sized enterprise (SME) accounting and financial data are particularly vulnerable to missing or inaccurate information when compared to larger company data. This means that generalising our results to a broader SME population should be done cautiously.
 - Finally, the time-series element of our dataset is too short to permit robust analysis of the nature of causality in the relationships found using appropriate dynamic models.

While we have raised some areas of potential bias resulting from imperfect data, it is difficult to predict to what extent we might expect these factors to bias our results. Nor can we comment on the likely direction of such bias in terms of either raising (or lowering) our estimated effects above (below) their actual effects.

Having sensibly raised some potential limitations which are inherent in such large scale analyses, we can also state that our study has some important advantages over similar evaluations and more general studies on the financing and performance of smaller and younger companies. Our overall confidence in the results is supported by the following factors:

- The HM Revenue & Customs dataset used in our study is unique. It permits us to examine the absolute and relative effects of two equity based schemes across a large number of observations (for some analyses, the number of total observations is approximately 100,000) over a period of time (averaging four to five years).
- As both schemes have broad sectoral coverage and are focused on smaller and younger companies, this study can provide some important insights into a relatively under-researched segment of the UK economy. Most studies concerned with the influence of equity on company performance look at much larger and older companies but less commonly over a significant period of time.
- We use actual recorded performance data in our estimations. This is often found to be superior when compared to survey based, subjectively reported measures.
- Our use of advanced panel data estimation techniques allows us to be more confident statistically that our estimates accurately represent the underlying relationships examined.
- Panel data methods allow the use of more effective econometric techniques to address and control for unobservable company effects. This further increases our confidence in the results.

Key findings²

To examine the comparative impact of EIS and VCT on recipient companies, econometric modelling is required which enables the effect of other extraneous factors to be controlled for. This analysis allows a more robust and precise assessment of the two schemes and their impact. Using panel data analysis, IES identified the following key findings at the aggregate level (ie across all companies).

General Capacity Building

- Investments made under EIS and VCT, but particularly EIS, tended to be associated with general capacity building (growth in fixed assets and employment) and an expansion in sales.
- EIS and VCT were, in general, found to be associated with higher (real) fixed asset formation, (real) sales turnover and employment.
- Company size of EIS and VCT scheme investments was found to be positively related to fixed asset accumulation and employment
- Age of company receiving EIS investments tended to be positively associated with gearing (the ratio of company debt commitments to equity ownership), employment and fixed asset accumulation.

Profitability

- On average, the EIS and VCT schemes generally have little discernible impact on real gross profits or investment, although the latter estimation was problematic for missing data reasons.
- Investments made under EIS and VCT tended to be negatively associated with company profit margins.
- Increasing company size of EIS and VCT recipients was associated with reduced effectiveness of scheme investments as measured by (real) gross profits (and labour productivity).
- The age of company receiving VCT investments tended to enhance employment and profit margins.

Productivity

- The VCT scheme appeared to have no statistical effect on labour productivity.
-

² Some findings are repeated under separate headings to add clarity to this summary.

-
- For EIS only, the scheme was associated with lower gearing and higher labour productivity.
 - Company size of EIS and VCT was negatively associated with labour productivity.

Sector

- Companies operating in multiple sectors (ie having more than one sic code) with EIS investment were associated with higher sales and employment.
- Scheme investments in business services companies were associated with higher fixed asset formation (VCT only) and higher employment.
- In contrast to business services, 'other' service sector companies performed relatively poorly in terms of associations with sales (VCT only) and labour productivity (EIS only).

Age

- Age of the company receiving EIS investments was associated with gearing, employment and fixed asset accumulation.
- Age of company receiving VCT investments tended to enhance both employment and profit margins.

Survival

- Survival rates for EIS and VCT supported companies were lower than those recorded in matched but unsupported companies. However, for companies receiving both EIS and VCT support, survival rates were broadly comparable with those of unsupported companies. However, non-survival is measured imperfectly, and refers to all companies not currently trading which might include genuine failure alongside a host of other reasons.

Comment

Overall, these results indicate that EIS and VCT investments have a positive effect on capacity building in recipient companies. However, in material terms, these effects remain at present very small. There is some additional limited evidence of a profit enhancing effect. However, we also note that both schemes appear to be associated with differentials in performance depending on the size, age and sector of the recipient company.

It is important that these findings are interpreted within the context of the target community of young, growth-orientated small companies in higher risk trades. That general capacity building (i.e. real assets and employment growth) appears a strong

positive consequence of the two schemes (especially EIS) is to be applauded. The purpose of any public scheme is essentially to strengthen the *future* capability of the economy. It is the growth of capacity that is likely to be of more importance than the factors of profitability or productivity for young and growing businesses in the short term.