This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with its author and that no quotation from the thesis and no information derived from it may be published without the author's prior consent.

ECONOMIC LINKAGES WITHIN THE RURAL ECONOMY: THE CASE OF PRODUCER SERVICES

by

BRYAN KEITH MILLS

A thesis submitted to the University of Plymouth in partial fulfilment for the degree of

DOCTOR OF PHILOSOPHY

Department of Land Use and Rural Management Faculty of Land, Food and Leisure

July 2002

Bryan Keith Mills

Economic linkages within the rural economy: the case of producer services

This research seeks to contribute towards the understanding of economic linkage within the rural context by exploring the relationship between rurally located small to medium-sized enterprises (SMEs) and their purchase of producer (business) services. In addition, the work considers other inter-rural and intra-rural differences, in both firm (SMEs) behaviour and firm characteristics.

Whilst the subject of linkages has been explored by other researchers, the market town and SME focus of this thesis provides a more spatially contained framework than is often encountered within this type of research. By focusing on four towns of similar size and structure contained within two noticeably different counties, the work is able to explore difference within the rural setting. Given its focus on market towns, rural areas, SMEs, the service sector and indigenous growth potential, the work contributes to current debates in both academia and in national and European government policy.

The underlying hypothesis that forms the basis of this research is that integration, in terms of local spending on producer services, is a function of a firm's characteristics. In order to test this hypothesis, data was collected from four rural towns and a logistic regression model was constructed using variables that described both firms' characteristics and proportion of spend on services in their resident town. The model was then tested using data from a further two towns.

This thesis has shown that there is a relationship between some of a firm's characteristics and the location of the firm's producer service spending, enhancing our understanding of firms operating within the rural context. Key characteristic variables that are shown to have a relationship with producer service spend location are: firm Standard Industrial Classification (SIC), size (in terms of total sales, total number of hours worked by all staff), total spend on producer services by firm and distance that the current location is from the firm's previous location. Given the changing role and nature of rural firms, this research provides timely information concerning the relationship between firms and service providers.

Contents:

List of Tables:	vi
List of Figures:	viii
Acknowledgement	X
Chapter 1: Introduction	1
1.1 Introduction	1
1.2 The History of the Rural 'Problem'	2
1.3 Possible Solutions	3
1.4 The Theoretical and Real World Importance of Linkages	5
1.5 Producer Services	6
1.6 Rural SMEs	<i>7</i>
1.7 The Relationship between SMEs and Producer Services	8
1.8 General Research Aim	10
1.9 Structure of the Thesis	11
Chapter 2: Literature Review	13
2.1 Introduction	13
2.2 What is the Rural Economy?	13
2.3 Defining Economic Linkages and Multipliers	24
2.4 The Role of Service Industries	36

2.5 The Importance of SMEs in general42
2.6 Decision-making in SMEs47
2.7 Availability of Services51
2.8 Summary51
Chapter 3: Research Methodology Error! Bookmark not defined.
3.1 Introduction Error! Bookmark not defined.
3.2 Research Aims Error! Bookmark not defined.
3.3 Research Objectives Error! Bookmark not defined.
3.4 Conceptualisation and OperationalisationError! Bookmark not defined.
3.4 Summary Error! Bookmark not defined.
Chapter 4: Data Collection and Description Error! Bookmark not defined.
4.1 The Reasons for Selecting Multiple TownsError! Bookmark not defined.
4.2 Rationale for the Selection of Towns Error! Bookmark not defined.
4.3 Questionnaire Pre-Test and Pilot Stage Error! Bookmark not defined.
4.5 Consideration of the Significance of Low Pilot Response Rates Error!
Bookmark not defined.
4.6 Actual Response Rate to Main Survey Error! Bookmark not defined.
4.7 Main Features of Respondents Error! Bookmark not defined.
4.8 Economic Linkages
4.9 Inter Town/County Differences

4.10 The Significance of the Inter-County Differences. Error! Bookmark not defined.

4.11 Conclusion Error! Bookmark not defined.

Chapter 5: Preliminary Data Analysis and Model Development Error!

Bookmark not defined.

5.1 Introduction Error! Bookmark not defined.
5.2 Correlations with Characteristics Error! Bookmark not defined.
5.3 Indigeneity Error! Bookmark not defined.
5.4 Virtual Employees and Quasi-Products Error! Bookmark not defined.
5.5 Variable Preparation
5.6 Variable Selection Error! Bookmark not defined.
5.7 Correlation Analysis Error! Bookmark not defined.
5.8 Multicollinearity Error! Bookmark not defined.
5.9 Possible Variables to be Included in ModelError! Bookmark not defined.
5.9 Possible Variables to be Included in ModelError! Bookmark not defined. 5.10 Conclusion
· · · · · · · · · · · · · · · · · · ·
5.10 Conclusion Error! Bookmark not defined.
5.10 Conclusion Error! Bookmark not defined. Chapter 6: Multivariate Model Estimation Error! Bookmark not defined.
5.10 Conclusion Error! Bookmark not defined. Chapter 6: Multivariate Model Estimation Error! Bookmark not defined. 6.1 Introduction Error! Bookmark not defined.
5.10 Conclusion Error! Bookmark not defined. Chapter 6: Multivariate Model Estimation Error! Bookmark not defined. 6.1 Introduction Error! Bookmark not defined. 6.2 Results of Model Estimation Error! Bookmark not defined.

