# THE INFLUENCE OF LOCATION ON THE USE BY SMES OF EXTERNAL ADVICE AND COLLABORATION: DETAILED ECONOMETRIC ESTIMATES

Professor Robert J. Bennett
University of Cambridge
Department of Geography
Downing Place
Cambridge
CB2 3EN

Telephone: 01223 339957
Fax: 01223 333392
E-Mail: rjb7@cus.cam.ac.uk

Dr Paul J. A. Robson
Paul Robson
Centre for Entrepreneurship
Department of Management Studies
University of Aberdeen
Aberdeen AB24 3QY
Scotland

Telephone: 01224 274362
E-Mail: p.j.a.robson@abdn.ac.uk

William J. A. Bratton
University of Cambridge
Department of Geography
Downing Place
Cambridge
CB2 3EN

Telephone: 01223 339957
Fax: 01223 333392
E-Mail: William.Bratton@spectrumsc.co.uk

December 2000

**Abstract**

This paper provides a large scale analysis of the influence of location on the extent of use and impact of external advice and collaboration on small and medium sized enterprises (SMEs) in Britain. The analysis indicates that for *private sector advisors* (accountants, consultants etc) and collaboration with suppliers and customers, the intensity of use does not vary significantly with location in most cases. Only the input of business friends and relatives is strongly locationally constrained. EU Structural Fund status of an area also has few major effects on use of private sector advice. However, the impact of external advice, and the extent of *local* collaboration between similar firms, is influenced by location, with impact generally increasing with the size of business concentration, density and closeness to a business centre; i.e. there are positive effects of urban location and agglomeration economies. For *public sector support agencies* (such as the Small Business Service Business Link, TECs/LECs, enterprise agencies, and also chambers of commerce) the reverse is generally true. Levels of use are locationally influenced but impact is not.

# THE INFLUENCE OF LOCATION ON THE USE BY SMES OF EXTERNAL ADVICE AND COLLABORATION: DETAILED ECONOMETRIC ESTIMATES

## 1. Introduction

This paper assesses the extent, form and location of external advice and collaboration of small and medium sized enterprises (SMEs) in Britain. It focuses on assessing whether urbanization and agglomeration economies influence the role of advice and collaboration and the extent to which peripherality is an important influence.

The scale of external business services has grown very rapidly in all western economies in the last 20 or 30 years, both in terms of the number of firms involved and their employment. This growth may be encouraging locations which are already particularly strong in business services, or have specialist access to the businesses which are experiencing the greatest demand for services; i.e. it may be working in favour of locations with agglomerations of existing technical expertise, or located in proximity to the areas of greatest demand. This has led to recognition of areas within which high concentrations of business services are emerging (see e.g. Marshall, 1988; Daniels and Moulaert, 1991; Keeble and Bryson 1996; Wood et al., 1993; Bennett and Graham, 1998). Such areas may possess advantages for the general development of their economies not only for the clients they service, but also by becoming a rich area for exchange of information or development of innovation between business service firms themselves. Thus, the increasing concentration of service suppliers may encourage further and intensifying concentration in existing centres.

Various theoretical developments suggest that the potential importance of such agglomeration economies derives from a pattern of relationships between businesses that give advantages to urban

locations and other centres where concentrations of businesses exist. Porter (1990, 1998) argues that there are benefits from the comparative advantage of local 'clusters' of business concentration that helps firms to compete. Other authors argue that there are non-linear increasing returns to scale deriving from clustering and concentration (see e.g. Romer, 1986; Krugman, 1993, Martin and Sunley, 1996; Casson, 1997). These theoretical arguments are borne out to some extent in empirical findings of the importance of face-to-face contact in high order business exchanges (see e.g. Pred, 1980; Phelps 1992; Coffey and Bailly, 1992; Scott, 1993; Marshall, 1994; Harrison et al., 1996).

The agglomeration process may also be reinforced by institutional and social relations between firms within localities and regions, developing joint collaboration and networks of both strong and weak ties (Vatne, 1995) or embeddedness and trust relationships (Granovetter, 1985). Thus, benefits of economies of scale and scope may result from networking between business service firms themselves which stimulates strong client-customer networks of trust. Conversely, businesses in more rural or peripheral regions may have more limited potential to develop collaborative arrangements or to call on external inputs (e.g. Keeble, 1993, 1998). For example, O'Farrell and Wood (1998) argue that networking is an important aspect of the success of business service firms located in London and South East England, compared to Scotland. For specialist business services they argue that the close networks of interaction with clients, the concentration of 'home region externalities', and close institutional relations leads to major benefits for the London - South East market compared to more peripheral areas.

Despite recognising the potential importance of such processes, there has been a relatively dispersed approach in previous research that seeks to assess the influence of location on the extent and form of external business relations. Many studies that have been undertaken often tend to control inadequately for the extent to which locational

differences of external links arise from the effect of factors such as firm structure, industry structure, and the role of government schemes and agencies (where the role of grants based on spatial eligibility criteria may have major influence on of the extent of external network development). Thus, although Storey (1994) has argued that location is one of the key influences on the development of SMEs (together with a firm's age, sector, size and ownership structure), it is unclear in applying this conclusion to external relations whether locational effects arise from some specific intrinsic reason of place, or from the variable geographical pattern of internal firm dynamics, industry structure and/or government intervention. A further drawback of many previous studies investigating the influence of location has been that the sample size or the methodological design of the analysis have understandably constrained the dimensions of location that can be assessed, or have limited the range of other influence variables investigated.

This paper briefly reviews the main contributions to the debate about the influence of geographical location on external business relationships, arguing that a multi-faceted view of role of location needs to be developed. It then applies a wide range of locational and other measures to analysis of the external advice and collaboration developed by SMEs in Britain, using the large sample generated from the Cambridge ESRC CBR survey of 1997 (see Cosh and Hughes, 1998). This is one of the largest scale surveys of SMEs undertaken in Britain and its sample size alone allows the influence of a wide range of different locational and other variables to be investigated. A key part of the analysis is to introduce to the CBR survey for the first time a wide range of alternative locational codings which are then evaluated. The main contribution of this paper is therefore to provide a large scale view on the influence of location on external advice and collaboration, whilst controlling for the influence of other factors.

## 2. Previous studies of the influence of location on the use of external advice and collaboration

Many previous survey studies have sought to assess the extent of external services as a function of location. For example, Marshall (1982, Tables 5, 6 and 7) in a study of manufacturing firms in urban centres found statistically significant differences in the extent of external sourcing of insurance, legal, computing and stockmaking. Similarly Oakey and Cooper (1989) and Coe (1998) find strong local purchasing linkages whilst Curran and Blackburn (1994) find 35% of manufacturing firms buying 50% or more of their purchases within 10 miles of their premises.

A further group of survey studies has investigated broad regional differences in types of services used. One intensive study is that by O'Farrell et al. (1992) comparing a matched pairs sample of 425 service firms in Scotland and S.E. England. Although the propensity to externalise differs only slightly between the S.E. (16%) and Scotland (13%), O'Farrell et al. found that there was a much higher and statistically significant internalization in the S.E. than Scotland. Similarly O'Farrell et al. (1993) found that in a parallel sample of 233 manufacturing firms there was a statistically significant difference between the proportions of external services that were 'imported' into the regions (39% in Scotland compared to 30% in the S.E.). Both findings suggest that it is probably differences in local supply conditions that influence these trends, although firm type, firm strategy and the level of sophistication of demand (for example the presence of local 'blue chip' companies) are important demand-side differentiating characteristics for the largest firms (O'Farrell et al., 1992, p. 525; 1993, p. 398).

Another strand of evidence derives from studies of urban-rural shift, which show some differences between urban and rural places in the extent of external links and use of advice. For example, Keeble et al. (1992), in a survey of 1128 firms in urban, accessible rural, and

remote rural areas, demonstrate that rural firms report access to customers and business advice as statistically significant constraints on their development. More detailed results of the same survey in Keeble et al. (1992, Table 7) show availability of staff, proximity to customers and access to business advice or training facilities all to be negative features of the remote rural areas, and in most cases also of accessible rural areas. In total, Keeble et al. (1992, Figure 5.4) demonstrate remote rural areas to be lower users of external advice from all sources, both public and private, with accessible rural areas as usually the highest users and urban as second highest. Similarly Keeble (1998) shows that SMEs have a higher level of collaboration and external use of advice in the SE and in conurbations than in the periphery or more rural areas.

*Counter-findings*

Not all studies have found significant locational differences in demand and supply for external business advice, however. One of the most detailed studies is the stratified random sample of 233 manufacturing firms by O'Farrell et al. (1993). This demonstrates the dominating effect of firm size and service type on externalisation as well as the influence of many other variables including firm age, ownership structure (for independent plants), employment change, production structure and exporting. After controlling for these factors, the O'Farrell et al. study finds only small locational differences between the two regions of Scotland and S.E. England, with Scotland using slightly more external services (12.4%) than the S.E. (10.3%), but the effect is not statistically significant. Moreover, there is little influence of regional differences for the take up of different types of business service. Lack of differences between manufacturing firms in the S.E. and Scotland is also found in a detailed analysis of impact and satisfaction from external services by O'Farrell and Moffat (1995). Comparing these results with O'Farrell et al. (1992), which found strong regional differences for service firms, O'Farrell et al. (1993, p. 398) comment that this is due to the "less sophisticated

service" demand towards more general management consultancy service since no corporate headquarters of major service businesses were included in their 1993 sample. Thus, local industry and firm structure, HQ functions, and size may be the most important determinants of the extent of interregional differences in the use of external advice.

Similarly Peters (1989) in a detailed study comparing firms in Southern and N.W. areas of Britain found few statistically significant differences in firm success, external sourcing or performance. Also Keeble and Bryson (1996, p. 927), using the 1991 Cambridge SBRC survey, found that there were no statistically significant differences in the take up of external advice of private sector services between the four-fold division of the S.E., outer Southern, Industrial Heartland and Periphery. The significant regional differences found in their sample all derive from government schemes, discussed further below. Furthermore, the large scale studies by Keeble using the SBRC (1992) and Cosh and Hughes (1998), adopting a four-fold categorization of 8 conurbations, large towns (over 150,000 population), small towns (10,000-150,000 population), and rural areas (of under 10,000 population), also find no statistically significant differences in the use of external advice for private sector services (although significant spatial differences again exist for government initiatives).

Even stronger negative findings are those by Curran and Blackburn (1994) who find that owner-managers of SMEs tend to have limited and non-extensive networks with little contact with external advisors, low level of use of social or family relationships for business purposes, and draw to a relatively limited extent from business associations (trade, professional and local chambers) or Government business support. Moreover they find that the link of SMEs to their locality has been growing weaker, and is less likely to occur in newer or more rapidly expanding firms. Nor are SMEs strongly tied with larger firms in *local* networks. Curran and Blackburn (1994, p. 116) conclude that the role of locality and local embeddedness has been

greatly exaggerated. In addition Rugman et al. (1995) and Dunning (1993) argue that firms will increasingly seek external relationships to other regions or countries to gain the advantage of those other region's core assets. A survey of 131 predominantly large multinational enterprises shows that both local and foreign locations are used to capture collaborative benefits, essentially as complements to each other (Dunning, 1996). This suggests that firms do not adopt rigid views about localisation and collaboration but seek out the best external links irrespective of location. Similarly, Bryson (1997) finds that only 2% of clients choose their consultants on the basis of location or local availability, whilst Bryson and Daniels (1998) find business consultants predominantly to have 'weak ties' to their clients. In other countries there has similarly been found little or no difference between regions in the use by firms of external advice (e.g. Vatne, 1995).

The findings of these studies suggest that we must be very cautious as yet in concluding that there are major and significant differences between locations in the extent and form of external advice and collaboration as a result of the influence of location *per se*. Rather, differences in externalisation appear more as a result of the differential location of demand, and differences in industrial structure and firm organisation, not of place *per se*. Wood et al. (1993, p. 696) also acknowledge that regional differences mainly reflect the client sectors served, the supply of small business firms, and the approach of different managers/founders in different places in assessments of locational influences.

Those studies which do find significant differences in externalisation, therefore, may be doing so as a result of inadequate controls for the role of other factors, which we investigate further below. Similarly, Peters (1989, p. 333-4) observes that matched pairs methodologies, by selecting pairs matched on the basis of firm's product specifications, may be controlling out the chief structural influences of products, markets and the supply of managerial skills that may be the key

explanatory factors lying behind regional differentiation. Again this suggests the importance of controlling for differences of firm size and industry structure in assessments of locational influences.

*The role of government assistance and support agencies*

A further important complexity is the need to control for the influence of different governmental grant and assistance programs which are geographically defined. The influence of government schemes on the level of use of external advice appears to result chiefly from the eligibility criteria that allow firms in assisted areas to access grant or other supports and preclude or diminish access in non-assisted areas. As to be expected, initiatives targeted on specific areas definitionally all show significant spatial variation for example; the take-up of Rural Development Commission supports (see Keeble et al., 1992; Smallbone et al., 1993; Birley and Westhead, 1993), and level of use of the Northern Ireland activities of LEDU (Barkham et al., 1996).

Similarly assessments covering the 1980s and early 1990s tend to show that SME take-up of government assistance achieved by the DTI Enterprise Initiative did differ significantly between areas; e.g. Keeble and Bryson (1996) found take-up to range from 27.1% in the SE to 38.3% in the industrial heartland and 39.8% in the periphery. Similarly Keeble and Bryson (1996, Table 9) found that take-up of enterprise agency support was also much higher in the periphery (16.9% of firms) than the south east (4.7%), a finding echoed in the CBR 1997 Survey (Keeble, 1998) and in a smaller sample by Smallbone et al. (1993, Table 4). Similar results apply to assistance from the Enterprise Allowance Scheme (Marshall et al. 1993), and to a broad range of consultancy and advisory schemes (Westhead, 1995).

A potentially important conclusion drawn from these studies is that assisted areas may have higher take-up of government initiatives, whether or not they are specifically targeted on these areas. This could be because the resource levels are higher or because firms in such

areas become 'grant takers' or dependent. Because they are eligible for a group of specific schemes they are also made more aware of other supports and externalise more in order to obtain this support. This may arise because the agencies through which they access assisted area schemes act as gateways to a package of other government assistance. Indeed the concept of a 'one stop shop' for such assistance emerged during the 1980s in many assisted areas before it was taken up nationally through the Business Link initiative. However, the studies cited above fail to differentiate fully how much of the increased take-up is due to the targeting and design of the policy initiative. The Enterprise Initiative, for example, was not nationally uniform, but between 1988 and 1993 gave a two thirds subsidy to consultants hired in assisted and urban programme areas compared to 50% in other areas. Similarly enterprise agencies, technology supports and other consultancy schemes have all gained advantage from targeted government spending, EU supports, local government or other initiatives focused on assisted areas.

A major aspect of all of the studies cited is also the extent to which a selection bias has entered. Firms which choose to receive grant aid or other supports may be self-selected, or selected by the agencies, or the analyst, as those most likely to welcome support, or other criteria. Such self-selection or policy-selection is indeed a desired aspect of all policy interventions which are targeted at some firms rather than others. In evaluation of the marketing component of the DTI Enterprise initiative, for example, Wren and Storey (1998) find only small differences between 'treated' and 'untreated' firms, but they find that the differences would be much higher if they did not control for self-selection affects. They conclude (p. 27) that firms "tend to self-select themselves for assistance, and we find that the failure to take this into account severely biases the estimates".

Similarly, those studies that have controlled for firm type between assisted and non-assisted areas find fewer if any geographical contrasts. Thus Birley and Westhead (1993), in a study of 408

entrepreneurs, found few significant geographical differences between the characteristics of the founders in assisted and non-assisted areas, and no significant differences in the sales revenues and dependency on major product lines or service groups, employment change, customer and supplier bases or competitive structures. Where significant differences in external supports occur these focus exclusively on the narrow areas of the number and type of sources of finance (reflecting grant availability, local venture capital availability, tax-free zones or 'soft' support assistance). The overall conclusion, confirmed in Vaessen and Keeble's (1995) larger scale study of the 1991 SBRC (1992) survey, is that similar business activity occurs in all types of environment, and does not depend on local factors.

*Limitations of previous research*

From this review of the previous literature it is clear that there is some empirical evidence to suggest that differences do arise between areas in the extent of use of external advice and collaboration. However, there are also some contradictory empirical results. Those studies that are most credible in finding locational differences suggest that it is differences in demand characteristics, especially locational agglomeration, that are the chief drivers. However, there is also evidence that it is the differences in industry structure and the location of firm types, sectors, organizational structures and inter-firm relationships that influence the extent of external business relationships, rather than the location per se (such as itsperipherality). This conclusion is reinforced by the growing body of research suggesting that firms externalise very broadly, drawing on external assets wherever they are located, which in turn is encouraging greater interregional and international markets in external advice and relationships to develop. This is a trend that is only likely to increase with the continuing development of globalization and electronic communication.

In addition, assessment of the role of government initiatives that influence externalisation suggests that eligibility criteria play a key role; i.e. differences in eligibility and resources between assisted and non-assisted areas are the chief determinants of whether grants, external government advice or other supports are used. There is at best only limited evidence to confirm arguments that firms in assisted areas are greater users of government external advice for reasons other than that it is more available, or more heavily subsidized in these areas.

However, in drawing these conclusions we have noted some central drawbacks of much of the previous research: first, that the samples drawn are often very small; second, that there is considerable inconsistency between samples of the type of firms assessed (especially their size or whether they are startups and early stage, or not) and this limits the breadth of the conclusions that can be drawn; third, there has often been only limited attempts to control for the influence of other features, particularly of firm size and sector structure; fourth, there has frequently been little attempt to control for the possible influence of self-selection and policy-selection bias where public sector roles have been examined. The following analysis seeks to overcome these difficulties, presenting a form of analysis that assesses location whilst controlling for all the main variables that might influence variation in the use of external advice and collaboration.

## 3. Survey and methodology

The following analysis uses the 1997 ESRC CBR survey of SMEs of up to 500 employees. This is a new statistical random survey which has 2547 respondents. It is based on the sampling frame of Dun and Bradstreet and uses a prior telephone contact to check that size and other sampling criteria are satisfied by the randomly selected firms. The sample excludes the self-employed and sole traders, but is drawn from the 1.35 million businesses of 1-500 SMEs that contribute

87.5% of employment and 96.8% of GNP. Survey contact is made by mail with telephone chasing. A 25% response rate was achieved covering the whole of Britain. Tests of non-response bias show this to be a valid database for comparisons of response rates by age, employment numbers, turnover, pre-tax profit and legal status of the firm (Cosh and Hughes, 1998, Appendix). The survey is a stratified random design which covers two broad industrial sectors: (i) manufacturing (58%) and (ii) most sectors of business services (42%). It over-represents larger firms in order to obtain usable sizes of sample for larger SME, high-tech and innovating firms. The final sample strata achieved are 1-9 employees 44%, 10-199 employees 52%, and 200-500 employees 4%. Other details are given in Cosh and Hughes (1998). The stratification is important to the analysis here since it allows adequate sample sizes for a wide range of variables to be investigated. However, because the sample does not fully reflect the whole economy by size and sector, care must be taken in generalizing the conclusions.