	8.6 Summary Error.	Bookmark not defined.
C	Chapter 7: Discussion and Conclusion Error	! Bookmark not defined.
	9.1 Introduction Error.	Bookmark not defined.
	9.2 Intra-rural Difference in Firm Characteristics as	nd Behaviour Error!
Bookm	nark not defined.	
	9.3 Integration as a Function of a Firm's Characters	sticsError! Bookmark not
defined	ed.	
	9.4 Indigeneity Error.	Bookmark not defined.
	9.5 Virtual Employees and Quasi-Products Error.	Bookmark not defined.
	9.6 The Relationship between Research Findings and	d Policy Error! Bookmark
not def	efined.	
	9.7 Methodological ConsiderationsError.	Bookmark not defined.
	9.8 Areas for Further Research	Bookmark not defined.
	Appendix 1 - The Original Research ProposalError	Bookmark not defined.
	Appendix 2 - Qualitative Research Method Error.	Bookmark not defined.
	Appendix 3 - Initial Interview Guidelines Error.	Bookmark not defined.
	Appendix 4 - Revised Guidelines (1st revision)Error	! Bookmark not defined.
	Appendix 5 - Revised Guidelines (2nd revision)Erro	r! Bookmark not defined.
	Appendix 6 - Revised Guidelines (3rd revision)Error	e! Bookmark not defined.
	Appendix 7 - QuestionnaireError.	Bookmark not defined.

Appendix 8 - Justification for Individual Questions in Questionnaire.. **Error! Bookmark not defined.**

Appendix 9 - Questionnaire Development Log Error! Bookmark not defined.

Appendix 10 - Covering Letter Style 1............Error! Bookmark not defined.

Appendix 11 - Covering Letter Style 2..........Error! Bookmark not defined.

Appendix 12 - Variables Included in Significance of Difference AnalysisError!

Bookmark not defined.

Appendix 13 – Individual Service Models Error! Bookmark not defined.

References Error! Bookmark not defined.

List of Tables:

Table 1: Developmental and Dependent Linkage Relationships	30
Table 2: Number of Businesses, Employment & Turnover (1998)	42
Table 3: SME Innovation	44
Table 4: Sources of SME Advice	40
Table 5: Operationalisation of the Main Conceptual Hypothesis	Error! Bookmark not defined
Table 6: Index of Deprivation - Cornwall	Error! Bookmark not defined
Table 7: Cornish Towns	Error! Bookmark not defined
Table 8: Oxfordshire Towns	Error! Bookmark not defined
Table 9: Wantage, Thame, Helston, Bodmin Compared	Error! Bookmark not defined
Table 10: Summary of Pilot Results	Error! Bookmark not defined
Table 11: Reasons for Non-Response	Error! Bookmark not defined
Table 12: Structure of Firms in the Four Towns	Error! Bookmark not defined
Table 13: Expected Response per SIC	Error! Bookmark not defined
Table 14: Number of Firms on Database	Error! Bookmark not defined
Table 15: Usable population	Error! Bookmark not defined

Table 16: Final Response Rate	Error! Bookmark not defined.
Table 17: Correlation of Population and Response	Error! Bookmark not defined.
Table 18: Difference Between First and Last Quartile by Date Returned	Error! Bookmark not defined.
Table 19: Difference Between all Quartiles by Date Returned	Error! Bookmark not defined.
Table 20: Size of Firms	Error! Bookmark not defined
Table 21: History of Firms	Error! Bookmark not defined.
Table 22: Type of Firms	Error! Bookmark not defined.
Table 23: Number of Type Changes per Firm	Error! Bookmark not defined.
Table 24: Decision-maker Profile (Years with firm and Age)	Error! Bookmark not defined.
Table 25: Decision-maker Profile (distance and qualifications)	Error! Bookmark not defined
Table 26: Location of Service Providers by Proportion of Total Service Spend	d Error! Bookmark not defined
Table 27: Correlation between Tele-sales and UK Service Provision	Error! Bookmark not defined
Table 28: Location of Service Provision by SIC	Error! Bookmark not defined
Table 29: Location of Output Markets by SIC	Error! Bookmark not defined
Table 30: Organisation Membership	Error! Bookmark not defined
Table 31: Significant Inter Town/County Firm Differences	Error! Bookmark not defined
Table 32: Service Availability - Number of Service Firms per Town	Error! Bookmark not defined.
Table 33: Use of Services per Town by Firms Surveyed	Error! Bookmark not defined.
Table 34: Service Availability - Employees	Error! Bookmark not defined.
Table 35: Percentage of Firms that use Service in Same Town	Error! Bookmark not defined.
Table 36: Mean Spend on Services	Error! Bookmark not defined.
Table 37: Significance of Difference in Spend between Towns	Error! Bookmark not defined.
Table 38: Overall Service Cost per £ of Sales	Error! Bookmark not defined
Table 39: Service Location and Firm/Decision-Maker Characteristics (1)	Error! Bookmark not defined.
Table 40: Service Location and Firm/Decision-Maker Characteristics (2)	Error! Bookmark not defined.
Table 41: Service Location and Firm/Decision-Maker Characteristics (3)	Error! Bookmark not defined.
Table 42: Service Location and Firm/Decision-Maker Characteristics (4)	Error! Bookmark not defined.
Table 43: Indigeneity - Local Spend Correlation	Error! Bookmark not defined.
Table 44: Indigeneity - Distance to Service Correlation	Error! Bookmark not defined.
Table 45: Categorical Variables	Error! Bookmark not defined.
Table 46: Town and SIC dummy variables	Error! Bookmark not defined

Table 47: Ordinal Variables	. Error! Bookmark not defined.
Table 48: Adjusted Ordinal Variables	Error! Bookmark not defined.
Table 49: Univariate Logistic Regression	. Error! Bookmark not defined.
Table 50: Model 1 – Significant Spearman's Correlation (% Same Town Spearman)	nd) Error! Bookmark not
defined.	
Table 51: Univariate and Spearman's Compared	. Error! Bookmark not defined.
Table 52: Multicollinearity and Spearman's Correlation	. Error! Bookmark not defined.
Table 53: Possible Variables to be included in Model	Error! Bookmark not defined.
Table 54: Hypothesis 1 Results	. Error! Bookmark not defined.
Table 55: Distribution of Service Spend by SIC	Error! Bookmark not defined.
Table 56: Indigeneity Results	Error! Bookmark not defined.
Table 57: Hypothesis 2 Results	Error! Bookmark not defined.
Table 58: Comparison of Models using Various Significance Levels	Error! Bookmark not defined.
Table 59: Logistic Regression Model	Error! Bookmark not defined.
Table 60: Model Interactions	Error! Bookmark not defined.
Table 61: Model Coefficients	Error! Bookmark not defined.
Table 62: Impact of Model Coefficients in Descending Order	. Error! Bookmark not defined.
Table 63: Individual Service Models	. Error! Bookmark not defined.
Table 64: Variables shared between Total and Individual Service Spend Mod	lels Error! Bookmark not
defined.	
Table 65: Variables not shared between Total and Individual Service Spend	Models Error! Bookmark not
defined.	
Table 66: Response from Firms in Honiton and Blandford Forum	. Error! Bookmark not defined.
Table 67: Predictive ability of Model	Error! Bookmark not defined.
Table 68: Bivariate and Multivariate similarities	Error! Bookmark not defined.
List of Figures:	
Figure 1: Percentage of Total Employment in Service Industries (1861-1988	37
Figure 2: Indexed Growth in Employment (1998-2000)	38

Figure 3: The Importance of Understanding Service Links	40
Figure 4: Conceptual Model	Error! Bookmark not defined.
Figure 5: Main Research Hypotheses	Error! Bookmark not defined.
Figure 6 Southern England's Major Roads (Motorways)	Error! Bookmark not defined.
Figure 7: Major Cities	Error! Bookmark not defined.
Figure 8: Thame and Wantage SIC Structure	Error! Bookmark not defined.
Figure 9: Helston and Bodmin	Error! Bookmark not defined.
Figure 10: SIC Structure - 4 towns	Error! Bookmark not defined.
Figure 11: Employee Numbers Structure	Error! Bookmark not defined.
Figure 12: Helston Employee Structure 96	
Figure 13: Bodmin Employee Structure	Error!
Bookmark not defined.	
Figure 14: Thame Employee Structure 96	
Figure 15: Wantage Employee Structure Error! Bookmark n	not defined.
Figure 16: Bodmin SIC Structure 97	
Figure 17: Helston SIC Structure Error! Bookmark not de	efined.
Figure 18: Wantage SIC Structure	97
Figure 19: Thame SIC Structure	Error!
Bookmark not defined.	
Figure 20: Location of Output Markets	Error! Bookmark not defined.
Figure 21: Service Provision Sourced from the Rest of the UK (all fou	r towns) Error! Bookmark not defined.
Figure 22: Approximate Location of East Devon and North Dorset	Error! Bookmark not defined.

Acknowledgement

The author of this thesis would like to take this opportunity to thank those involved in its development. Firstly, it is important to recognise the strong support received from the supervisory team. Professor Andrew Errington, as director of study, provided regular encouragement, advice on both structure and content and critique. Professor Peter Gripaios provided invaluable additional advice and critique, often introducing a different perspective on the topic under investigation. Support at a local level was provided by Dr Alan Bleakley.

Additionally, without the funding provided by Cornwall College it would not have been possible to undertake this research. The author would particularly like to thank Mr. Michael Wills and Dr. Leo Salter for their vision and hard work in this respect.

It is also important to acknowledge the friendship and support offered to me by my colleagues, both at Cornwall College and the University of Plymouth, and the administrative support received from Ms Jenna Roskilly. Finally, I would like to thank my wife, family and friends for their continued support and encouragement, which have been present throughout my academic career.

AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award.

This study was financed with the aid of a studentship from Cornwall College.

A programme of advanced study was undertaken, which included two postgraduate modules in research methodology with the University of Plymouth Business School.

Relevant seminars and conferences were regularly attended at which work was often presented and papers prepared for publication.

Publications:

- Mills, B. K. (2000) Developments in the Concept of Indigeneity and the 'Virtual Employee-Quasi Product' split, *RICS*, http://www.rics.org.uk/respdf/roots2000mills.PDF
- Mills, B. K. (1999) Why the Search for a Definition of Rurality may be a Fool's Errand, *POPFEST Online Journal*, 'www.cometo/popfest, Vol. 1, No. 2

Presentation at Conferences:

- Mills, B. K. (2001) Indigeneity and the 'Virtual Employee-Quasi Product' split, PERG/RGRG - RGS-IBG Conference 2001, January 2001, University of Plymouth
- Mills, B. K. (2001) Economic Linkages in the Rural Economy: The Case of Producer Services, *PERG/RGRG RGS-IBG Conference 2001*, January 2001, University of Plymouth
- Mills, B. K. (2000) Journeys through peripherality and visits to the peri-urban fringe, Poster, *Agricultural Economics Society Annual Conference*, April 2000, University of Manchester
- Mills, B. K. (2000) Developments in the Concept of Indigeneity and the 'Virtual Employee-Quasi Product' split, *ROOTS RICS*, April 2000, Wye College, University of London
- Mills, B. K. (2000) Further Developments in the Concept of Indigeneity and the 'Virtual Employee-Quasi Product' split, *Young Rural Researchers Session RGS-IBG Conference 2000*, January 2000, University of Sussex
- Mills, B. K. (2000) Journeys through peripherality and visits to the peri-urban fringe, Postgraduate Research in Population Geography RGS-IBG Conference 2000, January 2000, University of Sussex
- Mills, B. K. (1999) An Introduction to the Concept of Indigeneity, *Young Rural Researchers Session RGS-IBG Conference 1999*, 7th January 1999, Leicester University
- Mills, B. K. (1998) Why the Search for a Definition of Rurality may be a Fool's Errand, *POPFEST 1998 hosted by St Andrews and Dundee Universities*, Dundee University.

Signed	••••	• • • •	• • •	•••	 •••	•••	• • •	•••	 • •	• • •	• •	 ••	••	٠.	
Date					 				 						

Chapter 1: Introduction

1.1 Introduction

In recent years, the rural arena has moved further up the political agenda. This was clearly highlighted when, in February 1999, the British Government began a consultation process under the title Rural England (DETR, 1999a). This process ultimately led to the publication of a Rural White Paper on the 28th of November 2000. The paper contained numerous initiatives, including £100 million made available to improve networking and services in rural market towns.