The focus of this paper on the use of external advice and collaboration utilizes survey questions that ask respondents to identify each field and source of advice they had used to pursue their business objectives in the previous 3 years, and to rate its impact in meeting their business objectives. Further questions assess external collaboration, defined as formal or informal collaborative partnership arrangements with other organizations. We compare local and national/international collaborations with (i) suppliers, (ii) customers, and (iii) firms in the same line of business.

In the empirical analysis we first examine the influence of location on the use of 13 sources of business advice. Second, we examine locational variation in the impact of business advice from different sources. We then investigate the influence of location on external collaboration. The results at each stage use multivariate statistical estimation based on logit and ordered logit methods. For each stage of the analysis a range of different geographical features of location is

tested whilst controlling for firm type and other influences. This strategy is discussed below.

*Controlling for sources of variation*

A key element of this analysis is to control for the influence of a wide range of other features in order to isolate the influence of locational differences. The main features we include here are: (i) the size of the firm, since this has been shown in many analyses to be a major influence on the extent of external advice and collaboration (e.g. Bennett and Robson, 1999); (ii) exporting, measured by a (0,1) dummy variable; (iii) rate of employment growth over the previous three years; (iv) profitability per employee, as a measure of business success and/or ability to pay for external advice; (v) skill levels within the firm, measured by the proportion of managerial, technologist, scientist, higher professional, technician and lower professional; (vi) innovator/non-innovator, defined by the adoption by the SME of a novel product or process innovation over the previous three years that is not only new to the firm but also new to the industry, (vii) high technology sector, within either manufacturing or services, that satisfies the SIC classification used in other major studies by Butchart (1987) and Keeble (1994); (viii) sector differences, for manufacturing and business services.

For public sector sources of external advice a number of other variables which measure the size, capacity, service types and partner/competitor characteristics of each agent are also included. The variables include (ix) the fee income levels of the public agent; (x) the age of the Business Link in the area; (xi) the number of separate business support outlets/offices in the area; (xii) the number of personal business advisors available locally, (xiii) the number of different business services offered; (xiv) the total number of business support staff; and (xv) dummy variables for England, Scotland and Wales because of the different public support systems in each country.

*Locational characteristics*

A wide range of different locational characteristics have been assessed in earlier studies. Our aim here is to assess the role of each main type of locational classification whilst controlling for the influence of other variables. As summarized in the earlier discussion, these relate to both the demand characteristics of a location (such as the number and type of other businesses in the area); agglomeration and peripherality effects measured by the location of a business relative to other businesses; supply characteristics of where service firms are located; more specific geographical features such as peripherality and rurality; and the eligibility for government assistance. We test fourteen main geographical structures:

(i)  Location in an EU assisted area, defined as objective 1,2 and 5b.

(ii) Location relative to the nearest *local* business centre, measured by distance to the 126 local business centres taken from the classification given in Bennett et al. (1999, Table 3).

(iii) Location relative to the nearest *regional* business centre, measured by distance to the 11 largest centres given in Bennett et al. (1999, Table 3): London, Birmingham, Manchester, Glasgow, Leeds, Liverpool, Edinburgh, Newcastle, Bristol, Nottingham and Sheffield.

(iv) Location relative to general market demand, to assess potential external economies of scale or scope; measured by the *number* of businesses within given distances of 1km, 15km and 50km from the survey respondent.

(v) Local density/agglomeration of businesses, measured by *density* of businesses within distances of 1km, 15km and 50km of the respondent.

(vi) Location relative to general market supply of business service firms, measured by the proportion of business service firms within 1km, 15km and 50km of the respondent.

(vii) Location relative to micro business demand/supply, measured by the proportion of micro business firms (1-9 employees) within 1km, 15km and 50km of the respondent.

(viii) Location relative to SME business demand/supply, measured by the proportion of SMEs (10-200 employees) within 1km, 15km and 50km of the respondent.

(ix) Location relative to large firm demand/supply, measured by the proportion of firms over 200 employees within 1km, 15km and 50km of the respondent.

(x) High technology clustering effects, measured by the proportion of high technology firms within 1km, 15km and 50km of the respondent.

(xi) The effect of public employment spillover of demand/supply, measured by the proportion of employers in Broad Industrial Group 8 (public administion, education, and health) within 1km, 15km and 50km of the respondent.

(xii) Sector effects, measured by the proportion of manufacturing within 1km, 15km and 50km.

(xiii) Urban/rural distinctions, using Keeble's (1993, 1998) classification of rural/peripheral, small towns, large towns and conurbations.

(xiv) TEC cluster type. This classification, developed through cluster analysis of local industrial structures and labour markets by TEC National Council, classifies the TEC areas of England. We add

additional classes for Scotland and Wales. This acts as a joint regional and industrial structure variable in eight groups.

The information for measuring location relative to other businesses in the same area at various distances away from the survey respondent was developed by recoding, to the postcode district level, the CBR survey for the first time. This is then combined with information from the Census of Employment for 1993, at the postcode district level. The 1993 Census is the most recent full census and for the first time it included *all* businesses of one employee and above, and reallocated all multi-site businesses to their actual location of operations. It thus excludes only the self employed and is for the first time fully geographically accurate (see Thomas and Smith, 1997; and Appendix to Bennett et al., 1999).

## 4. Assessment of Locational Influences

The assessment of the role of locational influences on external business advice and collaboration is undertaken below in three sections: (i) sources of advice, and (ii) their impact, and (iii) types of collaborative arrangement. The results are given in Tables 1 to 6. In each of these tables a uniform set of other controls is given using the variables discussed earlier. To simplify the discussion the estimates of these variables are presented in two parts. First summaries of the main locational influences are summarised in Tables 1 to 5. Second, full econometric estimates are reported in the Appendix Tables A1 to A5. The full estimates in the Appendix show that not all of the control variables are significant in all equations. In general the most important are the size of the firm, its sector, its growth and some cases its exporting and innovation record.

When estimating the specific role of the 14 locational influences, each is assessed individually by adding it to the core equation containing the control variables. Only one locational variable is included an any time so that it does not matter in what order the variables are

16

presented. This sequential process is used because most of the geographical codes overlap with each other to a considerable extent thus introducing multi-collinearity which prevents their joint estimation. For example, most rural areas are also eligible for EU structural funds, they are also distant from business centres and concentrated in TEC cluster types 3,7 and 8.

For each geographical feature introduced, the marginal increase in explanatory power is assessed in two ways: first, using the statistical significance of the individual regression coefficient(s); second, using the overall increase in explanatory power. Because we are using logit models to assess the use/non-use, and ordered logit models to assess impact, normal $R^2$ and F tests are not possible. Instead, the criterion used is the percentage of responses correctly classified, for the case of the logit estimates, and the 'goodness of fit' statistics for the ordered logit estimates[1]. In each case the increase in explanatory power is compared with the responses correctly classified using only the control variables (for firm type, industry sector, etc) before the addition of each locational variable. This assessment of the *marginal* contribution of each locational variable to increasing explanatory power is a crucial part of the methodology of this paper.

## 4.1 Use of different sources of external advice

The sources of external advice include all main categories of private sector suppliers, two types of business association (sector and local-based), and the main local or regional government-backed business support bodies (enterprise agencies, TECs, LECs, Business Link (BL) and regional development agencies). These different suppliers cover the range of different types of interaction intensities and contrasts in the environments of trust between client and adivsor expected to be present in the use of external advice.

Table 1 reports the results of assessing the probability of using *private sector advisors*. The results vary considerably by type of source, but

there is little general pattern of geographical influence except for the role of business friends/relatives, which is strongly influenced by location in a business centre, the total local supply/demand of businesses, business service firms, and density of businesses in the vicinity. It appears that the use of accountants, lawyers, banks, customers, suppliers, consultants and trade/professional associations is hardly at all influenced by most locational factors, but chiefly by differences in firm or industry structures. TEC cluster types are relevant, but only for differentiating, from the rural base, London, Birmingham and the SE, which as locations all have positive effects on use levels compared to the rest of the country. EU assisted area status only influences the use of suppliers, possibly because of government subsidies for supply networks.

Comparison of the percentage of cases of use of each source which are correctly classified in the logit model, with those already correctly classified using the control variables alone, shows that the increased explanatory power of the geographical variables in no case is of great significance. The only cases that increase explanatory power by more than 1% are for the use of a lawyer (for the proportion of public administrative employers within 15km), and the TEC cluster types for the case of customers and consultants (in each case because of the influence of specific region effects for London and Birmingham, and Scotland).

Turning to Table 2, the probability is assessed of using *local public sector advisors* and the local chambers of commerce (which although private sector bodies, as they are local, have been included in this table rather than Table 1 to facilitate comparisons). In these estimates control variables are included for national dummies (for England, Scotland and Wales) because of the different policy structures in each case. These are significant in most cases.

Locational influences are generally more important than in Table 1. EU assisted area status now significantly increases use of TECs and

enterprise agencies, but not for use of Business Link (or its Scottish or Welsh equivalents of Business Shop and Business Connect, respectively) and regional development agencies. This indicates that Business Link is acting chiefly as a national system at a local level (a finding echoed in Priest, 1998). Distance to a local business centre is more significant than distance to a regional centre, negatively for chambers, TECs/LECs and enterprise agencies, and positively for regional development agencies (which probably reflects the role of the Rural Development Commission, which is one of the main agencies included in this category and which focuses on rural and peripheral areas).

Locational supply/demand variables chiefly affect the use of chambers and TECs/LECs, and in almost all cases negatively; i.e. as the number of other businesses or proportion of service firms increases, or the number of other firms increases, use of chambers and TECs/LECs reduces, suggesting that these sources to some extent fill a gap where the 'mass' of the local business community is smaller. For local concentrations of business service firms, large firms and high technology firms this same pattern carries over to Business Link. The use of enterprise agencies is affected by only a few geographical variables: strongly positively by being in an EU assisted area (reflecting the subsidies and grants available through enterprise agencies), and negatively for the distance from a local business centre and proportion of high technology firms in the same area. The use of regional development agencies is influenced by most of the geographical variables, in most cases negatively, except for distance from a local or regional business centre, percentage of micro firms, and percentage of local public employment, where it is positive.

The Keeble urban-rural classification, and TEC cluster type variables, are now much more relevant, particularly for the use of chambers, TECs/LECs and regional development agencies from the Keeble and TEC classifications, and also for Business Link for TEC clusters. This confirms the importance of separating the source of external business

advice (public or private) when investigating locational influences. It suggests that most of the previous results found using the Keeble, EU assisted status and TEC cluster type classifications are an artefact of eligibility criteria and public sector decision making influences, not of private sector supply or demand components. Moreover, the significantly greater use levels of these agents seems to be to agglomerations in the conurbations and large towns, not in the peripheral and rural areas as found by Keeble (1993; 1998, Fig. 10.3). This indicates the importance of controlling for sector and other industry characteristics as well as differences in local supplier capacity. When these are controlled for a reverse pattern of findings emerges to that developed from simple cross-tabulations.

The aggregate goodness of fit in Table 2 can also be compared with those cases with no geographical variables included. As in the case of Table 1, the inclusion of geographical variables has only very minor effects on increasing the probability of satifactorily explaining use of advice from any given source. The only case of increasing the explanatory power by greater than 1% is for the reduced use of Business Link with increasing business density, and higher proportions of business firms and high technology firms in the area. Hence, although significant for public sector sources, the influence of location only adds a small, marginal improvement in explanatory power compared to using simple control variables to explain the use of external advice as a result of industry structure, firm type and the characteristics of each supplier of advice.

## 4.2 Impact of different sources of external advice

The impact of business advice is measured in the CBR survey on a five-point scale ranging from 1 - no impact, to 5 - crucial impact. As an ordinal measure the influence of location on its value by respondents is estimated here using an ordered logit model.

20

External business advice, even as defined in our survey as going beyond the delivery of basic information and seeking to meet business objectives, is a fairly broad area of external inputs to a business which can range from fairly modest to crucial impacts. Indeed, the assessments made by respondents in the CBR survey had an average of 2.8, just below 'moderate' (see Bennett and Robson, 1999). The highest impacts were recorded by customers, accountants, business friends/relatives, lawyers and suppliers, which were all above average; between 'moderate' and towards 'important' impact. The lowest impacts were recorded for all public sector suppliers and chambers of commerce.

Table 3 reports the estimates of impact for the *private sector suppliers* of advice. This shows that a much wider range of geographical variables influences impact compared to use levels (Table 1). However, as with use, lawyers, banks, customers, suppliers and consultants show very little influence of geography on impact. The main advisor sources where increasing impact is influenced by geography are for accountants, and business friends. In these cases, location in areas with many businesses, many service firms, large or small firms, and at high density all increase impact.

The converse is to some extent true for trade and professional associations, where distance from a centre is associated with higher impact whilst location in a concentration of other businesses and higher densities is associated with lower impact. Since trade and professional associations are almost all national bodies chiefly located in London, this indicates that their benefits are chiefly felt by those businesses more distant from centres and concentrations of other businesses. Thus they seem to play an important gap filling role.

As with use levels, EU Assisted Area status, the Keeble urban/rural classification, and TEC cluster types offers virtually no explanatory power.

The assessment of impact for *public sector advisors* is shown in Table 4. In this case the sample sizes constrain estimation in some cases[2]. Despite these constraints it is clear that, as for use of external business advice, adviser impact is significantly influenced by geographical factors in only a few cases. Focussing on individual coefficients, it is the impact of chambers of commerce that is chiefly influenced by location across a broad range of criteria: distance to a regional centre (negatively), the local concentration of firms, business service firms, business density, the Keeble urban/rural classification, and TEC cluster types. These results are strongly in line with the influence of location on use (Table 2).

A few locational variables influence the impact of TEC/LEC advice: chiefly local business concentration and density. A few locational variables also influence the impact of enterprise agencies, negatively with concentration and density. The regional development agencies are also associated negatively with the Keeble classification of large towns (compared to the rural category base), again confirming the influence of the Rural Development Commission on distributing support to more peripheral areas.

Overall, however, there is only a small degree of significant influence of location on the impact of public sources of advice, rather less than for the influences of location on the use of external public sector advice.

*4.3 External collaboration*

Collaborative arrangements are assessed here between a business, its customers, its suppliers, and horizontally with other firms in the same line of business. This should offer insight into the relationship between some of the more important roles of inter-firm advice and

other forms of exchange of information, mutual supports, or development of innovation, products and markets. In our analysis we estimate the probability of having such collaborations at the national/international level and at the local level. The results of the logit estimates in each case are shown in Table 5.

*Collaboration with suppliers* at both the international/national and local levels has no significant geographical dimension. Collaboration with suppliers appears to be sought irrespective of the location of the client, on a general basis, with no systematic localization or advantage/disadvantage resulting from location. This reflects a wide body of other literature which suggests that, even for small firms, sourcing can be undertaken on a broad basis, increasingly on a global basis, where the prime considerations are price and quality (e.g. Casson, 1997; Dunning, 1996), although national/international collaboration is strongly influenced by firm size, exporting and growth record (see Appendix, Table A.5). The lack of impact on collaboration of location also fits with other findings on the attempts to develop regional supply networks as a policy initiative by the DTI, which Bennett and Robson (1999) demonstrate to have a low use and poor satisfaction level for the same CBR survey respondents.

*Collaboration with customers* displays a modest role for *local* location effects, but only for local collaboration influenced by a higher proportion of high technology businesses within 1km or 15km increases the chances of collaboration with customers, whilst higher proportions of public sector employment reduce collaboration. This suggest that local customer relations up the supply chain may be particularly relevant to the high-tech sector. However, the total increase in cases correctly classified does not exceed 1% in any situation. The effect of location is therefore minor even in this case.

*Horizontal collaboration* with firms in the same line of business shows a wider range of locational effects. For international/national collaboration, the factors that affect the chances of collaboration all

relate to the composition of the local business community. International/national collaboration is advantaged by a local business population with a large proportion of micro businesses within 1km from the respondent. In contrast, the proportion of larger SMEs (of 10-200 employees) reduces the chances of international/national collaboration. This suggests that such collaboration may in part be a 'push' factor resulting from an relatively lower level of larger SMEs, large firms or manufacturing firms in the immediate area. Moreover, the strength of these effects is in all cases statistically strongest for the business composition measures within 1km, and reduces for business composition at 15km and further away.

For local collaboration with firms in the same line of business more locational variables are significant, but a quite different group from those for international/national horizontal collaboration. The positive factors increasing the chances of local horizontal collaboration are the total size of the local business population, and its density. These positive influences increase the closer the community is defined: they are statistically stronger at 1km than 15km. Indeed the number of businesses within 1km and their density within 1km are the most significant of all features positively related to collaborations. A negative influence on the chances of horizontal collaboration is the distance from a local business centre (which is the expected converse of the concentration and density variables, which show a positive influence).

These results are entirely consistent with prior expectations from Porter (1990, 1998) and the embeddedness literature (e.g. Granovetter, 1985; O'Farrell and Wood, 1998) of the role of 'home regions externalities' and the advantages of local frameworks of trust that allow horizontal relations between similar firms to develop. The surprising finding is how constrained these relationships are to firms in the same line of business, that there is no statistically detectable role of locational influences for collaboration with suppliers, and only limited roles for locational variables affecting the chances of

collaboration with customers. Moreover, where collaboration and partnerships occur, they are stimulated by both 'push' from the local areas as a result of distance from a local business centre, and by 'pull' that stimulates greater collaboration the greater the proportion of micro firms in the locality, the greater the local total number of business and their density, and the greater the proportion of nearby business service firms. This suggests that horizontal collaboration is largely developed to increase production capacity or increase market access. However, the overall importance of locational factors, even for horizontal collaborative relations, is relatively modest. It achieves its chief statistical relevance for the influence of business concentrations and density within 1km. However, no individually significant locational variable increases explanatory power by more than 0.3%.

This interpretation can be taken further by noting the motives behind collaboration. These are analysed for the same survey respondents by Kitson and Wilkinson (1998, Figure 3.2). In a multiple response question, the main motives for collaboration (with percentage of respondents in parentheses) are: to expand the range of expertise (76%), to assist in development of specialist services or products required by customers (70%), to provide access to UK markets (54%), to improve financial or market credibility (49%), to help to retain current customers (46%), to provide access to overseas markets (45%), and to share R & D (36%). Only 26% collaborated to gain access to or spread the costs of new equipment, and 16% to assist in management and staff development. Kitson and Wilkinson interpret these results as firms seeking to gain advantages of economies of scale and scope. The greatest degree of collaboration is between firms in the same line of business (60%), whilst collaboration with customers occurs for 47% of respondents, and collaboration with suppliers for 45% of respondents. Hence, not only does horizontal collaboration with firms in the same line of business have the greatest association with locational factors, it is also the most frequent form of collaboration.