This renewed interest in rural areas has stemmed from a variety of circumstances including the decline of agriculture, the impact of BSE on the farming community, the changing role of rural areas (the re-population and economic growth of rural areas: Breheny, Hart & Errington, 1996; Keeble & Tyler, 1996; Westhead, 1995) and the need to respond to and engage with European initiatives. Traditionally, policies for rural areas have focused on a combination of agriculture-based initiatives (e.g. The Common Agricultural Policy), tourism (farm diversification and rural-based tourism) and, in areas that have a rural and industrial mix (e.g. Cornwall), the relocation of branch plants. However, the changing nature of the problems encountered in rural areas has led to a reinterpretation of the situation. It is, in fact, fair to state that the last two decades have seen the priorities of rural policy transformed (Lowe & Ward, 1998). Rather than adopt sectoral approaches, there is now increasing interest in the role and functioning of the rural economy in all of its diversity.

The traditional emphasis on relocation of branch plants has been superseded by an increasing interest in the growth of indigenous companies (Chaston & Mangles, 1996;

Dobson, 1987; Grimes, 1993; Smallbone & North, 1994). In addition, the overall approach of policy initiatives has moved from 'top down' towards 'bottom up' (i.e. greater emphasis on community involvement in local policy creation). However, for policy to be effective it must be targeted at the correct geographical areas. Thus, there is a role for research that better explains the role and functioning of economic actors and locations within the rural arena.

1.2 The History of the Rural 'Problem'

Patterns of industrial and demographic location, apparent in any industrialised country, are partly explained by the phenomenon of industrial conglomeration. This form of conglomeration has existed since early-eighteenth century industrialisation (Stobart, 1996). As industries developed, so their associations with a particular place began to strengthen (e.g. cotton in eastern Lancashire, woollens in West Yorkshire, metal working in West Midlands, etc.). This regional specialisation created new companies and attracted existing companies into the area, thereby maintaining and enhancing employment.

However, this conglomeration and industrial specialisation has often led to severe problems during down-turns in economic fortune. This is acutely apparent in regions such as Cornwall which, after seeing the decline of its mining, China clay, fishing and farming industries, has been left as the South West's poorest performer (GDP per head is 71.2% of the UK figure) (Gripaios, 1997). Similar problems with specialisation can also be witnessed with the collapse of coal mining in South Wales and the North of England, and the loss of shipbuilding contracts on the Tyne.

Regional problems may be further compounded if Marshall's (1989 a, b) approach is correct. Marshall (1989b) identifies the continuing growth in employment in the service¹ sector and the decline of employment in manufacturing. When this is viewed in conjunction with agglomeration of services in major urban areas and the expanding separation of ownership and highly skilled employment from the lower-skilled branch-factory style of employment found in rural areas, the future for some rural communities continues to look bleak (Dobson, 1987 and Marshall, 1989a).

However, there has been growth in employment within some rural areas. Breheny, Hart and Errington (1996) have commented on the trend towards growth in peri-urban rural areas being driven by a flow of jobs from urban areas back to rural areas (which they refer to as the *second wave* of counter-urbanisation). However, as they also comment, the continuing trend towards companies out-sourcing an increasing amount of business services requirements does not automatically lead to firms that have strong economic links with the local economy. The weak linkages sometimes created by outsourcing need to be considered alongside suggestions by Gripaios (1997), Marshall (1989a) and Love (1990) that local linkages are weakened as a result of one company taking over another - the predatory company often imposing its own preference in suppliers.

1.3 Possible Solutions

The brief discussion above has introduced some of the problems facing rural areas. However, the decline in rural areas has not arisen as a result of total governmental neglect, but has occurred in spite of government policies to assist rural areas. The exact nature of assistance has changed with successive governments and within governments.

¹ Services are activities "consumed or enjoyed only at the instant that they are produced" (Begg, Dornbusch & Fischer, 1994, page 2), as contrasted with goods which are physical commodities.

The traditional interventionist solution to the problem has been to offer grant aid to foster industry relocation (often branch factories). However, this may result in little more than the temporary relocation of semiskilled or unskilled employment, contributing little to local multipliers. Alternatively, grants may be directed towards merely 'propping up' dying industries, providing employment but no growth, at the risk of ever-increasing drains on the public purse (Gripaios, 1985).

A clear definition of a rural area's problem and the exact form which any subsequent regional aid should take are complex issues. Indeed the "effectiveness or otherwise of various types of regional policy initiatives has been a major academic controversy for many years" (McCann, 1997, page 695). This is often further complicated by purely political motives on the part of some policy makers. However, if aid is to have any long-term effect, the exact nature of problems within rural areas needs to be considered.

Englmann and Walz (1995, page 4) warn us that "If, for example, regional disparities are the result of cumulative processes, government intervention (e.g. subsidies in order to attract producers to a specific area) might not work at all if undertaken too late". Mydral (1972), refers to the cumulative process as cumulative causation and states that, left to their own devices, companies and other economic agents will be driven to relocate from one area to another by virtue of their own profit-maximising axioms. This drive towards short-term profit is often at the expense of long-term growth, for both the company and the country as a whole (Gripaios, 1985). Mydral (1972, page 26) also states that "the play of the market normally tends to increase, rather than to decrease, the inequalities between regions". This problem becomes further compounded when globalisation and the growth of information technology are brought into the equation.

Doubts are beginning to be expressed as to any government's ability to control its national economy (Curran & Blackburn, 1994).

It can be suggested that the traditional 'top-down' (grant aid) approach has failed to remove regional economic disparities (Dobson, 1987; Keane, 1990 and above discussions). In addition, a pure 'free market' may not fully redress the balance between economically rich and poor regions (Curran & Blackburn, 1994; Mydral, 1972). It, therefore, follows that alternative strategies need to be considered.

1.4 The Theoretical and Real World Importance of Linkages

In order to understand the dynamics and functionality of the rural economy, and therefore to suggest solutions regarding the economic problems encountered, it is necessary to develop an understanding and appreciation of rural linkages. In this context, linkages can refer to both the purchasing and supply of goods and services by both firms and households (Armstrong & Taylor, 2000). Firms supply products and services to each other, to the government and to households (both home and abroad). Households, on the other hand, both purchase goods and services and supply labour. It is essential that these, often complex, interactions are adequately understood if policy is to achieve its goals.