## 5. Conclusion

This paper has sought to develop a broadly-based view of the relevance of location to the extent of use and impact of external business advice and external collaboration between SMEs of 1-500 employees. Whilst other studies also include the self-employed and sole traders, our results do cover the 1.3 million businesses responsible for the vast majority of British GNP and employment. The significance of the paper is to assess if locations are significantly advantaged or disadvantaged and thus whether the development of external relations between firms and their advisors is likely to contribute to increased or decreased unevenness of development. Additionally, conclusions on the significance of location have importance for the form and extent of government support policies for SMEs.

This paper has been able to use the large sample basis of the CBR survey of SMEs to develop an examination of a wide range of locational attributes, whilst controlling for the influence of business size, and sector and a variety of other variables. Summary Tables 1 to 5 are complemented by full econometric estimates in Tables A.1 to A.5.

A particularly important aspect of the methods followed has been assessment of the *marginal* increase in explanation offered by locational factors, once other aspects of the firm and its industry structure have been controlled for. The locational attributes examined include both demand aspects related to the firm and the market in which it is located, as well as supply aspects deriving from location including government policy eligibility. The results are complex because of the wide range of sources of external advice and the variety of external collaboration examined. In effect, this paper combines a separate analysis of 13 external sources of advice and 6 dimensions of external collaboration, each element of which has been

subject to considerable previous research and debate. Despite this complexity, and despite small sample sizes of some sources of advice, the general conclusion that can be drawn is of wide applicability: that *in almost all cases location has only relatively minor marginal explanatory power once the character of the firm and its sector structure have been taken fully into account.*

For the *use of private sector sources* of external advice, only friends and relatives are significantly influenced by a wide range oflocational variables, and to a lesser extent the use of accountants, banks and lawyers (Table 1). Trade and professional associations fill a gap where local clusters of businesses are less developed. EU assisted area status only influences the take-up of advice from suppliers, possibly as a result of public sector subsidies to supply chain development. An increase in the proportion of local public sector employment generally decreases the use of some private sector sources of advice suggesting a minor local 'crowding out' effect. The influence of location relative to regional business centres, and Keeble's urban/rural classification and TEC clusters appear largely irrelevant as influences on use levels.

There is a considerable contrast between the effect of location on the *impact*, compared to the use, of private sector advice sources (Table 3). The marginal increase of explanatory power for advisor impact is considerable as a result of including locational variables in most cases, particularly for TEC cluster types as well as market potential variables. This suggests that whilst location has relatively little influence on market penetration, distance from clusters of similar businesses, and specific types of local economy, do influence the effectiveness of advice. Perhaps this is the result of reduced transaction costs which allow lower costs for intensive advice in larger centres compared to rural areas. This is particularly true for the impact of accountants and friends and relatives. For trade and professional associations, which are normally a national body, generally the converse is true, their higher impact in peripheral areas and locations with small absolute numbers or low density of

businesses, indicates that they may be an important means by which SMEs access advice in remoter areas. As with use, the Keeble urban/rural classification has little explanatory power for private sector sources, but TEC cluster types do differentiate higher impacts for use of banks and business friends chiefly in the larger industrial centres.

These findings generally confirm the results reported in the studies by O'Farrell et al. (1992, 1993), Curran and Blackburn (1994) and others that have found that industry structure and differences in the character of firms by size, sector, skills, etc. account for the main differences in the use of external advice. Fewer studies have been made of impact levels, though Storey (1994) and Keeble's various studies are suggestive of agglomeration effects: of higher impacts received in more urbanised locations. The results here suggest that peripherality does introduce limitations on advice that reduces impact. Because the measures of peripherality chiefly associated with lower impacts are distance from a local business centre, or areas with low densities and small absolute numbers of businesses, we interpret 'peripherality' as a phenomenon leading to less opportunities to gain market access, and lower probabilities of finding clients and suppliers. This has been perhaps best expressed by Casson (1997, p. 45): as the result of negative externalities of information flows and reduced opportunities for inter-business exchanges in smaller markets, individual buyers and sellers have less chance to make useful matches for themselves, but there is also less chance that their opposite numbers can also make a useful match. This reduces the scope for coordination and increases the potential effects and risks resulting from external shocks.

In general, then, our findings support the view that it is the scale and diversity of local market conditions that are important to the level of use, and particularly the impact, of private sector external advice. This is less the result of intensive specific external networks than more general effects of external agglomeration economies. This suggests the usefulness of the cluster concept of Porter (1990, 1998), but less

as a cooperation phenomenon, then as describing the general factor conditions operating in an area. This in turn suggests that the private sector gains increasing returns to scale as a result of agglomeration, with a disproportionate non-linear scale of benefits the larger the cluster and more concentrated the businesses in an area, as argued by Romer (1986), Krugman (1993) and Martin and Sunley (1996).

For *local public sector support bodies*, with which we have included local chambers of commerce as they chiefly operate at a similar level, there are considerable contrasts with the private sector sources. Now use levels are generally strongly influenced by location but impact levels are less so. Although the marginal increases in explanatory power as a result of including locational attributes for use levels is still small and only exceed 1% in two cases, many individual coefficients are significant (Table 2).

The effect of distance to business centres and the role of concentrations of businesses within the local area, using almost all the alternative measures, appear to be significant influences on the use of many agents. This chiefly relates to regional development agencies and mainly reflects the role of the Rural Development Commission in operating to counteract peripherality, but it also characterises the use of TECs/LECs and chambers of commerce, and to a lesser extent Business Link. This indicates that whilst a local focus for business supports increases the accessibility of local support services, the more urban the location, the more that firms are able to find alternative suppliers to the public sector sources. This finding indicates that local public support agencies for SMEs are most relevant to SMEs in the smaller business centres and areas which have more geographically dispersed businesses; i.e. that chambers, TECs/LECs and Business Link, but most of all regional agencies, fill a gap where the mass of the local business community is smaller.

The relevance of the Keeble urban/rural classification and TEC cluster types is confirmed strongly for public sector agents, but the pattern of

use is now the reverse of that found by Keeble et al., (1992) and Keeble (1998): there are *lower levels of use* in the more rural and peripheral areas compared to larger towns and conurbations for chambers, TEC and LECs and regional agencies, not higher levels as previously found from simple cross tabulations. This demonstrates the importance of using multivariate controls for firm type and industry structure before seeking to conclude on the relative role oflocational variables.

The analysis of *collaboration* between businesses generally points in the same direction as the use and impact of business advice. As with the use of advice, the choice of collaboration with suppliers and customers is little affected by location. This confirms theconclusion by Dunning (1993) or Rugman et al. (1995) that firms cooperate in the supply chain through the best external links they can find, irrespective of location. There is, however, a range of locational factors that significantly affects horizontal collaboration between firms 'in the same line of business'. Collaboration is increased by 'pull' factors such as business concentration, density and the local proportion of high technology and business service firms (especially for those within very close proximity - within 1km and 15km). Horizontal collaboration is reduced where the business is further from a local business centre. In terms of the expectations raised by cluster theory (Porter, 1998) or embeddedness (O'Farrell and Wood, 1998), the analysis suggests that it is general locational attributes such as business concentration, density and location close to a local business centre that are important. This suggests, further, that the trust necessary to facilitate and maintain horizontal relations between what are essentially competitor, or potential competitor, firms increases with the level of business concentration and the focus of an area as a 'centre', particularly its proportion of micro and business service firms. However, the total increase in explanatory power from the role of locational factors, is very small, even for horizontal collaboration. This suggests that it is other characteristics, chiefly firm size, innovation, growth and exporting performance, and skill levels, which

chiefly explain collaboration, as indeed they also chiefly explain the extent of use of business advice and its impact.

A further significant finding is that where distance to business centres is of importance on external business relations, it is chiefly distance from a local centre not a regional centre. This indicates that whilst business concentration is clearly important, as indicated by the relevance of many of the locational variables, it is probably more critical that this occurs within a very conveniently located mileau, than one that is particularly focal as a regional centre. This adds a nuance to the interpretation of the possible nonlinear effect of agglomeration economies: that whilst higher concentrations of businesses increases the potential for use and impact of external advice and for horizontal collaboration, once a SME is close to a location with a certain critical mass, the additional advantage of being close to a larger regional centre is less important, or is not important at all (depending on the advice/collaboration sought). The local business centres used in this analysis number 126 and they range down in size to quite small centres: 48% have less than 5000 businesses and 82% have less than 10,000 businesses (excluding the self employed) (Bennett et al, 1999, Table 3). Since 76% of all British businesses are within 17.8km of these centres, only a small minority of businesses are very distant from a local centre. These are chiefly in upland Scotland, central Wales, Cumberland, Northumberland, Lincolnshire, Norfolk, Suffolk, North Devon and North Cornwall. The argument by Bennett et al., (1999), that most of the British economy operates as a 'meta-cluster' of overlapping local clusters that can act as a broad platform for business development, appears to be borne out by this analysis.

Despite the constraints of sample size, it is clear from this paper that while there are significant localised agglomeration economies that influence the use and impact of some sources of external business advice, and the degree of horizontal collaboration between businesses, for most businesses these locational influences are relatively minor.

Most businesses, except those in the most peripheral areas, are accessible to what they need in terms of external advice and collaboration more or less wherever they are located within Britain.

## Notes

[1] Logit estimates are used where the dependent variable is dichotomous (use/non-use of advise), ordered logit estimates are made where the dependent variable is an ordered scale (of impact). Goodness of fit for ordered logit models can be evaluated by comparing the likelihood value with that obtained by estimating the model as a multinominal logit regression model. The test is only suggestive because the ordered logit model is not nested within the multinominal logit model. This nothwithstanding, the comparison of the likelihood allows an evaluation of goodness of fit.

[2] This is because of the low use levels of many public sector suppliers and the need for a minimum sample size across the five ordinal categories used to score impact. There is also a lower response rate to the impact questions, although there is no significant response bias (see Cosh and Hughes, 1998, Appendix).

**TABLES**

Table 1: Summary of significant locational measures for use of business advice at p = 0.05 or greater. The base for urban-rural comparisons is rural, and for TEC clusters is T3 rural.

| | Accountant | Lawyer | Banks | Friends/ relatives | Customers | Suppliers | Consultants | Trade/ Professional Associations |
|---|---|---|---|---|---|---|---|---|
| EU Assisted Area | | | | | | + | | |
| Distance to local business centre | | | - | - | | | | |
| Distance to regional business centre | | | | | | | | |
| No. of businesses within 1km | | | + | + | | | | |
| 15km | | | | + | | | | |
| Business density within 1km | | | | + | | | | |
| 15km | | | | + | | | | |
| % business service firms within 1km | | + | | + | | | | |
| 15km | | | | + | | | | |
| % micro firms within 1km | | | | | | | | + |
| 15km | | | | | | | | |
| % SMEs within 1km | | | | | | | | + |
| 15km | | | | | | | | |
| % large firms within 1km | | | | | | | - | - |
| 15km | | | | | | | | |
| % Hi tech firms within 1km | | | | | | | | |
| 15km | | | | | | | | |
| % public employers within 1km | | | | | | | | |
| 15km | - | - | | | | | | |
| % manufacturing within 1km | | - | | | - | | | |
| 15km | | | | | - | | | |
| Urban-rural:        - conurbation | | | | | | | | |
|                  - large town | | | | | | | | |
|                  - small town | | | | | | | | |
| TEC Clusters: T1 London & B'ham | + | | | + | | | | |
|          T2 Relatively affluent | | | | | | | | |
|          T4 SE Commuter | + | + | | + | | | | |
|          T5 Traditional industries | | | | | | | | |
|          T6 Large cities | | | | | | | | |
|          T7 Scotland | | | | | | | + | |
|          T8 Wales | | | | | | | | |

Table 2: Summary of significant locational measures for use of business advice at p = 0.05 or greater. The base for urban-rural comparisons is rural, and for TEC clusters is T3 rural.

| | Chamber of Commerce | TEC/LEC | BL/BS/BC | Enterprise Agencies | Regional Agencies |
|---|---|---|---|---|---|
| | | | | | |
| EU Assisted Area | | + | | + | |
| Distance to local business centre | | | | - | + |
| Distance to regional business centre | | | | | + |
| No. of businesses within 1km | | | | | - |
| 15km | | | | | - |
| Business density within 1km | | | | | - |
| 15km | | | | | - |
| % business service firms within 1km | - | | | | - |
| 15km | - | | - | | - |
| % micro firms within 1km | | - | | | + |
| 15km | - | - | | | + |
| % SMEs within 1km | | + | | | - |
| 15km | + | + | | | - |
| % large firms within 1km | | | | | - |
| 15km | | | | | - |
| % Hi tech firms within 1km | | - | | | - |
| 15km | | - | - | | - |
| % public employers within 1km | | + | + | | + |
| 15km | | | + | | + |
| % manufacturing within 1km | | | | | |
| 15km | | | | | |
| Urban-rural:        - conurbation | + | + | | | - |
| - large town | | + | | | - |
| - small town | | | | | - |
| TEC Clusters: T1 London & B'ham | | | - | | |
| T2 Relatively affluent | | | | | - |
| T4 SE Commuter | | | | | - |
| T5 Traditional industries | | | - | | |
| T6 Large cities | | | | | |
| T7 Scotland | | | - | + | |
| T8 Wales | | | | | |

36

Table 3: Summary of significant locational measures on impact for business advice at p = 0.05 or greater. The base for urban-rural comparisons is rural, and for TEC clusters is T3 rural.

| | Accountant | Lawyer | Banks | Friends/ relatives | Customers | Suppliers | Consultants | Trade/ Professional Associations |
|---|---|---|---|---|---|---|---|---|
| EU Assisted Area | | | | | | | | |
| Distance to local business centre | | | | | | | | |
| Distance to regional business centre | - | | | | | | | |
| No. of businesses within 1km | + | | | + | | | | - |
| 15km | + | | | + | | | | |
| Business density within 1km | + | | | + | | | | |
| 15km | + | | | + | | | | - |
| % business service firms within 1km | | | | + | | | | |
| 15km | | | | | | | | |
| % micro firms within 1km | - | | | | | | | + |
| 15km | | | | | | | | |
| % SMEs within 1km | + | | | | | | | - |
| 15km | | | | | | | | |
| % large firms within 1km | | | | | | - | | - |
| 15km | + | | | + | + | | | |
| % Hi tech firms within 1km | | | | | | | | |
| 15km | | | | | | | | |
| % public employers within 1km | | | | | | - | | |
| 15km | | | | | | | | |
| % manufacturing within 1km | | | | | | | | |
| 15km | | | | | | | | |
| Urban-rural: - conurbation | + | | | | | | | |
| - large town | | | | | | | | |
| - small town | | | | | | | | |
| TEC Clusters: T1 London & B'ham | + | | | | | | | |
| T2 Relatively affluent | | | | | | | | |
| T4 SE Commuter | | | | | | | - | |
| T5 Traditional industries | | | | | | | - | |
| T6 Large cities | | | | | | | | |
| T7 Scotland | | | | | | | | |
| T8 Wales | | | | | | | | |

Table 4: Summary of significant locational measures for impact of business advice at p = 0.05 or greater. The base for urban-rural comparisons is rural, and for TEC clusters is T3 rural.

| | Chambers of Commerce | TEC/LEC | BL/BS/BC | Enterprise Agencies | Regional Agencies |
|---|---|---|---|---|---|
| EU Assisted Area | | | | | |
| Distance to local business centre | | | | | |
| Distance to regional business centre | - | | | | |
| No. of businesses within 1km | | - | | - | |
| 15km | + | | | | |
| Business density within  1km | | + | | - | |
| 15km | + | | | | |
| % business service firms within 1km | | | | | |
| 15km | + | | | | |
| % micro firms within 1km | | | | | |
| 15km | | | | | |
| % SMEs within 1km | | | | | |
| 15km | | | | | |
| % large firms within 1km | | | | | |
| 15km | | | | | |
| % Hi tech firms within 1km | | | | | |
| 15km | | | | | |
| % public employers within 1km | | | | | |
| 15km | | | | | |
| % manufacturing within 1km | | | | | |
| 15km | | | | | |
| Urban-rural:        - conurbation | + | | | | |
| - large town | | | | | - |
| - small town | | | | | |
| TEC Clusters: T1 London & B'ham | + | | | | |
| T2 Relatively affluent | | | | | |
| T4 SE Commuter | + | | | | |
| T5 Traditional industries | + | | | | |
| T6 Large cities | | | | | |
| T7 Scotland | | | | | |
| T8 Wales | | | | | |

Table 5: Summary of significant locational measures for extent of external collaboration at p = 0.05 or greater. The base for urban-rural comparisons is rural, and for TEC clusters is T3 rural.

| | National/international collaborative arrangements | | | Local collaborative arrangements | | |
|---|---|---|---|---|---|---|
| | Suppliers | Customers | Firms in same lines of business | Suppliers | Customers | Firms in same lines of business |
| EU Assisted Area | | | | | | |
| Distance to local business centre | | | | | | - |
| Distance to regional business centre | | | | | | |
| No. of businesses within 1km | | | | | | + |
| 15km | | | | | | + |
| Business density within 1km | | | | | | + |
| 15km | | | | | | + |
| % business service firms within 1km | | | | | | + |
| 15km | | | | | | |
| % micro firms within 1km | | | + | | | |
| 15km | | | | | | |
| % SMEs within 1km | | | - | | | |
| 15km | | | | | | |
| % large firms within 1km | | | | | | |
| 15km | | | | | | |
| % Hi tech firms within 1km | | | | | + | |
| 15km | | | | | + | |
| % public employers within 1km | | | | | | |
| 15km | | | | | - | |
| % manufacturing within 1km | | | | | | |
| 15km | | | | | | |
| Urban-rural:        - conurbation | | | | | | |
| - large town | | | | | | |
| - small town | | | | | | |
| TEC Clusters: T1 London & B'ham | | | | | | |
| T2 Relatively affluent | | | | | | |
| T4 SE Commuter | | | | | | |
| T5 Traditional industries | | | | | | |
| T6 Large cities | | | | | | |
| T7 Scotland | | | | | | |
| T8 Wales | | | | | | |

## References

Barkham, R. Gudgin, G., Hart, M. and Harvey, E. (1996) *The Determinants of Small Firm Growth: an inter-regional study in the UK 1986-90*, Jessica Kingsley, London.

Bennett, R. J. and Graham, D. J. (1988) Explaining size differentiation of business service centres, *Urban Studies*, 9, 1457-1480

Bennett, R. J., Graham, D. J., and Bratton, W.J.A. (1999) The location and concentration of businesses in Britain: business clusters, business services, market coverage and local economic development, *Transactions, Institute of British Geographers,* 24, 393-420.

Bennett, R. J. and Robson, P. J. A. (1999) The use of external business advice by SMEs in Britain, *Entrepreneurship and Regional Development* 11, 155-180.

Birley, S. and Westhead, P. (1992) A comparison of new firms in 'assisted' and 'non-assisted' areas in Great Britain, *Entrepreneurship and Regional Development*, 4, 299-338.

Bryson, J. R. (1997) Business service firms, service space and the management of change, University of Cambridge, CBR, WP62.

Bryson, J. R. and Daniels, P. W. (1998) Business Link, strong ties and the walls of silence, *Environment and Planning C, Government and Policy,* 16, 265-280.

Butchart, R. L. (1987) A new UK definition of high technology industries, *Economic Trends*, No. 400, February.

Casson, M. (1997) *Information and Organization: A new perspective on the theory of the firm,* Oxford University Press, Oxford.

Coe, N. M. (1998) Exploring uneven development in producer service sectors: detailed evidence from the computer service industry in Britain, *Environment and Planning A,* 30, 2041-2068.

Coffey, W. J. and Bailly, A. (1992) Producer services and systems of flexible production, *Urban Studies,* 29, 857-868.

Cosh, A. D. and Hughes, A. (eds.) (1998) *Enterprise Britain: Growth innovation and public policy in the small and medium-sized enterprise sector 1994-97,* University of Cambridge, ESRC Centre for Business Research.

Curran, J. and Blackburn, R. A. (1994) *Small Firms and Local Networks: the death of the local economy?* Paul Chapman, London.

Daniels, P. and Moulaert, F. (eds.) (1991) *The Changing Geography of Advanced Producer Services*, Belhaven, London.

Dunning, J. H. (1993) *Multinational Enterprises and the Global Economy*, Addison Wesley, Wokingham.

Dunning, J. H. (1996) *The Geographical Sources of the Competitiveness of Firms: some results of a new survey*, University of Reading, Dept. of Economics, DP 218.

Granovetter, M. (1985) Economic action and social structure: the problem of embeddedness, *American Journal of Sociology,* 91(3), 481-510.

Harrison, B., Kelley, M. R. and Grant, J. (1996) Innovative firm behaviour and local mileau: explaining the intersection of

agglomeration, firm effects, and technological change, *Economic Geography*, 72, 233-258.

Keeble, D. (1993) Small firm creation, innovation and growth and the urban-rural shift, Chapter 3, pp. 56-78, in J. Curran and D. Storey (eds.) *Small firms in urban and rural locations*, Routledge, London.

Keeble, D. (1994) Regional influences and policy in new technology-based firm creation and growth, pp. 204-218 in R. Oakey (ed.) *New Technology-based Firms in the 1990s*, Paul Chapman, London.

Keeble, D. (1998) North-South and Urban-Rural variations in SME Growth, innovation and networking in the 1990s, in A. Hughes and A. Cosh (eds.) *Enterprise Britain*: *Growth, innovation and public policy in the small and medium-sized enterprise sector 1994-97*, ESRC Centre for Business Research, pp. 99-113.

Keeble, D. and Bryson, J. (1996) Small-firm creation and growth, regional development and the North-South divide in Britain, *Environment and Planning A*, 28, 909-934.

Keeble, D., Tyler, P., Broom, G. and Lewis, J. (1992) *Business Success in the Countryside: the performance of rural enterprise*, HMSO, London

Kitson, M. and Wilkinson, F. (1998) Markets and competition, Chapter 3, pp. 28-37, in A. Cosh and A. Hughes (eds.) *Enterprise Britain: Growth, innovation and public policy in the small and medium-sized enterprise sector 1994-97,* University of Cambridge, ESRC Centre for Business Research.

Krugman, P. (1993) *Geography and Trade*. Massachusetts, MIT Press.

Marshall, J. N., Damesick, P. and Wood, P. (1987) Understanding the location and role of producer services in the United Kingdom, *Environment and Planning A,* 19, 575-595.

Marshall, J. N. (1992) Linkages between manufacturing industry and business services, *Environment and Planning* A14, 1523-1540.

Marshall, J. N. (1988) *Service and Uneven Development,* Oxford University Press, Oxford.

Marshall, J. N., Alderman, F. N., Wong, C. and Thwaites, A. (1993) The impact of government-assisted management training and development on small and medium-sized enterprises in Britain, *Environment and Planning C: Government and Policy*, 11, 331-348.

Marshall, J. N. (1994) Business reorganization and the development of corporate services in metropolitan areas, *Geographical Journal*, 160, 41-49.

Martin, R. and Sunley, P. (1996) Paul Krugman's geographical economics and its implications for regional development theory: a critical assessment, *Economic Geography*, 72, 259-292.

Oakey, R. P. and Cooper, S.Y. (1989) High technology industries, agglomeration and the potential for peripherally sited small firms, *Regional Studies*, 23, 347-360.

O'Farrell, P. N., Hitchens, D. M. W. N. and Moffat, L. A. R. (1992) The competitiveness of business service firms in Scotland and South East England: a matched pairs analysis, *Regional Studies*, 26, 519-533.

O'Farrell, P. N. and Moffatt, L. A. R. (1995) Business services and their impact upon client performance: An exploratory interregional analysis, *Regional Studies*, 29, 111-124.

O'Farrell, P. N., Moffat, L. A. R. and Hitchens, D. M. W. N. (1993) Manufacturing demand for business services in a core and peripheral region: does flexible production imply vertical disintegration of business services? *Regional Studies,* 27, 385-400.

O'Farrell, P. N. and Wood, P. A. (1998) Internationalisation by business service firms: towards a new regionally-based conceptual framework, *Environment and Planning A,* 30, 109-128.

Peters, I. J. (1989) *Small Business Growth: spatial and non-spatial aspects of development*, unpublished Ph.D., University of Southampton.

Phelps, N. (1992) External economies, agglomeration and flexible accumulation, *Transactions, Institute of British Geographers,* N. S. 17(1), 35-46.

Porter, M. E. (1990) *The Competitive Advantage of Nations*, Free Press, New York.

Porter, M. E. (1998) *On Competition,* Harvard Business Review Press, Boston, Massachusetts.

Pred, A. R. (1980) *Urban Growth and City-systems in the United States, 1840-1860*, Harvard University Press, Cambridge, Mass.

Priest, S. P. (1999) Business Link SME Services: targeting, innovation and charging, *Environmental Policy C; Government and Policy,* 17,177-194.

Romer, P. M. (1986) Increasing returns and long-run growth, *Journal of Political Economy*, 94, 1002-1036.

Rugman, A. M., van den Broeck, J. and Verbeke, A. (eds.) (1995) *Beyond the Diamond: Research in global management*, vol. 5, JAI Press, Greenwich, Conn.

SBRC (1992) *The State of British Enterprise: growth, innovation and competitive advantage in small and medium-sized firms*, University of Cambridge, Small Business Research Centre.

Scott, A. J. (1993) *Technologies: high technology industry and regional development in Southern California*, University of California Press, Berkeley.

Smallbone, D., North, D. and Leigh, R. (1993) The case of external assistance by mature SMEs in the UK: some policy implications, *Entrepreneurship and Regional Development* 5, 279-285.

Storey, D. J. (1994) *Understanding the small business sector*, Routlege, London.

Thomas, P. and Smith, (1995) Results of the 1993 Census of Employment, *Employment Gazette,* October, 369-377.

Vaessen, P. and Keeble, D. (1995) Growth-oriented SMEs in unfavourable regional environments, *Regional Studies,* 29, 489-505.

Vatne, E. (1995) Local resource mobilisation and internationalisation strategies in small and medium sized enterprises, *Environment and Planning* A, 27, 63-80.

Westhead, P. (1995) New owner-managed business in rural and urban areas in Great Britain: a matched pairs comparison, *Regional Studies*, 29, 367-380.

Wood, P. A., Bryson, J. and Keeble, D. (1993) Regional patterns of small firm development in the business services: evidence from the UK, *Environment and Planning A*, 25, 256-700.

Wren, C. and Storey, D. J. (1988) *Estimating the impact of publicly subsidized advisory services upon small firm performance: the case of the DTI marketing initiative,* SME Centre, University of Warwick.

**APPENDIX**

**Table A.1:** Estimates of a logit model of the expectation of using each source of advice (*** p<0.01; **p<0.05; * p<0.1). Standard errors in parentheses.
Notes: for the Urban and Rural the comparison variable is rural locations. For Tec cluster type the comparison variable is T1 3 Rural

| | Accountant | Solicitor | Bank | Business Friend/Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| Number of Employees | -0.09009 (0.13172) | **0.99418*** (0.11076)** | **0.22914** (0.10440)** | **-0.53861*** (0.10737)** | 0.06714 (0.10024) | -0.03550 (0.10440) | **0.78780*** (0.10852)** | 0.61602*** (0.11345) |
| Exporter/Non-exporter | 0.11098 (0.16502) | 0.03630 (0.13062) | **-0.31676** (0.12924)** | **0.33490** (0.13125)** | **0.21550* (0.12379)** | 0.15135 (0.12740) | 0.04270 (0.13088) | -0.10663 (0.13367) |
| Percentage Rate of Employment Growth | 0.00141 (0.00093) | **0.00204*** (0.00075)** | **0.00170** (0.00070)** | **0.00178*** (0.00057)** | **0.00089* (0.00053)** | 0.00069 (0.00048) | 0.00067 (0.00051) | -0.0008 (0.00057) |
| Profitability per employee | 0.00106 (0.00580) | 0.00460 (0.00444) | -0.00302 (0.00451) | -0.00610 (0.00454) | -0.00028 (0.0043) | -0.00144 (0.00449) | 0.00024 (0.00468) | -0.00006 (0.00469) |
| Skill | 0.00025 (0.00278) | **0.00586*** (0.00226)** | 0.00019 (0.00218) | 0.00260 (0.00220) | 0.00135 (0.00213) | -0.00317 (0.00224) | 0.00337 (0.00231) | -0.00074 (0.00233) |
| Innovator/Non-innovator | **0.53573*** (0.20567)** | 0.20305 (0.15042) | **0.32574** (0.14820)** | **0.33335** (0.14383)** | **0.42419*** (0.13922)** | **0.59382*** (0.14042)** | -0.01048 (0.14510) | 0.08926 (0.14746) |
| High Technology | -0.16805 (0.20362) | 0.11024 (0.16497) | -0.03499 (0.16061) | -0.23382 (0.16527) | 0.10455 (0.15470) | -0.06935 (0.15871) | **0.27716* (0.16072)** | -0.12757 (0.16968) |
| Manufacturing/Services | 0.24937 (0.18687) | -0.14046 (0.15151) | 0.21051 (0.14780) | -0.02972 (0.14973) | -0.09883 (0.14339) | **0.43490*** (0.15004)** | **-0.28680* (0.15413)** | **-0.48840*** (0.15471)** |
| Constant | **1.34400*** (0.26336)** | **-1.23084*** (0.21666)** | 0.14686 (0.20866) | -0.19852 (0.21032) | **-0.36864* (0.20305)** | **-0.79946*** (0.21250)** | **-1.62010*** (0.22516)** | **-1.13198*** (0.21973** |
| N | 1334 | 1334 | 1334 | 1334 | 1334 | 1334 | 1334 | 1334 |
| Log likelihood | -603.0956 | -841.1224 | -865.9829 | -846.2950 | -911.8817 | -868.5294 | -834.8038 | -814.9438 |
| Pseudo R$^2$ | 0.0115 | 0.0737 | 0.0151 | 0.0277 | 0.0132 | 0.0248 | 0.0465 | 0.0349 |
| % Correctly Classified | 82.91 | 65.89 | 63.42 | 65.22 | 56.30 | 62.07 | 64.02 | 66.64 |
| **Geographical Variables** | | | | | | | | |
| European Union Assisted Area | -0.08587 (0.15805) | -0.08795 (0.12629) | 0.04389 (0.12498) | -0.07357 (0.12719) | 0.05702 (0.12026) | **0.28322** (0.12285)** | 0.08463 (0.12735) | 0.06647 (0.12947) |
| % Correctly Classified | 82.91 | 65.97 | 63.64 | 65.14 | 55.92 | 62.74 | 64.32 | 66.34 |
| Distance to nearest business centre | **-0.01465* (0.00762)** | -0.00863 (0.00659) | **-0.01573** (0.00641)** | **-0.01664** (0.00706)** | -0.00911 (0.00635) | 0.00068 (0.00641) | 0.00535 (0.00661) | -0.00324 (0.00683) |
| % Correctly Classified | 82.91 | 65.74 | 63.64 | 65.29 | 55.40 | 62.07 | 64.39 | 66.41 |
| Distance to regional business centre | -0.00192 (0.00195) | 0.00026 (0.00162) | 0.00073 (0.00158) | -0.00144 (0.00161) | -0.00051 (0.00152) | 0.00238 (0.00157) | -0.00165 (0.00164) | -0.00094 (0.00165) |
| % Correctly Classified | 82.91 | 65.97 | 63.64 | 65.14 | 56.00 | 62.22 | 63.79 | 66.49 |

**Table A1 continued**

| No. of businesses within: | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Accountant | Solicitor | Bank | Business Friend/ Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
| 1km | 0.04151 (0.09624) | 0.05939 (0.07688) | **0.14989** (0.07563)** | **0.16618** (0.07634)** | 0.07969 (0.07285) | 0.04978 (0.07554) | -0.04103 (0.07756) | -0.06754 (0.07868) |
| % Correctly Classified | 82.90 | 66.62 | 63.32 | 64.52 | 55.66 | 62.04 | 63.92 | 67.15 |
| 15km | 0.12795 (0.13255) | 0.02859 (0.10853) | **0.18264* (0.10383)** | **0.20679** (0.10499)** | 0.12337 (0.10020) | 0.06323 (0.10378) | 0.01782 (0.10664) | 0.09995 (0.10791) |
| % Correctly Classified | 82.91 | 65.89 | 63.34 | 64.92 | 55.17 | 62.14 | 63.87 | 66.04 |
| 50km | 0.16332 (0.18358) | -0.04523 (0.14812) | 0.14455 (0.14418) | **0.34788** (0.14833)** | 0.12293 (0.140188) | 0.01093 (0.14500) | -0.02032 (0.14932) | 0.17155 (0.15215) |
| % Correctly Classified | 82.91 | 65.82 | 63.57 | 64.92 | 55.47 | 62.14 | 64.02 | 66.34 |
| **Density of businesses within:** | | | | | | | | |
| 1km | 0.03639 (0.09604) | 0.05226 (0.07665) | **0.14454* (0.07543)** | **0.17036** (0.07620)** | 0.07221 (0.07264) | 0.05480 (0.07532) | -0.03643 (0.07734) | -0.06489 (0.07842) |
| % Correctly Classified | 82.91 | 66.42 | 63.42 | 64.47 | 55.85 | 62.14 | 63.79 | 67.17 |
| 15km | 0.12802 (0.13255) | 0.02865 (0.10583) | **0.18258* (0.10382)** | **0.20679** (0.10499)** | 0.12338 (0.10019) | 0.06328 (0.10378) | 0.01776 (0.10664) | 0.10016 (0.10791) |
| % Correctly Classified | 82.91 | 65.89 | 63.34 | 64.92 | 55.10 | 62.14 | 63.87 | 66.04 |
| 50km | 0.16333 (0.18359) | -0.04516 (0.14812) | 0.14465 (0.14419) | **0.34779** (0.14834)** | 0.12311 (0.14019) | 0.01114 (0.14501) | -0.02018 (0.14933) | 0.17162 (0.15216) |
| % Correctly Classified | 82.91 | 65.82 | 63.57 | 64.92 | 55.47 | 62.14 | 64.02 | 66.34 |
| **% of business service firms within:** | | | | | | | | |
| 1km | **0.02179* (0.01132)** | **0.01829** (0.00881)** | 0.00630 (0.00839) | **0.01711** (0.00836)** | 0.00131 (0.00806) | -0.00623 (0.00847) | -0.00838 (0.00857) | -0.00932 (0.00877) |
| % Correctly Classified | 82.91 | 65.97 | 63.49 | 64.92 | 56.00 | 61.92 | 64.32 | 66.41 |
| 15km | **0.03581** (0.01602)** | 0.01834 (0.0125) | 0.01065 (0.01222) | **0.02908** (0.01228)** | 0.01846 (0.01180) | -0.00352 (0.01226) | 0.00648 (0.01252) | -0.00697 (0.01276) |
| % Correctly Classified | 82.91 | 65.89 | 63.34 | 64.62 | 55.70 | 62.07 | 64.32 | 66.64 |
| 50km | **0.03775** (0.01857)** | 0.01895 (0.01451) | 0.00406 (0.01417) | **0.03783*** (0.01427)** | 0.01712 (0.01370) | -0.01057 (0.01425) | 0.00707 (0.01456) | -0.0677 (0.01481) |
| % Correctly Classified | 82.91 | 65.44 | 63.57 | 65.07 | 55.70 | 62.14 | 64.02 | 66.64 |
| **% of micro firms within:** | | | | | | | | |
| 1km | 0.00767 (0.01423) | 0.01239 (0.01147) | -0.00753 (0.01126) | 0.00469 (0.01140) | 0.00911 (0.01086) | -0.00197 (0.01122) | 0.00671 (0.01149) | **0.02815** (0.01168)** |
| % Correctly Classified | 82.90 | 65.57 | 63.97 | 65.48 | 56.17 | 61.70 | 64.70 | 67.45 |

**Table A1 continued**

| | Accountant | Solicitor | Bank | Business Friend/ Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| 15km | 0.01773 (0.03009) | 0.01374 (0.02383) | -0.02127 (0.02361) | 0.02637 (0.02385) | 0.01217 (0.02278) | 0.00783 (0.02350) | 0.00334 (0.02420) | -0.01316 (0.02454) |
| % Correctly Classified | 82.91 | 65.89 | 64.01 | 65.28 | 56.20 | 61.65 | 64.45 | 66.87 |
| 50km | 0.01753 (0.04396) | 0.03581 (0.03497) | 0.01086 (0.03458) | 0.05308 (0.03484) | 0.01400 (0.03326) | -0.01824 (0.03430) | 0.03453 (0.03518) | -0.01824 (0.03565) |
| % Correctly Classified | 82.91 | 66.04 | 64.22 | 64.67 | 55.82 | 61.57 | 63.84 | 66.64 |
| **% of SMEs within:** | | | | | | | | |
| 1km | -0.00948 (0.01536) | -0.01320 (0.01236) | 0.00694 (0.01214) | -0.00518 (0.01229) | -0.00823 (0.01171) | 0.00047 (0.01210) | -0.00472 (0.01239) | **-0.02799** (0.0158) |
| % Correctly Classified | 82.90 | 65.57 | 63.97 | 65.48 | 56.02 | 61.70 | 64.42 | 67.87 |
| 15km | -0.02287 (0.84116) | -0.01408 (0.02533) | 0.02077 (0.02508) | -0.03119 (0.02534) | -0.01364 (0.02420) | -0.00722 (0.02497) | -0.00131 (0.02571) | 0.01381 (0.02606) |
| % Correctly Classified | 82.91 | 66.04 | 64.22 | 65.28 | 55.98 | 61.65 | 64.60 | 66.94 |
| 50km | -0.02303 (0.04543) | -0.03554 (0.03613) | -0.01027 (0.03576) | **-0.06025*** (0.03603) | -0.01456 (0.03439) | 0.02069 (0.03550) | -0.03271 (0.03638) | 0.01565 (0.03685) |
| % Correctly Classified | 82.91 | 65.97 | 64.07 | 64.67 | 55.90 | 61.57 | 63.92 | 66.72 |
| **% of large firms within:** | | | | | | | | |
| 1km | 0.02584 (0.10678) | -0.05564 (0.08404) | 0.08800 (0.08478) | -0.01352 (0.08428) | -0.10868 (0.08045) | 0.08333 (0.08193) | **-0.14539*** (0.08606) | **-0.23084** (0.09043) |
| % Correctly Classified | 82.90 | 65.57 | 64.04 | 65.93 | 56.78 | 61.77 | 64.59 | 66.99 |
| 15km | 0.23674 (0.28459) | -0.12372 (0.22839) | 0.25829 (0.22540) | 0.11543 (0.22875) | -0.00480 (0.21843) | -0.13440 (0.22434) | -0.19509 (0.23095) | 0.08198 (0.23652) |
| % Correctly Classified | 82.91 | 65.89 | 63.92 | 65.58 | 55.67 | 61.72 | 64.15 | 66.79 |
| 50km | 0.63525 (0.55162) | -0.46873 (0.46747) | -0.23833 (0.45895) | 0.56142 (0.46916) | -0.06748 (0.43821) | -0.18676 (0.44812) | -0.67593 (0.45920) | 0.50548 (0.48558) |
| % Correctly Classified | 82.91 | 65.74 | 63.92 | 65.20 | 55.75 | 61.80 | 64.15 | 66.64 |
| **% of Hi tech Firms within:** | | | | | | | | |
| 1km | 0.04041 (0.03322) | 0.02636 (0.02564) | -0.00550 (0.02497) | 0.00523 (0.02509) | -0.01929 (0.02417) | -0.00958 (0.02500) | 0.02404 (0.02526) | -0.02259 (0.02632) |
| % Correctly Classified | 82.90 | 66.09 | 63.97 | 65.48 | 56.55 | 61.85 | 64.35 | 66.62 |
| | | | | | | | | |
| 15km | 0.06385 (0.04630) | 0.03535 (0.03550) | -0.00049 (0.03500) | 0.03249 (0.03485) | -0.00572 (0.03371) | -0.03488 (0.03514) | 0.01409 (0.03560) | -0.02091 (0.03650) |
| % Correctly Classified | 82.91 | 66.27 | 63.99 | 65.28 | 55.75 | 61.80 | 64.60 | 66.57 |