Within this thesis, the linkage of particular interest will be the inter-firm linkage. Close inter-firm linkages may be important to the local economy, as they help to reduce economic leakages from the local economy (McCann, 2001) and encourage technological development (Dobson, 1987). However, this thesis concentrates on the first issue, the presence or absence of economic leakage, by investigating firms' purchasing of producer services and whether these are obtained locally, or from more distant suppliers. It is through this definition of the local linkage that the word integration is defined. Integration

relates to the proportion of its total producer service requirement that an individual firm purchases locally.

1.5 Producer Services

One way in which an enhanced understanding of linkages may be developed is through focused consideration of the specific link that is formed between a firm and its producer service suppliers. Services can be defined in general as intangible economic activities (Pass & Lowes, 1993) and producer services can be defined as "services that supply customers in business and commerce" (Marshall 1990, page 363). Curran and Blackburn (1994, page 58) provide a useful classification of services, separating the category into "services meeting the needs of businesses (producer services); services meeting the needs of other services and private consumers in the middle (mixed services) and services aimed at satisfying private consumers only...(consumer services)". However, whilst this separation of services has it uses, the economic linkage caused by firms purchasing services is common to both producer and mixed services.

Marshall (1989b) warns against becoming pre-occupied with the search for the "holy grail of a perfect classification." (page 366). The use of a service by a business makes it a producer service. If this service also happens to be used by consumers, this in no way negates the first, and in the study of linkages more important, use (Curran & Blackburn, 1994). Therefore, a combination of Curran and Blackburn's (1994) producer services and mixed services will be used within this thesis to define producer services.

The significance of (producer and consumer) service sector employment has been identified by numerous authors (for example; Dobson, 1987; Marshall, 1989a; Hansen, 1990a). If this sector continues to be important then it would appear necessary to consider the case of services in a rural setting. The need for a more sophisticated understanding of

the role of both small firms and service sector firms has been put by Dobson (1987) who states that "We need to know more about the role of new firms in the [producer and consumer] service sector in terms of their wealth and employment creating effects" (page 58).

The importance of producer services in both wealth and employment creation has been well documented (Hansen, 1990a). Even in areas where there has been decline in the newly privatised service providers² (Gripaios, 1997), there has still been an increase in the overall number employed in the service sector (Gripaios, R., 1996 - producer and consumer services combined). In addition, it has also been shown that producer services play a pivotal role in attracting and retaining other companies to an area (Hansen, 1990a; Illeris, 1989a & 1989b and Stabler & Howe, 1988) (in addition, Hansen, 1990a quotes Bailly & Maillat, 1988; Gillis, 1987; Monnoyer & Philippe, 1985; Pederson, 1986; Quinn, 1988).

1.6 Rural SMEs

The above discussion has suggested that both linkages and producer services are valuable areas for research. However, focusing the research specifically on small and medium³ sized enterprises (SMEs) can further develop this research area. The importance of SMEs in rural economies and the role that such companies play in local economic linkages has become an increasingly important area for researchers. As traditional relocation and 'top down' approaches have proved unsuccessful, policy makers and economists have looked instead at more indigenous forms of development (Grimes, 1993) and, in recent years, the emphasis has shifted towards stimulating growth amongst existing SMEs as opposed to merely increasing the number of SMEs *per se* (Chaston & Mangles,

² BT, water, electricity, etc.

³ Medium Enterprise - one which employs, on average, less than 250 staff, has gross assets less than £2,800,000 and a turnover below £5,750,000 (Companies Act, 1981).

1996). Small business is typically locally owned, managed and located, thereby partly reducing the ownership and control problems identified by Dobson (1987), Gripaios (1997), Love (1990) and Marshall (1989a).

Whilst interest has moved towards SMEs, there is still relatively little literature investigating SMEs and local linkages in the rural economy. Errington (1994a) states that "more needs to be known...about the extent to which new businesses in the countryside provide employment opportunities for local people" (page 373). Furthermore, Johnson and Rasker (1995) comment that "A rich research agenda exists in the area of understanding location values" (page 413). Keeble and Tyler (1995) found that most new company startups are instigated by in-migrants⁴. In addition, the fact that indigenous development has not managed to produce an "adequate manufacturing base" and thus is characterised by "a low-skilled, poor opportunity local economy...and a service sector highly geared to parttime and seasonal work" (Gorton & White, 1997, page 4) certainly causes concern when the policy move towards indigenous SME growth is considered.

1.7 The Relationship between SMEs and Producer Services

Given the inherent difficulties that arise when attempting to make general statements concerning the rural economy⁵, it would appear that a more focused form of analysis might serve us better. Conti, Malecki and Oinas (1995) have suggested that the geography of the enterprise needs to be analysed. This is a sentiment echoed by Fawson and Criddle (1994) and Hansen (1990a) who call for research into regional linkages, with Marshall (1989b) offering the best summary of this need, given the importance of service providers as employers (as outlined on page 3): "our understanding of the economies of

⁴ In-migrants - people moving into the area from another part of the country.

⁵ Errington, 1990 page 58 - "rurality was not a good predictor of industrial structure".

private services is not sufficiently developed for us to easily identify an appropriate policy which does more than aim to attract mobile service industries" (page 375).

These authors raise numerous areas for research, from regional linkages to private services, demonstrating that the general area is poorly understood. Rather than seeking to address all of these research areas, there seems an immediate need to better understand the role of SMEs and services, particularly as rural economies are often dominated (in both employment and number of firms) by SMEs (Curran & Blackburn, 1994). For this reason, it would seem appropriate to use SMEs as the basis of any study into rural industries (more 'traditional' agricultural industries having been covered in some depth by existing literature). In fact, the need for a better understanding of SMEs and local economies has been stated by Curran and Blackburn (1994) who insist that "What is profoundly unsatisfactory...is the lack of clarity, the lack of rigour and, most importantly, the lack of well founded data and analysis to support the assumptions about small firms and local economies, however the latter [local economy] is defined' (page 2).