**Table A1 continued**

| | Accountant | Solicitor | Bank | Business Friend/ Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| 50km | **0.12373**\*\* **(0.06039)** | 0.07595 (0.04701) | 0.02121 (0.04627) | **0.08639**\* **(0.04621)** | 0.04268 (0.04449) | -0.00399 (0.04596) | 0.03619 (0.04707) | -0.02193 (0.04794) |
| % Correctly Classified | 82.91 | 65.89 | 64.15 | 65.28 | 56.28 | 61.65 | 63.84 | 66.64 |
| **% of BIG8 within:** | | | | | | | | |
| 1km | **-0.03576**\* **(0.01845)** | 0.00565 (0.01542) | -0.01729 (0.01508) | -0.00037 (0.01538) | 0.00884 (0.01463) | 0.01462 (0.01509) | -0.00409 (0.01545) | -0.00103 (0.01556) |
| % Correctly Classified | 82.90 | 65.94 | 64.04 | 65.71 | 55.41 | 61.85 | 64.50 | 66.69 |
| 15km | **-0.10277**\*\*\* **(0.03585)** | **0.06916**\*\* **(0.03049)** | -0.03018 (0.02967) | -0.01581 (0.03018) | -0.00397 (0.02870) | 0.01842 (0.02956) | -0.01355 (0.03066) | -0.01948 (0.03105) |
| % Correctly Classified | 82.98 | 67.17 | 63.77 | 65.51 | 55.67 | 61.88 | 64.37 | 67.02 |
| 50km | **-0.11317**\*\* **(0.05625)** | 0.02603 (0.04693) | -0.04310 (0.04632) | **-0.08185**\* **(0.04793)** | -0.05432 (0.04510) | -0.00778 (0.04645) | -0.00964 (0.04805) | -0.02050 (0.04864) |
| % Correctly Classified | 82.91 | 65.82 | 64.22 | 65.45 | 56.13 | 61.57 | 64.37 | 66.64 |
| **% of Manufacturing Firms within:** | | | | | | | | |
| 1km | -0.00984 (0.01354) | **-0.02673**\*\* **(0.01108)** | -0.01143 (0.01079) | **-0.01932**\* **(0.01131)** | **-0.02081**\*\* **(0.010611)** | -0.01030 (0.01086) | 0.00489 (0.01114) | -0.00973 (0.01143) |
| % Correctly Classified | 82.90 | 66.54 | 64.27 | 65.03 | 56.87 | 61.77 | 64.27 | 66.62 |
| 15km | -0.00585 (0.02562) | **-0.05109**\*\* **(0.02045)** | 0.00159 (0.02029) | -0.01710 (0.02071) | **-0.03917**\*\* **(0.01966)** | -0.01467 (0.02015) | -0.00776 (0.02079) | 0.03374 (0.02081) |
| % Correctly Classified | 82.91 | 66.42 | 63.99 | 65.51 | 56.88 | 61.72 | 64.45 | 67.02 |
| 50km | -0.00351 (0.03423) | **-0.05881**\*\* **(0.02720)** | 0.01225 (0.02712) | -0.02553 (0.02761) | -0.01320 (0.02606) | 0.01087 (0.02673) | -0.02314 (0.02777) | 0.03322 (0.02778) |
| % Correctly Classified | 82.91 | 65.59 | 63.92 | 65.66 | 55.37 | 61.80 | 63.84 | 66.72 |
| **Urban & Rural Categorisation:** | | | | | | | | |
| Conurbation | 0.17701 (0.21710) | 0.00661 (0.17412) | 0.03135 (0.17136) | 0.10481 (0.17310) | 0.12138 (0.16518) | 0.18204 (0.17166) | 0.01993 (0.17628) | 0.06766 (0.18040) |
| Large Town | -0.08314 (0.24246) | -0.05459 (0.20093) | -0.11949 (0.19666) | -0.16955 (0.20422) | 0.00388 (0.19127) | 0.06767 (0.19942) | -0.11664 (0.20561) | 0.23335 (0.20596) |
| Small Town | 0.17405 (0.21437) | -0.05127 (0.17127) | -0.03572 (0.16877) | 0.11073 (0.17063) | -0.03436 (0.16296) | 0.18948 (0.16890) | 0.00267 (0.17373) | 0.04523 (0.17836) |
| % Correctly Classified | 82.91 | 66.04 | 63.57 | 64.99 | 55.85 | 62.14 | 63.94 | 67.25 |
| **TEC Cluster Type:** | | | | | | | | |

**Table A1 continued**

| | Accountant | Solicitor | Bank | Business Friend/ Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| T1 1 London and Birmingham | **0.64081\*\*** **(0.29129)** | 0.35648 (0.23272) | 0.09918 (0.23133) | **0.52192\*\*** **(0.23579)** | **0.40104\*** **(0.22167)** | 0.15829 (0.22545) | 0.18611 (0.23654) | 0.21997 (0.24171) |
| T1 2 Relatively Affluent | 0.25770 (0.25383) | 0.14477 (0.21293) | **-0.36439\*** **(0.21047)** | 0.27826 (0.22110) | 0.17661 (0.20422) | -0.27826 (0.20980) | 0.00415 (0.21961 | 0.10433 (0.22501) |
| T1 4 South East Commuter | **0.55122\*\*** **(0.26178)** | **0.66627\*\*\*** **(0.21501)** | 0.17130 (0.21322) | **0.43008\*\*** **(0.21728)** | 0.24846 (0.20299) | -0.16213 (0.20766) | 0.13408 (0.21764) | 0.30976 (0.22306) |
| T1 5 Traditional Industrial Areas | 0.01687 (0.29362) | 0.00718 (0.25078) | 0.02550 (0.25266) | 0.10352 (0.26432) | -0.19822 (0.24400) | -0.10874 (0.24495) | -0.01628 (0.25940) | 0.16632 (0.26365) |
| T1 6 Traditional Industrial Cities | 0.33561 (0.28171) | 0.14412 (0.23208) | -0.13821 (0.23073) | 0.34190 (0.23947) | 0.23134 (0.22223) | -0.08165 (0.22665) | -0.00084 (0.23877) | 0.31402 (0.24089) |
| T1 7 Scotland | 0.12704 (0.3542) | 0.49784 (0.30609) | -0.46049 (0.29305) | 0.36628 (0.30253) | 0.25940 (0.28717) | -0.39445 (0.30363) | **0.65757\*\*** **(0.29832)** | -0.36639 (0.34099) |
| T1 8 Wales | 0.71312 (0.51841) | -0.11825 (0.37592) | -0.01298 (0.37356) | 0.03068 (0.39145) | -0.49121 (0.37581) | -0.22188 (0.36788) | -0.28405 (0.40552) | 0.47500 (0.37520) |
| % Correctly Classified | 82.92 | 65.61 | 63.58 | 65.16 | 57.79 | 61.70 | 65.16 | 67.35 |

**Table A.2:** Estimates of a logit model of the expectation of using each source of advice (*** p<0.01; **p<0.05; * p<0.1). Standard errors in parentheses.
Notes: for the Urban and Rural the comparison variable is rural locations. For TEC cluster type the comparison variable is T1 3 Rural.

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | Regional Development Agencies |
|---|---|---|---|---|---|
| Number of Employees | 0.21421 (0.13281) | **0.68466*** (0.13588)** | **0.31926*** (0.12432)** | -0.22820 (0.14837) | 0.08942 (0.23963) |
| Exporter/Non-exporter | **0.30260* (0.16189)** | -0.19305 (0.16257) | **0.37262** (0.14666)** | 0.09933 (0.17889) | 0.28627 (0.29266) |
| Percentage Rate of Employment Growth | 0.00058 (0.00066) | **0.00163** (0.00066)** | **0.00085* (0.00051)** | **0.00110** (0.00053)** | 0.00108 (0.00077) |
| Profitability per employee | -0.00739 (0.00583) | **-0.01494** (0.00761)** | **-0.01184* (0.00632)** | **-0.01578** (0.00756)** | -0.01376 (0.00871) |
| Skill | -0.00002 (0.00294) | 0.00141 (0.00296) | 0.00047 (0.00278) | -0.00342 (0.00318) | 0.00065 (0.00555) |
| Innovator/Non-innovator | 0.00487 (0.18148) | **0.46803*** (0.17304)** | -0.13638 (0.16744) | **0.58523*** (0.18710)** | **0.89714*** (0.28216)** |
| High Technology | 0.02231 (0.19771) | 0.14513 (0.19501) | **0.42390** (0.17427)** | -0.03351 (0.21896) | -0.01523 (0.34499) |
| Manufacturing/Services | **0.33729* (0.19750)** | **0.38288* (0.19723)** | **0.60532*** (0.18738)** | **0.38085* (0.21448)** | **0.66334* (0.38778)** |
| Income Independent | **1.84577* (1.07619)** | **3.32515*** (1.11242)** | **2.60944*** (0.93458)** | -0.42419 (1.24827) | **3.23512* (1.86721)** |
| Income Non-Independent | 0.99470 (0.91660) | **4.90014*** (0.93815)** | **1.61796*** (0.52398)** | -0.13916 (0.78771) | **1.76872* (1.03441)** |
| BL Age | **0.02025** (0.00867)** | -0.01233 (0.00895) | **0.028086*** (0.00766)** | 0.00622 (0.00964) | 0.01581 (0.01559) |
| Outlets | **0.04100* (0.02397)** | **0.08017*** (0.02599)** | 0.02637 (0.02497) | 0.00910 (0.02564) | -0.00846 (0.04707) |
| PBAs | 0.08004 (0.20101) | 0.26752 (0.19842) | 0.03859 (0.18454) | 0.00997 (0.23458) | 0.54787 (0.37286) |
| CCI No. of Services | 0.01460 (0.03442) | 0.00553 (0.03418) | -0.01661 (0.02804) | -0.01287 (0.03542) | 0.04382 (0.05663) |
| CCTE No. of Services | NA | NA | -0.03645 (0.03162) | **-0.07532* (0.04277)** | -0.00200 (0.06011) |
| No. of CCI staff per 1,000 businesses | 0.00239 (0.00255) | -0.00026 (0.00271) | 0.00245 (0.00233) | 0.00239 (0.00305) | -0.00218 (0.00497) |

**Table A2 continued**

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | Regional Development Agencies |
|---|---|---|---|---|---|
| No. of TEC staff per 1,000 businesses | -0.00148 (0.00129) | **-0.00336** (0.00131)** | -0.00218 (0.00156) | -0.00086 (0.00188) | -0.00393 (0.00309) |
| No. of CCTE staff per 1000 businesses | NA | NA | 0.00003 (0.00189) | **0.00477** (0.00226)** | 0.00132 (0.00349) |
| Scotland | 0.62579 (0.39126) | **0.80186** (0.37376)** | -0.78113 (0.52436) | **1.70406*** (0.36918)** | **1.37456* (0.71833)** |
| Wales | 0.41944 (0.49031) | **0.73110* (0.42901)** | 0.47433 (0.48524) | 0.43382 (0.51008) | **2.63040*** (0.68856)** |
| Constant | **-2.94534*** (0.66551)** | **-2.76105*** (0.67955)** | **-2.71722*** (0.53291)** | -1.79279 (0.65975) | **-5.36853*** (1.10242)** |
| N | 1097 | 1097 | 1274 | 1274 | 1274 |
| Log likelihood | -577.6251 | -575.0368 | -682.6579 | -517.5512 | -235.3780 |
| Pseudo $R^2$ | 0.0366 | 0.0968 | 0.0955 | 0.0710 | 0.0831 |
| % Correctly Classified | 76.48 | 75.11 | 73.78 | 84.77 | 94.82 |
| **Geographical Variables** | | | | | |
| European Union Assisted Area | **0.29598* (0.16509)** | **0.52224*** (0.16265)** | 0.19037 (0.15598) | **0.61301*** (0.17809)** | -0.06726 (0.30728) |
| % Correctly Classified | 76.75 | 75.84 | 73.40 | 84.77 | 94.82 |
| Distance to nearest business centre | **-0.01703* (0.00910)** | **-0.01704* (0.00872)** | -0.00653 (0.00816) | **-0.01880** (0.00950)** | **0.04094*** (0.01176)** |
| % Correctly Classified | 76.48 | 75.39 | 73.70 | 84.85 | 94.82 |
| Distance to regional business centre | **-0.00435* (0.00240)** | -0.00316 (0.00234) | -0.00052 (0.00219) | 0.00039 (0.00261) | **0.01150*** (0.00388)** |
| % Correctly Classified | 76.39 | 75.11 | 73.86 | 84.77 | 94.82 |
| **No. of businesses within:** | | | | | |
| 1km | 0.04077 (0.11069) | 0.02092 (0.11169) | -0.13706 (0.10699) | 0.10491 (0.12491) | **-0.57139*** (0.21494)** |
| % Correctly Classified | 76.46 | 75.00 | 73.86 | 84.92 | 94.82 |
| 15km | 0.15328 (0.17076) | 0.18517 (0.17236) | -0.05946 (0.16590) | 0.13563 (0.19376) | **-1.00492*** (0.32140)** |
| % Correctly Classified | 76.39 | 75.21 | 74.02 | 84.77 | |
| 50km | 0.10038 (0.22233) | -0.05079 (0.22304) | **-0.37772* (0.20977)** | -0.11822 (0.24658) | **-1.85774*** (0.42840)** |

54

**Table A2 continued**

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | Regional Development Agencies |
|---|---|---|---|---|---|
| % Correctly Classified | 76.48 | 75.02 | 74.86 | 84.85 | 94.82 |
| **Density of businesses within:** | | | | | |
| 1km | 0.04772 (0.11012) | 0.01657 (0.11100) | -0.15025 (0.10620) | 0.07986 (0.12344) | **-0.52633** (0.20702) |
| % Correctly Classified | 76.48 | 75.11 | 73.70 | 84.85 | 94.82 |
| 15km | 0.15347 (0.17076) | 0.18541 (0.17236) | -0.05926 (0.16590) | 0.13555 (0.19376) | **-1.00534*** (0.32142)** |
| % Correctly Classified | 76.39 | 75.21 | 74.02 | 84.77 | 94.82 |
| 50km | 0.10022 (0.22233) | -0.05097 (0.27305) | **-0.37772* (0.20977)** | -0.11853 (0.24660) | **-1.85695*** (0.42849)** |
| % Correctly Classified | 76.48 | 75.02 | 74.86 | 84.85 | 94.82 |
| **% of business service firms within:** | | | | | |
| 1km | **-0.02407** (0.01149)** | **-0.02181* (0.01178)** | **-0.02052* (0.01103)** | -0.02008 (0.01297) | **-0.05712** (0.02516)** |
| % Correctly Classified | 76.48 | 75.21 | 74.18 | 84.93 | 94.82 |
| 15km | **-0.03884** (0.01749)** | -0.02805 (0.01751) | **-0.04118** (0.01656)** | -0.01785 (0.01896) | -0.06237 (0.03451) |
| % Correctly Classified | 76.30 | 74.84 | 74.86 | 84.77 | 94.82 |
| 50km | **-0.05001** (0.02077)** | **-0.06081*** (0.02080)** | **-0.05235*** (0.01904)** | -0.03683 (0.02264) | **-0.10931** (0.04340)** |
| % Correctly Classified | 76.30 | 75.48 | 74.86 | 84.85 | 94.82 |
| **% of Micro Firms within:** | | | | | |
| 1km | -0.01482 (0.01452) | **-0.03809*** (0.01480)** | -0.00592 (0.01334) | -0.00856 (0.01598) | **0.06858*** (0.02491)** |
| % Correctly Classified | 76.46 | 75.36 | 73.92 | 84.84 | 94.82 |
| 15km | **-0.10934*** (0.03522)** | **-0.08849*** (0.03432)** | -0.03369 (0.03010) | -0.03682 (0.03614) | **0.13170** (0.05583)** |
| % Correctly Classified | 76.48 | 75.11 | 73.85 | 84.77 | 94.82 |
| 50km | **-0.22560*** (0.05377)** | **-0.12541** (0.05038)** | -0.04498 (0.04434) | -0.05627 (0.05350) | **0.14177* (0.08283)** |
| % Correctly Classified | 76.75 | 75.57 | 73.78 | 84.85 | 94.82 |

**Table A2 continued**

| % of SMEs within: | | | | | |
|---|---|---|---|---|---|
| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | Regional Development Agencies |
| 1km | 0.01794 (0.01576) | **0.04333*** (0.01609)** | 0.00957 (0.01441) | 0.01075 (0.01724) | **-0.06523** (0.02663)** |
| % Correctly Classified | 76.46 | 75.46 | 73.76 | 84.84 | 94.82 |
| 15km | **0.12308*** (0.03751)** | **0.09996*** (0.03668)** | 0.04459 (0.03214) | 0.04008 (0.03867) | **-0.12359** (0.06041)** |
| % Correctly Classified | 76.46 | 75.11 | 73.47 | 84.77 | 94.82 |
| 50km | **0.22883*** (0.05540)** | **0.13354** (0.05229)** | 0.05495 (0.04591) | 0.06144 (0.05563) | -0.12708 (0.08662) |
| % Correctly Classified | 76.94 | 75.48 | 73.63 | 84.85 | 94.82 |
| **% of Large Firms within:** | | | | | |
| 1km | -0.02830 (0.11257) | 0.07481 (0.11353) | -0.11530 (0.09645) | -0.03932 (0.12277) | **-0.94965*** (0.25091)** |
| % Correctly Classified | 76.46 | 75.18 | 74.23 | 84.84 | 94.82 |
| 15km | 0.06128 (0.31223) | 0.08086 (0.30492) | **-0.48355* (0.28011)** | 0.18813 (0.32699) | **-2.04283*** (0.50151)** |
| % Correctly Classified | 76.48 | 75.02 | 74.70 | 84.85 | 94.98 |
| 50km | **1.74254** (0.69967)** | 0.15352 (0.61350) | **-1.11823* (0.58074)** | -0.06266 (0.64655) | **-3.49434*** (0.93820)** |
| % Correctly Classified | 76.84 | 75.02 | 74.70 | 84.77 | 94.90 |
| **% of Hi tech Firms within:** | | | | | |
| 1km | -0.04923 (0.03547) | **-0.08043** (0.03626** | **-0.05460* (0.03253)** | -0.04614 (0.03860) | **-0.17015** (0.07568)** |
| % Correctly Classified | 76.46 | 75.09 | 73.76 | 84.76 | 94.82 |
| 15km | **-0.09320* (0.05107)** | **-0.16001*** (0.05273)** | **-0.14684*** (0.04784)** | **-0.10386* (0.05714)** | **-0.28709** (0.11271)** |
| % Correctly Classified | 76.48 | 75.75 | 74.94 | 84.93 | 94.82 |
| 50km | **-0.22406*** (0.06866)** | **-0.21631*** (0.06673)** | **-0.18841*** (0.06218)** | **-0.18515** (0.07485)** | **-0.30651** (0.13454)** |
| % Correctly Classified | 76.66 | 75.39 | 74.70 | 84.85 | 94.82 |
| **% of BIG8 Firms within:** | | | | | |
| 1km | 0.01517 (0.01998) | **0.04814** (0.01975)** | **0.03834** (0.01749)** | 0.01513 (0.02107) | **0.06923** (0.03203)** |
| % Correctly Classified | 76.64 | 75.09 | 73.61 | 84.84 | 94.82 |

**Table A2 continued**

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | Regional Development Agencies |
|---|---|---|---|---|---|
| 15km | -0.01749 (0.04357) | 0.04535 (0.04100) | **0.08447\*\*** **(0.03857)** | 0.02022 (0.04281) | **0.14832\*\*** **(0.06622)** |
| % Correctly Classified | 76.48 | 75.02 | 73.63 | 84.93 | 94.82 |
| 50km | 0.04763 (0.07704) | **0.13921\*** **(0.07524)** | **0.21168\*\*\*** **(0.07140)** | 0.13040 (0.08188) | **0.46974\*\*\*** **(0.12881)** |
| % Correctly Classified | 76.48 | 75.21 | 74.70 | 84.69 | 94.82 |
| **% of Manufacturing Firms within:** | | | | | |
| 1km | -0.00085 (0.01422) | -0.01548 (0.01503) | 0.00078 (0.01293) | 0.00225 (0.01618) | -0.03727 (0.02720) |
| % Correctly Classified | 76.46 | 74.91 | 73.92 | 84.84 | 94.82 |
| 15km | 0.03202 (0.02718) | -0.03957 (0.02807) | -0.01285 (0.02537) | -0.00537 (0.03176) | -0.07541 (0.05364) |
| % Correctly Classified | 76.30 | 75.11 | 73.94 | 84.77 | 94.82 |
| 50km | **0.10732\*\*\*** **(0.04155)** | 0.00086 (0.04235) | -0.005770 (0.03739) | -0.03341 (0.04776) | **-0.18039\*\*** **(0.08070)** |
| % Correctly Classified | 76.48 | 75.11 | 73.94 | 84.77 | 94.82 |
| **Urban & Rural Categorisation:** | | | | | |
| Conurbation | **0.53534\*\*** **(0.25980)** | **0.55248\*\*** **(0.26559)** | 0.12191 (0.24005) | 0.46832 (0.29274) | **-1.01850\*\*** **(0.43507)** |
| Large Town | **0.46634\*** **(0.26824)** | **0.587127\*\*** **(0.26627)** | 0.04733 (0.23397) | 0.29198 (0.28286) | **-0.85244\*\*** **(0.40112)** |
| Small Town | 0.08849 (0.22958) | 0.40793 (0.22830) | -0.04189 (0.19501) | 0.26467 (0.24582) | **-1.64758\*\*\*** **(0.39358)** |
| % Correctly Classified | 76.12 | 75.02 | 73.70 | 84.85 | 94.82 |
| **TEC Cluster Type:** | | | | | |
| T1 1 London and Birmingham | -0.59509 (0.49300) | **-0.96844\*** **(0.49685)** | **-1.36662\*\*\*** **(0.47295)** | -0.56301 (0.61234) | -1.22917 (0.94891) |
| T1 2 Relatively Affluent | -0.12988 (0.31023) | -0.32945 (0.30215) | **-0.47801\*** **(0.24670)** | 0.03231 (0.35997) | **-1.21892\*\*** **(0.47693)** |
| T1 4 South East Commuter | 0.06198 (0.31047) | -0.15259 (0.30285) | -0.41484 (0.25855) | 0.40840 (0.34835) | **-2.00637\*\*\*** **(0.62893)** |

**Table A2 continued**

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | Regional Development Agencies |
|---|---|---|---|---|---|
| T1 5 Traditional Industrial Areas | 0.34557 (0.36136) | -0.46408 (0.36917) | **-0.64080\*\*** **(-0.29823)** | 0.36994 (0.40631) | **-1.04211\*** **(0.57168)** |
| T1 6 Traditional Industrial Cities | **0.88301\*\*\*** **(0.31190)** | 0.46014 (0.30702) | -0.21399 (0.29989) | 0.53803 (0.39175) | -0.94029 (0.57501) |
| T1 7 Scotland | 0.45806 (0.46102) | 0.37709 (0.44370) | **-1.26968\*\*** **(0.56421)** | **1.85074\*\*\*** **(0.48258)** | -0.08894 (0.80126) |
| T1 8 Wales | 0.34207 (0.54508) | 0.39524 (0.48991) | -0.01926 (0.52703) | 0.62612 (0.59164) | 1.14081 (0.75549) |
| % Correctly Classified | 76.66 | 75.39 | 74.18 | 84.77 | 94.82 |

58

**Table A.3:** Multivariate estimates of an ordered logit model of the client assessment of the impact of using each source of advice (*** p<0.01; **p<0.05; * p<0.1). Standard errors in parentheses. Notes: for the Urban and Rural the comparison variable is rural locations. For Tec cluster type the comparison variable is T1 3 Rural.

| | Accountant | Solicitor | Bank | Business Friend/Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| Number of Employees | **0.20182**<br>(0.10173) | **0.58719***<br>(0.12647) | **0.33926***<br>(0.11696) | **-0.40102**<br>(0.15806) | **0.24435*<br>(0.13061) | -0.05484<br>(0.14992) | **0.54460***<br>(0.16247) | **0.44590**<br>(0.21933) |
| Exporter/Non-exporter | -0.02173<br>(0.12303) | 0.04472<br>(0.14754) | -0.06275<br>(0.13919) | 0.14879<br>(0.19788) | 0.15119<br>(0.16103) | -0.15482<br>(0.17773) | **-0.46829**<br>(0.18973) | -0.07699<br>(0.28366) |
| Rate of Employment Growth | **0.00140***<br>(0.00051) | **0.00197***<br>(0.00061) | 0.00038<br>(0.00051) | **0.00153***<br>(0.00053) | **0.00106**<br>(0.00052) | -0.00023<br>(0.00050) | 0.00050<br>(0.00049) | 0.00036<br>(0.00213) |
| Profitability per employee | 0.00239<br>(0.00043) | **0.01086*<br>(0.00618) | 0.00523<br>(0.00602) | 0.00084<br>(0.00723) | 0.00526<br>(0.00618) | **-0.01439*<br>(0.00793) | **0.01835**<br>(0.00770) | 0.01531<br>(0.01042) |
| Skill | -0.00019<br>(0.00216) | 0.00201<br>(0.00270) | -0.00077<br>(0.00243) | -0.00142<br>(0.00304) | -0.00029<br>(0.00268) | 0.00138<br>(0.00328) | 0.00101<br>(0.00342) | **-0.01107**<br>(0.00480) |
| Innovator/Non-innovator | 0.15060<br>(0.13481) | 0.15966<br>(0.15777) | -0.10043<br>(0.15190) | 0.17108<br>(0.19763) | **0.36649**<br>(0.16678) | **0.33350*<br>(0.18773) | -0.05873<br>(0.20158) | -0.06947<br>(0.32832) |
| High Technology | -0.07292<br>(0.15294) | 0.04305<br>(0.17884) | **-0.41115**<br>(0.17750) | -0.29034<br>(0.24482) | 0.07142<br>(0.19231) | 0.16212<br>(0.22788) | 0.04183<br>(0.21913) | -0.03395<br>(0.38183) |
| Manufacturing/Services | -0.13061<br>(0.14520) | -0.27106<br>(0.17847) | 0.25737<br>(0.16204) | 0.07599<br>(0.21420) | -0.07187<br>(0.18441) | 0.15927<br>(0.21730) | -0.02262<br>(0.22366) | -0.20282<br>(0.30836) |
| Written Contract | NA | NA | NA | NA | NA | NA | **0.33278*<br>(0.17060) | -0.00705<br>(0.36644) |
| N | 1086 | 762 | 828 | 467 | 632 | 509 | 243 | 228 |
| Log likelihood | -1482.9997 | -1076.3646 | -1219.3888 | -623.4505 | -858.7414 | -687.7030 | -327.1552 | -278.6240 |
| Pseudo $R^2$ | 0.0059 | 0.0217 | 0.0077 | 0.0129 | 0.0107 | 0.0061 | 0.0119 | 0.0222 |
| Goodness of Fit | 25.3152 | **42.3818** | 25.1906 | 23.5504 | 19.5616 | 24.5930 | **36.1975*** | 35.7263 |
| **Geographical Variables**: | | | | | | | | |
| European Union Assisted Area | -0.02606<br>(0.12024) | -0.06302<br>(0.14293) | **0.23176*<br>(0.13687) | -0.18860<br>(0.18899) | 0.11494<br>(0.15914) | 0.19730<br>(0.17207) | -0.03273<br>(0.26090) | 0.16442<br>(0.31067) |
| Goodness of Fit | 28.286 | **45.8576** | 27.9680 | **32.4005*** | 21.7415 | 26.2987 | **37.3250*** | 35.8479 |
| Distance to nearest business centre | -0.00821<br>(0.00638) | 0.00797<br>(0.00747) | -0.00135<br>(0.00704) | **-0.01824*<br>(0.00984) | 0.00063<br>(0.00813) | 0.00921<br>(0.00833) | 0.00630<br>(0.00850) | 0.00852<br>(0.01562) |
| Goodness of Fit | 25.8302 | **47.8970*** | 29.8452 | 29.8202 | 20.5854 | 31.4378 | 22.3522 | **37.7071*** |
| Distance to regional business centre | **-0.00367**<br>(0.001626) | -0.00048<br>(0.00183) | -0.00130<br>(0.00173) | -0.00182<br>(0.00253) | -0.00096<br>(0.00208) | -0.00018<br>(0.00220) | 0.000121<br>(0.00258) | 0.00421<br>(0.00379) |
| Goodness of Fit | 26.269 | **43.2454** | 27.0488 | 32.8257 | 25.2348 | 26.9184 | 25.47932 | **39.7654*** |

**Table A3 continued**

| No. of businesses within: | Accountant | Solicitor | Bank | Business Friend/Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| 1km | **0.19052***** **(0.07299)** | 0.02754 (0.08482) | -0.01378 (0.08304) | **0.22871**** **(0.10874)** | -0.01178 (0.09489) | -0.07259 (0.10537) | **-2.0036*** **(0.11292)** | **-0.40815**** **(0.16446)** |
| Goodness of Fit | 30.6301 | **48.1880*** | 29.1034 | 26.0704 | 20.4009 | 29.9335 | 26.3645 | 36.6246 |
| 15km | **0.24242**** **(0.10131)** | 0.04354 (0.11879) | -0.06901 (0.11540) | **0.33145**** **(0.15071)** | 0.08087 (0.12800) | -0.10392 (0.14196) | -0.06265 (0.15295) | -0.34383 (0.22437) |
| Goodness of Fit | 26.4778 | **45.2006*** | 30.4514 | 26.4647 | 23.2447 | 31.0880 | 22.4648 | **36.8251*** |
| 50km | **0.28387**** **(0.14329)** | 0.02469 (0.16897) | -0.10552 (0.16205) | **0.36183*** **(0.20989)** | 0.00539 (0.18312) | -0.23735 (0.20400) | -0.26451 (0.21967) | -0.18055 (0.32797) |
| Goodness of Fit | 26.0452 | **40.0221*** | 30.8051 | 25.3573 | 22.6574 | 30.9613 | 22.3922 | **38.3418*** |
| **Density of businesses within:** | | | | | | | | |
| 1km | **0.19945***** **(0.07272)** | 0.04134 (0.08456) | -0.02667 (0.08287) | **0.23022**** **(0.10892)** | -0.01226 (0.09386) | -0.07457 (0.10538) | **-0.19512*** **(0.11266)** | **-0.40476**** **(0.16436)** |
| Goodness of Fit | 30.3534 | **49.0394*** | 28.534 | 26.1123 | 20.2633 | 30.0681 | 26.3003 | 36.4727 |
| 15km | **0.24250**** **(0.10131)** | 0.04347 (0.11879) | -0.06901 (0.11539) | **0.33158**** **(0.15071)** | 0.08073 (0.12800) | -0.10399 (0.14195) | -0.06284 (0.15294) | -0.34368 (0.22439) |
| Goodness of Fit | 26.4768 | **45.2038*** | 30.45 | 26.4650 | 23.24546 | 31.08164 | 22.46356 | **36.8253*** |
| 50km | **0.28379**** **(0.14330)** | 0.02481 (0.16900) | -0.10553 (0.16056) | **0.36172*** **(0.20988)** | 0.00524 (0.18315) | -0.23731 (0.20403) | -0.26483 (0.21968) | -0.18032 (0.32801) |
| Goodness of Fit | 26.0468 | **40.0661*** | 30.8014 | 25.3606 | 22.65638 | 30.9631 | 22.3905 | **38.34308*** |
| **% of business service firms within:** | | | | | | | | |
| 1km | **0.01440*** **(0.00808)** | 0.00841 (0.00914) | -0.00431 (0.00924) | **0.02911**** **(0.01166)** | 0.00063 (0.01034) | -0.00636 (0.01199) | -0.01019 (0.01274) | -0.01858 (0.01988) |
| Goodness of Fit | 26.9174 | **44.7026*** | 27.2220 | 27.3394 | 26.3611 | 29.0104 | 21.8877 | **42.5266*** |
| 15km | 0.01790 (0.01194) | 0.00206 (0.01385) | -0.01551 (0.01348) | **0.03172*** **(0.01824)** | 0.00293 (0.01558) | -0.01545 (0.01718) | -0.01648 (0.01890) | -0.00729 (0.02731) |
| Goodness of Fit | 26.8271 | **42.8444*** | 27.3156 | 29.26188 | 23.0778 | 31.9499 | 23.6905 | 36.6966 |
| 50km | 0.01730 (0.01380) | 0.00183 (0.01645) | **-0.02684*** **(0.01566)** | 0.02774 (0.02078) | 0.00009 (0.01818) | -0.01098 (0.02026) | -0.03522 (0.02182) | 0.00444 (0.03141) |
| Goodness of Fit | 26.1264 | **40.0292*** | 29.3690 | 27.32138 | 23.89158 | 29.1536 | 21.49764 | 36.7217 |
| **% of micro firms within:** | | | | | | | | |
| 1km | **-0.02238**** **(0.01132)** | 0.01647 (0.01269) | -0.01105 (0.01203) | 0.00070 (0.01657) | 0.00292 (0.01434) | 0.02045 (0.01635) | -0.01692 (0.01623) | **0.09206***** **(0.02555)** |
| Goodness of Fit | 27.7350 | **40.0311*** | 35.7052 | 24.2308 | 21.9046 | 26.2883 | 26.9234 | **37.6624*** |

**Table A3 continued**

| | Accountant | Solicitor | Bank | Business Friend/Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| 15km | **-0.03798*** **(0.02272)** | 0.01538 (0.02738) | -0.03256 (0.02520) | -0.04141 (0.03411) | -0.03624 (0.02907) | 0.02910 (0.03141) | -0.04170 (0.03384) | **0.09578*** **(0.05739)** |
| Goodness of Fit | 29.9060 | **38.6516*** | 25.1462 | 19.7380 | 27.2124 | 29.7006 | 25.6347 | 35.7639 |
| 50km | -0.01236 (0.03335) | 0.02288 (0.03881) | **-0.08590**** **(0.03661)** | 0.00464 (0.04945) | 0.016852 (0.04208) | -0.00274 (0.04751) | -0.06087 (0.05043) | 0.06089 (0.07969) |
| Goodness of Fit | 28.2554 | **39.8958*** | 23.3454 | 19.5090 | 28.8983 | 31.4011 | 29.7625 | 36.0633 |
| **% of SMEs within:** | | | | | | | | |
| 1km | **0.02816**** **(0.01139)** | -0.01212 (0.01324) | 0.00897 (0.01259) | -0.00577 (0.01738) | -0.00108 (0.01509) | -0.01844 (0.01712) | 0.02307 (0.01712) | **-0.09896***** **(0.02754)** |
| Goodness of Fit | 27.3996 | **44.9758**** | 28.0412 | 18.0996 | 26.5329 | 30.3689 | 27.1409 | 36.8309 |
| 15km | 0.03747 (0.02407) | -0.01634 (0.02816) | 0.03627 (0.02672) | 0.03314 (0.03617) | 0.03300 (0.03088) | -0.02957 (0.03346) | 0.04831 (0.03605) | **-0.10308*** **(0.06034)** |
| Goodness of Fit | 29.7564 | **38.6724*** | 25.3780 | 19.9223 | 26.9930 | 30.0736 | 25.8342 | 35.7218 |
| 50km | 0.01005 (0.03437) | -0.02484 (0.04005) | **0.08901**** **(0.03777)** | -0.00963 (0.05060) | -0.01803 (0.04339) | 0.00437 (0.04917) | 0.06524 (0.05195) | -0.06098 (0.08185) |
| Goodness of Fit | 28.2980 | **39.7070*** | 23.5976 | 19.5417 | 28.6962 | 31.7566 | 29.7297 | 36.0851 |
| **% of Large firms within:** | | | | | | | | |
| 1km | 0.04054 (0.08151) | -0.06086 (0.09780) | -0.04805 (0.08952) | 0.03256 (0.12114) | -0.05427 (0.11503) | **-0.26026**** **(0.12069)** | 0.01334 (0.12863) | **-0.47936**** **(0.21134)** |
| Goodness of Fit | 27.9462 | **42.1544**** | 22.2202 | 21.7835 | 23.9490 | 30.6519 | 29.9182 | 36.1759 |
| 15km | **0.44549**** **(0.22197)** | -0.01821 (0.24560) | 0.04324 (0.24003) | **1.10178***** **(0.32943)** | **0.63617**** **(0.27607)** | -0.27503 (0.30115) | -0.07021 (0.32953) | -0.23792 (0.57011) |
| Goodness of Fit | 27.7696 | **38.8150*** | 21.5558 | 20.1508 | 26.2887 | 30.2006 | 24.2888 | **37.2187*** |
| 50km | 0.58143 (0.46581) | 0.05919 (0.51840) | 0.37950 (0.47954) | 0.82910 (0.67851) | -0.00285 (0.56833) | -0.21800 (0.61137) | -0.12574 (0.67794) | -0.64859 (1.07019) |
| Goodness of Fit | 26.5286 | **39.9688*** | 21.6840 | 18.7715 | 30.7927 | 30.5349 | 26.1308 | **38.7945*** |
| **% of Hi tech firms within:** | | | | | | | | |
| 1km | 0.00223 (0.02432) | -0.01129 (0.02708) | -0.00654 (0.02559) | -0.01066 (0.03339) | -0.02587 (0.03309) | -0.04644 (0.03710) | 0.00873 (0.03354) | -0.03892 (0.06181) |
| Goodness of Fit | 28.9916 | 37.8160 | 24.0450 | 19.4515 | 28.8569 | 33.9140 | 25.3638 | **39.6824*** |
| 15km | 0.03032 (0.03310) | -0.00435 (0.03666) | -0.02423 (0.03577) | 0.00332 (0.04738) | -0.01863 (0.04232) | -0.05758 (0.05127) | -0.05983 (0.04688 | -0.04024 (0.08025) |
| Goodness of Fit | 28.6888 | **40.1066*** | 25.5016 | 18.3480 | 26.6997 | 34.3567 | 26.7222 | **37.5748*** |