One final important aspect of the provision of services, as opposed to the provision of goods, is that most towns actually contain at least one example of each of the main producer service types (e.g. accountant, lawyer, bank, IT or business consultant, etc.). The same cannot be said of goods. Thus, services allow us to ask more clearly why a firm has chosen not to source locally, although there is still a difference between provision and *adequate* provision.

⁶ Activity that occurs in a rural economy i.e. defined by location not sector.

9

1.8 General Research Aim

Whilst it is clear from the above discussion that rural areas have a combination of unique and common⁷ economic contexts and problems, there is no clear consensus as to a solution or series of solutions (as discussed on page 3). The rural economy is being restructured, and may in some areas be in quite severe economic decline (Curran & Blackburn, 1994). However the mechanisms of decline, growth and interaction are poorly understood (Conti, Malecki & Oinas, 1995; Dobson, 1987; Errington, 1994a; Fawson & Criddle, 1994; Hansen 1990a; Johnson & Rasker, 1995; Marshall, 1989b).

In order to begin to address this lack of understanding of interaction, this thesis seeks to provide an improved understanding of one specific type of economic interaction. The relationship between firms and their suppliers of producer services is at present poorly understood. By investigating this relationship, within the context of rurally located market towns, this thesis provides insights into various key areas.

Firstly, an enhanced understanding of the relationship between firms' characteristics and producer service sourcing decisions is developed through the use of an econometric model. This model demonstrates which key characteristics are most likely to influence a firm's choice of producer service provider location. In addition, by focusing on market towns it is possible to develop an appreciation of the role and function of the modern market town as a provider of producer services. Finally, studying different counties allows an exploration of intra-rural differences.

In order to develop an understanding of the relationship between SMEs and providers of producer services, a logistic regression model focusing on SMEs' individual characteristics and inter-firm relationships has been developed. By the inclusion of spatial

⁷ Shared within rural areas and shared between rural and urban areas.

dimensions, linkage relationships and general company characteristics, it was possible to test whether there is a significant relationship between a company's characteristics and its level of integration into the surrounding community, where integration is measured by the proportion of total producer services acquired locally.

Part of the original inspiration for this thesis (see Appendix 1) comes from Keane's investigation of the relationship between rurally located households' expenditure and local towns (Keane, 1989a, 1989b, 1990). However, whilst it is important to acknowledge this inspiration, the model eventually developed shares no direct link with Keane's work.

1.9 Structure of the Thesis

The remainder of this thesis is divided in the conventional way. After this brief introduction, a more detailed review of the literature is developed (Ch. 2). This follows the ordering of the introduction by first considering the nature of the rural economy. Considerable space is dedicated to this topic in order to ensure that the thesis is located in a clearly defined context. The review continues by demonstrating the important role which linkages play in economic analysis. The trend towards growth in the service industry is then considered alongside the rise in number and importance of small and medium-sized enterprises.

Following the review, a methodology chapter (Ch. 3) is included that establishes the research philosophy and provides a conceptualisation of the research question. This is then followed by an explanation of the data collection process and descriptive details of the data collected (Ch. 4). After this chapter, results of preliminary correlation analysis and preparation of the data for model estimation are presented (Ch. 5). This chapter in itself provides considerable evidence of the relationship between integration and SME characteristics.

In order to build on the relationship identified in the descriptive quantitative findings, a further chapter (Ch. 6) is devoted to the exploration of the data set using multivariate logistic regression. This chapter adds to the evidence already provided in the two previous chapters and includes details of testing of the model through collection of further empirical evidence.

Finally the thesis concludes with a discussion chapter (Ch. 7), which provides a summary of the main findings alongside a discursive exploration of the implications both in terms of policy and research. The chapter concludes by considering methodological implications, weaknesses and areas for further research.

Chapter 2: Literature Review

2.1 Introduction

This chapter develops the themes explored in Chapter 1 (e.g. producer services, linkages, SMEs, rurality, etc.), providing a deeper level of debate and integrating the argument within the context of the existing literature on the subject of rural SMEs and producer services. The field of rural economics enjoys a large volume of literature⁸. In addition, there is much to be gained from neighbouring fields including geography and general economics, and there are also aspects of the thesis that involve consideration of both psychology and small business behaviour (management studies).

In order to present the findings of this review of literature, the chapter is structured as a series of steps building towards a justification for the thesis. The chapter takes as its lead the thesis title⁹ and examines the issues encompassed within it. Thus, in order to place the work within its geographic context, the notion or concept of the rural economy is first explored, followed by the importance of economic linkages. The reasons for studying producer services in particular are then explained. The chapter then focuses on the important role SMEs now play in the economy and concludes with a brief discussion on the supply of services.

2.2 What is the Rural Economy?

Errington (1997) suggests two separate types of definition of a rural economy: a) by economic activities (e.g. those which may be viewed as 'land-based') and b) by the economic activities that occur within areas which could be described as rural. However,

⁸ For example - Area, Journal of Regional Science, Regional Studies, Journal of Rural Studies

⁹ Economic linkages within the rural economy: the case of producer services

the word rural is left undefined. The first definition avoids all mention of rurality - any industry that is land-based is rural. This provides an intuitive and simplistic classification. Thus, agriculture is land-based, and the agricultural economy is therefore rural. However, this approach has some drawbacks. For example, it is difficult for the researcher to classify the small specialist grower either within or on the outskirts of an urban area. More significantly, all industries that are not land-based are excluded from the rural economy. This leaves areas traditionally referred to as rural with large sectors of their economic activity unaccounted for, and in many cases creates a false picture of the industrial mixture of these areas. As Errington (1990) states; "Apart from agriculture and forestry, there are few industries which can claim to be uniquely rural, and indeed, some may challenge even this claim" (page 51).