**Table A3 continued**

| | Accountant | Solicitor | Bank | Business Friend/Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
|---|---|---|---|---|---|---|---|---|
| 50km | 0.05414 (0.04388) | -0.00933 (0.04874) | -0.00656 (0.04779) | 0.06281 (0.06300) | -0.00440 (0.05547) | -0.06946 (0.06395) | -0.02549 (0.06289) | 0.00362 (0.11048) |
| Goodness of Fit | 27.7162 | **39.8112*** | 25.0006 | 18.6558 | 26.5536 | 28.9071 | 26.2422 | 36.4084 |
| **% of BIG8 firms within:** | | | | | | | | |
| 1km | 0.01544 (0.01495) | 0.01507 (0.01649) | -0.00617 (0.01603) | -0.03158 (0.02117) | -0.01482 (0.01861) | **-0.26026** (0.12069)** | **0.03929*** (0.02172)** | **0.06397*** (0.03691)** |
| Goodness of Fit | 26.0500 | **40.4772**** | 26.5898 | 20.4761 | 27.5161 | 30.6519 | 28.3650 | 36.4157 |
| 15km | 0.01977 (0.02965) | 0.02827 (0.03279) | 0.02056 (0.03179) | -0.05480 (0.04154) | 0.03402 (0.03723) | -0.27503 (0.30115) | 0.03092 (0.04389) | 0.07438 (0.07169) |
| Goodness of Fit | 27.9902 | **37.7188*** | 25.0248 | 26.4259 | 27.3441 | 30.2006 | 28.9341 | **38.8333*** |
| 50km | -0.06392 (0.04650) | 0.03888 (0.05171) | 0.03771 (0.04901) | **-0.13888** (0.06638)** | 0.02462 (0.05790) | -0.21800 (0.61137) | 0.07148 (0.07168) | 0.08891 (0.12424) |
| Goodness of Fit | 25.7670 | **37.7200*** | 23.0650 | 20.5177 | 29.6155 | 30.5356 | 27.0330 | **38.07598*** |
| **% of manufacturing firms within:** | | | | | | | | |
| 1km | 0.00013 (0.01091) | -0.01693 (0.01280) | 0.00448 (0.01221) | -0.02270 (0.01677) | -0.01340 (0.01467) | -0.00308 (0.01582) | 0.00596 (0.01485) | -0.01738 (0.02662) |
| Goodness of Fit | 27.3436 | **37.7434*** | 25.9760 | 22.9664 | 25.5552 | 31.7816 | 30.0317 | **38.3249*** |
| 15km | 0.01210 (0.01927) | -0.00664 (0.02266) | 0.03064 (0.02121) | -0.00877 (0.02859) | -0.01831 (0.02534) | 0.00015 (0.02723) | -0.00800 (0.02901) | -0.05007 (0.04462) |
| Goodness of Fit | 30.4752 | **38.0640*** | 22.8634 | 23.8098 | 30.3643 | 31.5080 | 27.9493 | **37.9210**** |
| 50km | 0.02268 (0.02542) | -0.02052 (0.02999) | **0.05166*** (0.02837)** | 0.01170 (0.03897) | -0.02085 (0.03309) | 0.00362 (0.03525) | 0.02538 (0.03777) | -0.05586 (0.06182) |
| Goodness of Fit | 32.1532 | **40.1594**** | 21.0759 | 20.9208 | 29.8544 | 28.8210 | 28.9562 | 38.2969 |
| **Urban and Rural Categorisation:** | | | | | | | | |
| Conurbation | **0.33242** (0.16375)** | -0.02606 (0.19605) | -0.11673 (0.18418) | 0.36674 (0.24605) | 0.20854 (0.21654) | -0.19283 (0.24495) | 0.01755 (0.25097) | -0.69119 (0.52213) |
| Large Town | 0.19177 (0.19450) | -0.13068 (0.23219) | -0.07207 (0.21642) | 0.37412 (0.31197) | 0.18124 (0.25426) | -0.02035 (0.28798) | 0.08522 (0.30092) | -0.60407 (0.45712) |
| Small Town | 0.03295 (0.16063) | -0.05063 (0.19433) | -0.20394 (0.18172) | 0.04591 (0.24110) | 0.16269 (0.215887) | -0.28756 (0.24271) | -0.00939 (0.24993) | -0.45051 (0.37352) |
| Goodness of Fit | 33.8016 | **48.9274**** | 37.9362 | 42.3545 | 32.8727 | 30.9374 | 29.1441 | **63.0254***** |

**Table A3 continued**

| TEC Cluster Type: | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Accountant | Solicitor | Bank | Business Friend/Relative | Customers | Suppliers | Consultants | Trade/Prof. Association |
| T1 1 London and Birmingham | **0.44039\*\*** **(0.2245)** | 0.22783 (0.27260) | 0.15558 (0.24612) | **0.61339\*** **(0.34512)** | 0.09947 (0.28660) | -0.02054 (0.30461) | -0.45927 (0.33976) | -0.32283 (1.01552) |
| T1 2 Relatively Affluent | 0.32404 (0.20791) | 0.18209 (0.25475) | **0.42555\*** **(0.23119)** | **0.58192\*** **(0.33001)** | 0.05643 (0.27112) | 0.00562 (0.29766) | -0.41002 (0.32448) | 0.00278 (0.50454) |
| T1 4 South East Commuter | 0.08473 (0.20512) | -0.13008 (0.24724) | 0.06216 (0.22358) | 0.09271 (0.31820) | -0.03521 (0.26824) | -0.16803 (0.28873) | **-0.69783\*\*** **(0.32195)** | 0.00038 (0.51882) |
| T1 5 Traditional Industrial Areas | 0.09725 (0.24583) | -0.16329 (0.29942) | **0.45799\*** **(0.25953)** | 0.56744 (0.39328) | -0.05365 (0.33756) | -0.23062 (0.33769) | **-0.76871\*\*** **(0.36661)** | -0.75215 (0.66383) |
| T1 6 Traditional Industrial Cities | 0.21394 (0.22475) | -0.05165 (0.27309) | **0.41700\*** **(0.24688)** | 0.37491 (0.36017) | 0.21026 (0.29175) | 0.09277 (0.31267) | -0.06871 (0.35716) | 0.30665 (0.69978) |
| T1 7 Scotland | 0.06831 (0.28943) | -0.42882 (0.33350) | 0.08730 (0.34194) | -0.08700 (0.42184) | 0.05892 (0.36710) | 0.35356 (0.43786) | **-0.72055\*** **(0.40413)** | 0.47227 (0.92316) |
| T1 8 Wales | -0.21432 (0.35980) | 0.59796 (0.46085) | 0.09372 (0.40167) | 0.21326 (0.60964) | 0.44386 (0.57877) | -0.25894 (0.54057) | **-1.05606\*** **(0.61531)** | -0.64897 (0.85088) |
| Goodness of Fit | 43.6956 | **64.2952\*\*\*** | 43.0714 | **54.3149\*\*\*** | **50.0560\*\*** | 37.05218 | **48.8673\*\*** | **89.8145\*\*\*** |

63

**Table A.4:** Multivariate estimates of an ordered logit model of the client assessment of the impact of using each source of advice (*** p<0.01; **p<0.05; * p<0.1). Standard errors in parentheses. Notes: for the Urban and Rural the comparison variable is rural locations. For TEC cluster type the comparison variable is T1 3 Rural.

| | CCI | TEC | BL | Enterprise Agency | RDC |
|---|---|---|---|---|---|
| Number of Employees | 0.08394 (0.40444) | **0.34034*** **(0.19887)** | 0.14222 (0.18469) | 0.06596 (0.26311) | -0.08135 (0.45291) |
| Exporter/Non-exporter | 0.64239 (0.41991) | -0.27067 (0.23402 | 0.33883 (0.21259) | -0.22809 (0.28733) | **-1.89543*** **(0.56845)** |
| Percentage Rate of Employment Growth | -0.0001 (0.00223) | **0.00267*** **(0.00101)** | 0.00029 (0.00091) | **0.00232** **(0.00118)** | 0.00195 (0.00235) |
| Profitability per employee | **-0.04186*** **(0.02489)** | -0.01371 (0.01652) | -0.00028 (0.01092) | -0.02200 (0.01770) | **-0.14572** **(0.06269)** |
| Skill | **-0.01680** **(0.00818)** | -0.00203 (0.00474) | -0.00065 (0.00459) | 0.00424 (0.00535) | **0.02441** **(0.01134)** |
| Innovator/Non-innovator | -0.57679 (0.52474) | 0.12302 (0.24390) | -0.04023 (0.22987) | 0.31115 (0.30723) | 0.53717 (0.53854) |
| High Technology | 0.46507 (0.48283) | 0.40663 (0.26958) | -0.27399 (0.23840) | -0.21400 (0.35943) | 0.72039 (0.67272) |
| Manufacturing/Services | -0.45328 (0.63321) | 0.25108 (0.30312) | 0.08092 (0.31086) | 0.52539 (0.34986) | 1.96476 (0.74886) |
| Written Contract keep | **1.24277*** **(0.46288)** | 0.85276 (0.21959) | **0.79807*** **(0.19778)** | 0.42386 (0.30112) | NA |
| N | 104 | 301 | 373 | 202 | 63 |
| Log likelihood | -117.0859 | -406.2213 | -519.8660 | -275.6133 | -77.9781 |
| Pseudo R$^2$ | 0.0818 | 0.0436 | 0.0222 | 0.0222 | 0.1283 |
| Goodness of Fit | 21.80 | **40.00*** | **41.87** | **45.84** | 10.94 |
| **Geographical Variables** | | | | | |
| European Union Assisted Area | -0.09448 (0.40062) | -0.28056 (0.21674) | 0.19965 (0.20635) | -0.25430 (0.26130) | 0.06644 (0.51255) |
| Goodness of Fit | 23.40 | **48.77** | **43.20** | **49.10** | 14.27 |
| Distance to nearest business centre | -0.00552 (0.02462) | 0.00570 (0.01255) | 0.01383 (0.01190) | 0.01937 (0.01364) | **0.03638*** **(0.02007)** |
| Goodness of Fit | 23.48 | **41.38*** | **45.30** | **48.28** | 12.88 |
| Distance to regional business centre | **-0.01317** **(0.00576)** | 0.00036 (0.00291) | -0.00139 (0.00257) | 0.00426 (0.00361) | 0.00072 (0.000678) |
| Goodness of Fit | 25.80 | **44.44*** | **43.16** | **50.24*** | 15.32 |

**Table A4 continued**

| No. of businesses within: | | | | | |
|---|---|---|---|---|---|
| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | RDC |
| 1km | **0.51095*** | **-0.32160**** | -0.13294 | **-0.49127**** | -0.28334 |
| | **(0.28889)** | **(0.15852)** | (0.13987) | **(0.19990)** | (0.38328) |
| Goodness of Fit | 24.06 | **44.94**** | **49.08**** | **46.28**** | 12.30 |
| 15km | **1.07976**** | -0.03587 | -0.05470 | -0.39411 | -0.71314 |
| | **(0.41239)** | (0.20555) | (0.18802) | (0.25320) | (0.44830) |
| Goodness of Fit | 23.87 | **48.02**** | **48.20**** | **49.28**** | 25.78 |
| 50km | **1.71892**** | 0.02543 | 0.02531 | -0.50652 | -0.65941 |
| | **(0.59220)** | (0.28077) | (0.26029) | (0.32914) | (0.56889) |
| Goodness of Fit | 22.430 | **50.42***** | **44.52**** | **52.28***** | 13.40 |
| **Density of businesses within:** | | | | | |
| 1km | **0.51405*** | **-0.30765**** | -0.16956 | **-0.42612**** | -0.28384 |
| | **(0.28859)** | **(0.15479)** | (0.13858) | **(0.19136)** | (0.38030) |
| Goodness of Fit | 24.09 | **45.80**** | **47.23**** | **48.28**** | 12.24 |
| 15km | **1.07963**** | -0.03590 | -0.05472 | -0.39435 | -0.71349 |
| | **(0.41241)** | (0.20558) | (0.18803) | (0.25314) | (0.44813) |
| Goodness of Fit | 23.88 | **48.02**** | **48.38**** | **50.68***** | 25.78 |
| 50km | **1.71895**** | 0.02530 | 0.02494 | -0.50665 | -0.66020 |
| | **(0.59214)** | (0.28074) | (0.26029) | (0.32918) | (0.56945) |
| Goodness of Fit | 22.42 | **49.12**** | **44.61**** | **51.06***** | 13.40 |
| **% of business service firms within:** | | | | | |
| 1km | 0.04654 | 0.00025 | -0.00735 | -0.01199 | -0.00113 |
| | (0.03725) | (0.01871) | (0.01556) | (0.02204) | (0.04530) |
| Goodness of Fit | 25.46 | **46.86**** | **47.98**** | **46.80**** | 26.72 |
| 15km | **0.12504**** | 0.00513 | -0.00853 | -0.02330 | -0.01995 |
| | **(0.05224)** | (0.02609) | (0.02255) | (0.02873) | (0.06184) |
| Goodness of Fit | 22.28 | **46.04**** | **45.48**** | **49.42**** | 25.46 |
| 50km | **0.15953**** | 0.02395 | -0.00983 | -0.03233 | 0.00882 |
| | **(0.05587)** | (0.02889) | (0.02491) | (0.03325) | (0.07422) |
| Goodness of Fit | 22.16 | **49.42**** | **43.22**** | **50.68***** | 25.74 |
| **% of micro firms within:** | | | | | |
| 1km | -0.04868 | -0.00939 | 0.00438 | -0.02514 | 0.04921 |
| | (0.04260) | (0.02217) | (0.01812) | (0.02683) | (0.05224) |
| Goodness of Fit | 22.26 | **46.76**** | **44.24**** | **54.58***** | 13.30 |

**Table A4 continued**

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | RDC |
|---|---|---|---|---|---|
| 15km | -0.02795 (0.09449) | **-0.08391\* (0.04459)** | **-0.07576\* (0.03925)** | -0.05037 (0.05231) | 0.08999 (0.10434) |
| Goodness of Fit | 24.24 | **42.98\*\*** | **44.32\*\*** | **52.28\*\*\*** | 13.70 |
| 50km | 0.12081 (0.12791) | -0.05084 (0.06473) | -0.06916 (0.05705) | 0.05052 (0.07703) | -0.04289 (0.13832) |
| Goodness of Fit | 23.48 | **43.84\*\*** | **43.12\*\*** | **52.48\*\*\*** | 12.22 |
| **% of SMEs within:** | | | | | |
| 1km | 0.05131 (0.04677) | 0.01316 (0.02401) | -0.00341 (0.01942) | 0.03061 (0.02905) | -0.06068 (0.05561) |
| Goodness of Fit | 22.24 | **41.04\*** | **44.08\*\*** | **52.36\*\*\*** | 13.36 |
| 15km | 0.02347 (0.10162) | **0.08907\* (0.04762)** | **0.07821\* (0.04182)** | 0.05486 (0.05593) | -0.09437 (0.11521) |
| Goodness of Fit | 23.96 | **43.14\*\*** | **43.96\*\*** | **50.52\*\*\*** | 24.20 |
| 50km | -0.15338 (0.13280) | 0.04991 (0.06745) | 0.06745 (0.05909) | 0.06494 (0.08017) | 0.06083 (0.15235) |
| Goodness of Fit | 23.54 | **43.22\*\*** | **42.97\*\*** | **52.62\*\*\*** | 12.08 |
| **% of Large firms within:** | | | | | |
| 1km | 0.32948 (0.30994) | -0.11284 (0.17232) | -0.07458 (0.13117) | -0.06717 (0.21723) | 0.46710 (0.52626) |
| Goodness of Fit | 22.88 | **44.10\*\*** | **47.02\*\*** | **54.74\*\*\*** | 13.54 |
| 15km | 0.54119 (0.79938) | 0.53108 (0.41738) | **0.67996\* (0.39015)** | 0.23571 (0.50240) | -0.78021 (0.81971) |
| Goodness of Fit | 25.04 | **46.67\*\*** | **48.00\*\*** | **47.56\*\*** | 11.76 |
| 50km | **4.10103\*\* (1.81940)** | 0.72628 (0.78434) | 1.11060 (0.75867) | -1.25157 (0.87917) | -0.50337 (1.14188) |
| Goodness of Fit | 21.74 | **48.58\*\*** | **44.74\*\*** | **50.02\*\*\*** | 13.01 |
| **% of Hi tech firms within:** | | | | | |
| 1km | 0.04836 (0.09192) | 0.06935 (0.05352) | -0.04788 (0.04358) | 0.04553 (0.06263) | 0.01578 (0.15333) |
| Goodness of Fit | 23.50 | **43.66\*\*** | **43.94\*\*** | **58.92\*\*\*** | 32.92 |
| 15km | **0.28052\* (0.15128)** | 0.03079 (0.07208) | -0.03676 (0.06225) | -0.05640 (0.07726) | 0.06137 (0.18341) |
| Goodness of Fit | 23.39 | **47.20\*\*** | **45.72\*\*** | **54.84\*\*\*** | 22.88 |

**Table A4 continued**

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | RDC |
|---|---|---|---|---|---|
| 50km | **0.62534*** (0.20368)** | 0.08287 (0.09167) | -0.03075 (0.08198) | -0.04864 (0.10693) | -0.02630 (0.21191) |
| Goodness of Fit | 20.86 | **51.70*** ** | **42.88** ** | **69.56* ** | 14.42 |
| **% of BIG8 firms within:** | | | | | |
| 1km | -0.01471 (0.05125) | -0.00145 (0.02902) | 0.01697 (0.02405) | 0.04509 (0.03537) | -0.11217 (0.07423) |
| Goodness of Fit | 23.10 | **47.36** ** | **44.06** ** | **50.10*** ** | 17.14 |
| 15km | **-0.18613* (0.10491)** | 0.04209 (0.05483) | 0.02146 (0.04930) | 0.09146 (0.06468) | 0.13327 (0.11446) |
| Goodness of Fit | 25.56 | **42.86** ** | **43.78** ** | **47.88** ** | 28.24 |
| 50km | **-0.27206* (0.16508)** | 0.02878 (0.07890) | -0.01247 (0.07906) | **0.18841** (0.09416)** | 0.24469 (0.15146) |
| Goodness of Fit | 22.96 | **47.68** ** | **42.49* ** | **47.40** ** | 28.28 |
| **% of Manufacturing firms within:** | | | | | |
| 1km | 0.00276 (0.03088) | 0.02884 (0.02131) | -0.01094 (0.01624) | 0.03111 (0.02659) | -0.01216 (0.05632) |
| Goodness of Fit | 23.26 | **43.50** ** | **42.48* ** | **47.22** ** | 11.34 |
| 15km | 0.03535 (0.06146) | 0.01082 (0.03736) | 0.01189 (0.03136) | 0.02015 (0.04181) | -0.06874 (0.09308) |
| Goodness of Fit | 22.12 | **45.08** ** | **42.30* ** | **47.39** ** | 23.96 |
| 50km | 0.00416 (0.08568) | -0.02404 (0.05176) | 0.04574 (0.04265) | -0.03236 (0.06164) | -0.11317 (0.12948) |
| Goodness of Fit | 23.08 | **40.42* ** | **43.42** ** | **46.76** ** | 24.24 |
| **Urban & Rural Categorisation:** | | | | | |
| Conurbation | **1.46662** (0.57209)** | -0.00864 (0.33252) | -0.28608 (0.28664) | -0.66753 (0.42110) | **-1.31142* (0.75657)** |
| Large Town | **1.45282* (0.76054)** | -0.22142 (0.39035) | -0.39319 (0.35092) | -0.41222 (0.47251) | **-1.63547** (0.82876)** |
| Small Town | 0.70582 (0.58816) | 0.31928 (0.33180) | -0.18436 (0.28723) | -0.13899 (0.41301) | -0.75833 (0.75425) |
| Goodness of Fit | 26.46 | **54.04*** ** | **57.05*** ** | **53.38*** ** | **35.00* ** |
| **TEC Cluster Type:** | | | | | |
| T1 1 London and Birmingham | **2.50895*** (0.81754)** | 0.06772 (0.46929) | -0.40712 (0.36798) | -0.69489 (0.63075) | -1.18836 (1.10618) |

**Table A4 continued**

| | CCI | TEC/LEC | BL/BS/BC | Enterprise Agency | RDC |
|---|---|---|---|---|---|
| T1 2 Relatively Affluent | **1.40822*** **(0.73884)** | 0.36973 (0.40410) | -0.04093 (0.32009) | -0.02152 (0.59069) | 0.06674 (0.75993) |
| T1 4 South East Commuter | **1.99485**** **(0.81853)** | 0.20128 (0.40303) | -0.35443 (0.32901) | 0.33468 (0.57235) | 0.66839 (1.29570) |
| T1 5 Traditional Industrial Areas | **1.88572**** **(0.81316)** | 0.62010 (0.47005) | 0.27076 (0.35891) | 0.55713 (0.60009) | -0.98321 (1.04892) |
| T1 6 Traditional Industrial Cities | 0.84272 (0.76553) | -0.04902 (0.39669) | -0.28581 (0.34678) | -0.24163 (0.57200) | -0.49111 (0.86969) |
| T1 7 Scotland | 1.04712 (0.884856) | **0.96703*** **(0.50635)** | 0.83651 (0.98943) | 0.53179 (0.57498) | 0.84089 (1.16355) |
| T1 8 Wales | **2.85566*** **(1.48032)** | 0.52923 (0.56826) | 0.01305 (0.76203) | 0.10951 (0.87296) | 0.32222 (0.93190) |
| Goodness of Fit | 44.52 | **65.12*** | **66.38*** | **81.16***** | **73.54**** |

**Table A.5:** Estimates of a logit model of the expectation of a firm in the last 3 years entering into formal or informal collaborative or partnership arrangements with a range of other organisations (*** p<0.01; **p<0.05; * p<0.1).  Standard errors in parentheses. Notes: for the Urban and Rural variable the comparison variable is rural locations.  For TEC cluster type the comparison variable is T1 3 Rural.

| | National/International Collaborative or Partnership Arrangements | | | Local Collaborative or Partnership Arrangements | | |
|---|---|---|---|---|---|---|
| | Supplier | Customers | Firms in line of business | Supplier | Customers | Firms in line of business |
| Number of Employees | **0.52536\*\*\*** (**0.15555**) | **0.65591\*\*\*** (**0.14679**) | **0.46107\*\*\*** (**0.13513**) | -0.34124 (0.25605) | -0.17459 (0.30643) | -0.33247 (0.22705) |
| Exporter/Non-exporter | **0.76342\*\*\*** (**0.19162**) | **0.60424\*\*\*** (**0.17816**) | **0.61147\*\*\*** (**0.17184**) | 0.14212 (0.32865) | -0.41230 (0.39930) | -0.50254 (0.32135) |
| Rate of Employment Growth | **0.00248\*\*\*** (**0.00065**) | **0.00154\*\*\*** (**0.00058**) | 0.00022 (0.00054) | -0.0004 (0.00136) | 0.00045 (0.00104) | -0.00197 (0.00184) |
| Profitability per employee | -0.00116 (0.00685) | -0.00496 (0.00636) | -0.00830 (0.00568) | 0.00783 (0.00854) | -0.00962 (0.01024) | 0.00961 (0.00752) |
| Skill | 0.01586 (0.00345) | **0.01165\*\*\*** (**0.00327**) | **0.01820\*\*\*** (**0.00295**) | 0.00117 (0.00483) | 0.00633 (0.00626) | 0.00144 (0.00414) |
| Innovator/Non-innovator | 0.18327 (0.19068) | **0.41027\*\*** (**0.17569**) | **0.50250\*\*\*** (**0.16914**) | 0.19130 (0.34856) | -0.05143 (0.44096) | -0.18689 (0.34989) |
| High Technology | 0.08836 (0.21065) | **0.43513\*\*** (**0.19325**) | **0.48609\*\*** (**0.19206**) | -0.06558 (0.43558) | -0.14913 (0.51438) | 0.38827 (0.38143) |
| Manufacturing/Services | **0.40224\*** (**0.23599**) | 0.29467 (0.22342) | **-0.48391\*\*** (**0.20162**) | **-0.84795\*\*** (**0.35149**) | -0.02308 (0.43386) | **-1.28515\*\*\*** (**0.32258**) |
| Constant | **-4.08693\*\*\*** (**0.38427**) | **-3.80373\*\*\*** (**0.35549**) | **-3.07795\*\*\*** (**0.30995**) | **-2.56322\*\*\*** (**0.45867**) | **-3.38422\*\*\*** (**0.60239**) | **-1.88028\*\*\*** (**0.38992**) |
| N | 1338 | 1338 | 1338 | 1338 | 1338 | 1338 |
| Log likelihood | -483.2857 | -529.2312 | -562.0171 | -208.9163 | -159.5751 | -239.3227 |
| Pseudo R$^2$ | 0.0917 | 0.0898 | 0.1135 | 0.0356 | 0.0154 | 0.0899 |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| **Geographical Variables:** | | | | | | |
| European Union Assisted Area | 0.06653 (0.18208) | 0.11189 (0.17023) | -0.23169 (0.17211) | -0.28817 (0.34074) | -0.59272 (0.43124) | **-0.59299\*** (**0.33199**) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| Distance to nearest business centre | -0.00811 (0.01018) | **-0.01695\*** (**0.00998**) | 0.00896 (0.00845) | -0.02415 (0.02080) | -0.03191 (0.02554) | **-0.04432\*\*** (**0.02147**) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| Distance to regional business centre | -0.00040 (0.00232) | 0.00070 (0.00215) | 0.00006 (0.00209) | 0.00052 (0.00392) | -0.00192 (0.00499) | -0.00025 (0.00356) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |

**Table A5 continued**

| | National/International Collaborative or Partnership Arrangements | | | Local Collaborative or Partnership Arrangements | | |
|---|---|---|---|---|---|---|
| | Supplier | Customers | Firms in line of business | Supplier | Customers | Firms in line of business |
| **No. of businesses within:** | | | | | | |
| 1km | -0.08445 (0.10977) | -0.07664 (0.10466) | -0.02555 (0.09803) | 0.06473 (0.18128) | -0.04412 (0.22329) | **0.52018*** (0.16240)** |
| % Correctly Classified | 86.55 | 84.45 | 82.27 | 96.19 | 97.38 | 95.07 |
| 15km | -0.06366 (0.15094) | -0.01526 (0.14340) | 0.00252 (0.13603) | -0.04739 (0.25562) | 0.13962 (0.30660) | **0.57362** (0.22634)** |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | 0.10449 (0.21140) | -0.06513 (0.19907) | -0.04734 (0.18944) | -0.17191 (0.34886) | 0.71582 (0.46212) | 0.37845 (0.32637) |
| % Correctly Classified | 86.62 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| **Density of businesses within:** | | | | | | |
| 1km | -0.08002 (0.10934) | -0.07074 (0.10413) | -0.04467 (0.09758) | 0.06656 (0.18111) | -0.04040 (0.22262) | **0.51835*** (0.16233)** |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 15km | -0.06378 (0.15094) | -0.01531 (0.14340) | 0.00261 (0.13603) | -0.04747 (0.25563) | 0.13959 (0.30660) | **0.57359** (0.22633)** |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | 0.10439 (0.21139) | -0.06525 (0.19907) | -0.04737 (0.18944) | -0.17201 (0.34889) | 0.71574 (0.46211) | 0.37866 (0.32638) |
| % Correctly Classified | 86.62 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| **% of business service firms within:** | | | | | | |
| 1km | -0.00981 (0.01189) | -0.01077 (0.01146) | 0.00722 (0.01021) | 0.01461 (0.01875) | 0.01341 (0.02296) | **0.03271** (0.01613)** |
| % Correctly Classified | 86.62 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 15km | 0.00819 (0.01767) | 0.00375 (0.01686) | 0.00421 (0.01583) | 0.00333 (0.02960) | 0.04426 (0.03489) | **0.04343* (0.02588)** |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | 0.00502 (0.02064) | 0.01249 (0.01954) | 0.00665 (0.01840) | -0.03409 (0.03523) | 0.04523 (0.04079) | 0.01748 (0.03019) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |

**Table A5 continued**

| | National/International Collaborative or Partnership Arrangements | | | Local Collaborative or Partnership Arrangements | | |
|---|---|---|---|---|---|---|
| | Supplier | Customers | Firms in line of business | Supplier | Customers | Firms in line of business |
| **% of micro firms within:** | | | | | | |
| 1km | 0.00152 (0.01609) | 0.00766 (0.01520) | **0.03295** (0.01450) | -0.02707 (0.02803) | 0.03688 (0.03318) | -0.01255 (0.02490) |
| % Correctly Classified | 86.55 | 84.45 | 82.50 | 96.19 | 97.38 | 95.07 |
| 15km | 0.02181 (0.03437) | -0.04156 (0.03291) | **0.05902*** (0.03108) | -0.01738 (0.05997) | 0.04213 (0.06994) | 0.03982 (0.05341) |
| % Correctly Classified | | | | | | |
| 50km | -0.01342 (0.05031) | -0.00608 (0.04723) | 0.06359 (0.04515) | -0.00982 (0.08690) | 0.06787 (0.10228) | 0.10274 (0.07848) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| **% of SME firms within:** | | | | | | |
| 1km | -0.00103 (0.01741) | -0.00693 (0.01643) | **-0.034432** (0.01576) | 0.03142 (0.03028) | -0.03778 (0.03365) | 0.01201 (0.02690) |
| % Correctly Classified | 86.55 | 84.45 | 82.42 | 96.19 | 97.38 | 95.07 |
| 15km | -0.02171 (0.03652) | 0.04367 (0.03495) | **-0.06113*** (0.03300) | 0.02034 (0.06350) | -0.0469 (0.07413) | -0.05038 (0.05646) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | 0.01252 (0.05192) | 0.00579 (0.04881) | -0.06502 (0.04655) | 0.01471 (0.08941) | -0.07628 (0.10562) | -0.10499 (0.08062) |
| % Correctly Classified | 86.55 | 84.55 | 82.21 | 96.19 | 97.38 | 95.07 |
| **% of Large firms within:** | | | | | | |
| 1km | -0.03416 (0.11799) | -0.09408 (0.11373) | **-0.21164*** (0.11597) | 0.00385 (0.21065) | -0.28145 (0.28289) | 0.12891 (0.18562) |
| % Correctly Classified | 86.55 | 84.55 | 82.21 | 96.19 | 97.38 | 95.07 |
| 15km | -0.23494 (0.32442) | 0.26326 (0.31643) | -0.43711 (0.29514) | -0.05716 (0.57703) | -0.00047 (0.68510) | 0.54888 (0.55027) |
| % Correctly Classified | 86.55 | 84.55 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | 0.32558 (0.68700) | 0.10758 (0.63396) | -0.46726 (0.59926) | -0.72274 (1.06436) | 0.76174 (1.10063) | -0.54406 (0.99424) |
| % Correctly Classified | 86.55 | 84.55 | 82.21 | 96.19 | 97.38 | 95.07 |
| **% of Hitec firms within:** | | | | | | |

**Table A5 continued**

| | National/International Collaborative or Partnership Arrangements | | | Local Collaborative or Partnership Arrangements | | |
|---|---|---|---|---|---|---|
| | Supplier | Customers | Firms in line of business | Supplier | Customers | Firms in line of business |
| 1km | -0.00669 (0.03545) | 0.02634 (0.03249) | 0.02529 (0.03126) | 0.00122 (0.06166) | **0.12591** (0.06193) | -0.07776 (0.06093) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 15km | 0.04094 (0.04732) | 0.06879 (0.04458) | -0.00444 (0.04417) | -0.01340 (0.08603) | **0.20646** (0.08359) | -0.10341 (0.08337) |
| % Correctly Classified | 86.70 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | 0.03223 (0.06515) | 0.08283 (0.06131) | 0.01837 (0.05892) | -0.01979 (0.11383) | 0.19944 (0.12857) | -0.01354 (0.10163) |
| % Correctly Classified | 86.62 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| **% of BIG8 firms within:** | | | | | | |
| 1km | -0.00996 (0.02210) | 0.01256 (0.02030) | -0.00059 (0.01969) | 0.01996 (0.03662) | -0.00865 (0.04603) | -0.04861 (0.03655) |
| % Correctly Classified | 86.61 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 15km | 0.02299 (0.04371) | 0.00943 (0.04153) | 0.02443 (0.03934) | 0.05457 (0.06899) | **-0.20538** (0.10494) | -0.03705 (0.06838) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | -0.00744 (0.07036) | -0.05292 (0.06758) | 0.03066 (0.06212) | -0.02774 (0.11837) | -0.24695 (0.16464) | -0.05730 (0.10572) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| **% of Manufacturing firms within:** | | | | | | |
| 1km | 0.00393 (0.01609) | 0.00289 (0.01514) | -0.01602 (0.01553) | 0.00325 (0.02821) | 0.00373 (0.03284) | 0.00292 (0.02563) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 15km | -0.01150 (0.03036) | -0.00403 (0.02828) | -0.04402 (0.02885) | -0.04018 (0.05554) | 0.06539 (0.05768) | -0.05619 (0.05095) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |
| 50km | 0.00058 (0.04012) | -0.01040 (0.03768) | **-0.07383*** (0.03814) | 0.06235 (0.06748) | 0.03721 (0.08022) | -0.07502 (0.06690) |
| % Correctly Classified | 86.55 | 84.53 | 82.21 | 96.19 | 97.38 | 95.07 |

**Table A5 continued**

| | National/International Collaborative or Partnership Arrangements | | | Local Collaborative or Partnership Arrangements | | |
|---|---|---|---|---|---|---|
| | Supplier | Customers | Firms in line of business | Supplier | Customers | Firms in line of business |
| **Urban/Rural Categorisation:** | | | | | | |
| Conurbation | 0.05452 (0.25608) | -0.14756 (0.23892) | -0.09347 (0.25740) | 0.04073 (0.45012) | -0.00898 (0.048460) | **0.66670\* (0.40164)** |
| Large Town | 0.12532 (0.29354) | **0.43072\* (0.25816)** | -0.09536 (0.22380) | 0.44971 (0.47386) | -0.33964 (0.59973) | 0.19208 (0.47230) |
| Small Town | 0.20529 (0.24872) | -0.14415 (0.23431) | -0.27831 (0.22486) | -0.00489 (0.44993) | -0.31779 (0.50386) | -0.23128 (0.44488) |
| % Correctly Classified | 86.55 | 84.60 | 82.21 | 96.19 | 97.38 | 95.07 |
| **TEC Cluster Type:** | | | | | | |
| T1 1 London and Birmingham | -0.17439 (0.31395) | -0.26646 (0.30433) | -0.19529 (0.25844) | 0.02364 (0.53745) | 0.73273 (0.66266) | 0.67020 (0.49726) |
| T1 2 Relatively Affluent | 0.04438 (0.27137) | 0.03996 (0.25492) | -0.32932 (0.24103) | 0.48280 (0.47062) | 0.91262 (0.61090) | -0.02059 (0.43804) |
| T1 4 South East Commuter | 0.15652 (0.25905) | 0.23056 (0.24374) | -0.15760 (0.22702) | 0.21508 (0.47347) | 0.75210 (0.61240) | -0.04413 (0.41487) |
| T1 5 Traditional Industrial Areas | 0.31483 (0.32019) | 0.32546 (0.29994) | -0.47483 (0.32924) | 0.30746 (0.63285) | 0.91952 (0.72350) | -0.34262 (0.66855) |
| T1 6 Traditional Industrial Cities | 0.14345 (0.29705) | 0.15056 (0.27951) | -0.16600 (0.26592) | 0.51306 (0.51785) | 0.16465 (0.77354) | -0.04054 (0.49906) |
| % Correctly Classified | 86.55 | 84.45 | 82.21 | 96.19 | 97.38 | 95.07 |