Similarly, the second definition, *the economic activity that occurs within areas* which could be described as rural, still leaves the researcher with the difficulty of defining rurality. Although there are relatively simple quantitative measures relating to land use and population size which can be applied (for example, Cloke's (1983) index of rurality), the prescriptive nature of these measures provides us with little added insight. To illustrate, Cornwall which is rural both intuitively and by classification (Cloke, 1983), relies on tourism, public services and retailing for the majority of its employment¹⁰, with farm-related employment only constituting approximately 5% (excluding those in self-employment) (CCC, 1997; Gripaios. R, 1996). Gross domestic product is created by a similar division: (sector contributions to GDP) Manufacturing 27.4%, Tourism 22.5%, Services 14.2%, and Agriculture 8.1% (CCC, 1997). This does not differ from the South

¹⁰ Employment (in Cornwall) excludes those in self-employment which, whilst being difficult to measure, brings agriculture to over 8%. Nevertheless, this is still less than the other sectors mentioned; Tourism - 13%, Public Services - 25%, Retail - 9% (Gripaios, R., 1996; Sincock, 1995).

West of England as a whole, which has less than the national average of agricultural employees¹¹ (Field, 1997), and yet both contain significant areas classified as 'extreme rural' (Cloke, 1983).

For Cornwall (and to a similar extent Devon) to rely so heavily on retail and manufacturing and, in addition, to have a labour-intensive tourist industry, would suggest, if we did not 'know' otherwise, a relatively industrialised or post-industrial area. However, we may be *correct* in this assumption (of industrialisation), if what prevents us from labelling it thus is a combination of aesthetics and prescribed definition (based on demographic index scores) rather than economic reality.

Alternatively, urban areas can be classified by identifying land use that is uniquely urban (OPCS, 1981) (leaving what is non-urban to be termed rural). In many ways, this is the reverse of the methodology outlined above and presents similar problems. Developments are designated as urban or as belonging to an urban area depending on various criteria (population size, distance between urban nodes, etc.). This definition of 'belonging to an urban core' is continued outward into the hinterland to include those areas that have over 15% of their workforce commuting to the specified urban centre. This wider urban area is referred to by Peter Hall as a standard metropolitan labour area (as cited in OPCS, 1981). However, this concept has been criticised for its inability to account for differing commuting patterns amongst social classes, between work and leisure and for the rather arbitrary cut-off point of 15% (OPCS, 1981). In addition, the method presents problems when places of work are relocated outside of urban core areas (OPCS, 1981).

¹¹ Agriculture, forestry and fishing combined.

A Definition of Rurality

The prescribed definition of rurality stems from classification based on indicator variables. One of the most famous of these classification schemes is Cloke and Edwards' (1986) 1981 Index of Rurality for England and Wales (based on Principal Component Analysis - PCA). However, this index, like many others, contains variables that are somewhat difficult to justify. The inclusion of such variables as *distance from urban node* of 50,000 population, percentage of the population over 65 years old, and percentage of the population that are female and aged between 15-45 certainly raise some concerns over the validity of the index¹². While the model accurately identified those areas that the authors perceived to be rural as rural¹³, it could be suggested that this is simply a case of the statistics identifying aesthetic rural. In other words, the validity of the measure is demonstrated by the fact that the areas identified have face validity rather than by passing any more rigorous test.

The selection of 50,000 population, for example, may be questioned. The loading of this variable is high (PCA Loading Score, -0.78654) but the choice of, say, 40,000 or 30,000 population would have considerable impact on the loading (when reanalysed) and on the distance measured. In addition, the use of 'distance to urban node' also needs to be questioned. The use of travel cost might have greater relevance, since it is a fallacy to "assume travel costs are proportional to distance" (Chorely and Haggett, 1978) and it is often cost which influences, or explains, location decisions.

Consider, for example, the case of the M4 corridor. Along this road from London to Bristol, the distance from these two nodes increases and decreases and almost any

.

¹² These represent three of the eight variables used, the others being occupancy rate, commuting out pattern, household amenities, population density, and occupational structure.

location along the corridor represents a potential growth point (i.e. may attract industry). More importantly, if a wider interpretation of urban is adopted, these locations are perhaps more 'urban' than locations closer to other major nodes. Although Hall, Breheny, McQuaid and Hart (1987) have questioned the importance accredited to this corridor, preferring instead to suggest that a Western Crescent has formed around London, they focus specifically on high-tech industry, and admit that, even in this sector, growth since 1981 has occurred along the M4, strengthening the corridor thesis.

To return to Cloke and Edwards, the inclusion of the percentage of women in the population as an indicator of an urban area (PCA Loading Score, 0.67725) and the use of the percentage of the population over 65 as an indicator of rurality (PCA Loading Score, -0.65414) is debatable. Whilst there exists a tradition of 'retiring to the country' in Britain, this often means retiring to coastal resorts (such as Bournemouth) or small market towns and villages. However, the Cloke and Edwards model suggests that as the number of retired citizens in the population increases, the area becomes increasingly rural.

Of the remaining variables, the PCA Loading Scores are sometimes counter intuitive. Population density, for example, has a loading of only 0.58588 making it the least significant variable in the index, although this is reflected in recent studies (EC, 1997) that have shown that population density is, in general, a very approximate measure of the degree of rurality. In addition, occupancy rate and percentage employed outside the district both have higher loadings than the percentage of the population employed in agriculture.

The difficulty in developing a classification of rurality has not gone unnoticed. Cloke (1997), in a recent editorial for the Journal of Rural Studies, describes the geographers' fascination with numbers as a 'fetish'. This sentence echoes a wider debate

¹³ When the index was applied to 1981 Census data and compared with a similar study conducted using 1971 Census data, rurality was seen to diminish. Although this was partly due to alterations in census data collection, it led Cloke and Edwards to revise the index in

currently underway within social science with many researchers beginning to question the validity of using quantitative techniques in the study of human behaviour. However, the movement away from quantitative classification is not yet universally accepted, with many authors preferring to adopt a mixed methods approach (e.g. Harrington and O'Donoghue, 1998; Hoggart, 1990).

Does Development and Industry Structure Provide a Key to Classifying Rural Areas?

As difficulties exist in using demographics as a classifier, attention could instead be turned to differences in rates of economic development and variance in industry structure (this follows Hoggart (1990, page 255) who suggests that we use "theoretically significant markers [such as]...competition or monopoly employment sectors, poor or rich local councils..."). By discussing the 'rural problem' it is suggested that rural areas are in some way disadvantaged and as such may be identifiable by their economic output, or lack of it.

Given that very large geographic areas are often divided into countries, as well as counties, area descriptions could be 'borrowed' from inter-country analysis. It is common in this type of analysis to describe countries as post-industrial, industrial or developing. Arguably, industrial countries could be said to represent 'urban' areas whilst developing countries represent 'rural' areas (similar use of the words developing and developed can be found in Blunden, Pryce & Dreyer, 1998).

The difference between wealthy and poor countries has been explored by Viner (1953), who comments that the problem (poverty), and differentiation (between wealthy and poor), has not always been one of an absence of industry but rather a problem of "poverty, backwardness, poor agriculture and poor industry" (page 52). It would be difficult to suggest that, given modern education and media, any area of the UK was

an apparent attempt to return to their previous findings (Cloke & Edwards, 1986).

18

backwards. However, poverty and under developed industry and agriculture¹⁴ are common to many areas.

Whilst Viner's classification provides a partial definition of the problem, it cannot be generally adapted to define rurality. There are rural areas that are prosperous and/or advanced (e.g., Kent, Silicon Glen in Scotland, the Western Crescent around London) and many rural areas are now seen by investors as new and exciting investment opportunities (Marsden, Murdoch, Lowe, Munton & Flynn, 1993). Furthermore, there are numerous urban areas, particularly inner-city areas, which could be described as having "poverty, backwardness, poor [no] agriculture and poor industry" (Viner, 1953, page 52). Yet, is this not the way that rural areas are perceived, as backward, underdeveloped and lacking sophistication? Recent studies by Vaessen and Keeble (1995) on growth-orientated small to medium enterprises (SMEs) suggest that not only would this interpretation be unfair, but that in many instances it would also be inaccurate. SME growth is often shown to be greater and more innovative in areas traditionally defined as rural and peripheral (Keeble, 1997; Potter, 1993; Vaessen & Keeble, 1995). 15

Indeed, the notion that a generalisation regarding economic structure can be based on rurality alone has been discussed by Errington (1990) who found that "rurality was not a good predictor of industrial structure" (page 58). It may be that the mind-set which clearly separates rural from urban is preventing a more accurate understanding of rural industry and communities being developed (Hoggart, 1990).

.

¹⁴ E.g. Compare small farms in Devon and Cornwall and Welsh hill farms with the intensive agri-businesses found in Kent.

¹⁵ Although Westhead (1995) has provided contradictory evidence.

An Alternative Approach

The discussion above highlights the major difficulties in attempting to objectively define rurality. Whilst there is an obvious difference between open countryside and developed cityscape, any generalisation beyond this aesthetic differentiation may hinder our understanding of economic or social environments. The thrust of this argument is based on the belief that the classification of areas as either 'urban' or 'rural' is overemphasised and given discriminatory properties that do not, in reality, exist. This does not mean to say that the aesthetic has no relevance to the marketable value of location. However, what makes these locations desirable is the *perception* of rurality, a variable that may be extremely difficult, if not impossible, to accurately measure. As Cloke (1997) suggests, rurality is perhaps one of the best examples available of what the post-modernists refer to as a 'hyper-reality'.

Klaassen (1970) states that "urbanisation is, in fact, nothing more than a rational process for the creation of activity bundles that can operate efficiently as bundles at a smaller distance from each other" (page 115). The key here is the term "at a smaller distance"; in other words, the spatial distance between 'activities' has contracted to form 'bundles' or urban areas. This suggests that these activities already exist and have merely relocated for cost rationalisation. Thus, the urban is simply a spatially contracted rural. Alternatively, as isochronic distance is reduced by improvements in all forms of communication and as people, and the companies they work for, increasingly place value on relocating in or near environmental assets, rural becomes an expanded urban - a dispersed urban.

Whether the urban is encroaching on the rural or the rural on the urban is, of course, open to debate. What is clear, however, is that "cities have become relatively less distinctive entities" (Urry, 1984, page 55). With this reduction in one of the entities'

distinctiveness, it is also implied that the other has become less distinctive. Urban and rural are increasingly merging into one homogenous whole (Cloke, 1997).

Reasons for Increased Homogeneity

There already exists a growing electronic communication infrastructure. This technology has meant that the "tyranny of geographical distance and remoteness are considerably reduced" (Blunden, Pryce & Dreyer, 1998, page 150). In addition, from a social perspective, families increasingly live in isolated units, shopping not in city centres but in 'out of town' retail parks for example. With communications improving both in terms of electronic and road transport, and with non-urban areas benefiting more greatly from road transport improvements than congested urban areas, the situation arises where the physical distance between villages, towns and cities becomes less relevant, and peripherality is reduced (Potter, 1993).

As distance becomes less relevant to economic transactions, so too does the distinction between urban and rural. Indeed, Moseley (1974) suggests, when discussing possible regional locations for growth poles, that "there seems no valid reason why such an urban concentration might not take the form of a number of settlements close enough to form a single labour market" (page 113). This sentiment is echoed by Hansen (1972) who states that a "system of cities or towns linked by adequate transportation and communications might serve as well, or better [than a single city]" (page 122). Clearly, this stems partly from the assumption that smaller towns with growth potential will often demonstrate superior marginal returns on (public) investment than cities (that are near or at their development potential). Arguably, if this was the situation in the 1970s when these authors were writing, the situation in the early 21st century may actually add further emphasis to their suggestions.

Private transport has increased, 'out of town' shopping has been introduced, telephone communication and television are now national, and the concept of e-mail and e-business has been introduced and continues to expand. With regard to business 'networking', spatial considerations have also reduced. The relocation and creation of firms outside urban areas have led to a migration of senior managers and owners (*entrepreneurs*) to the countryside (Keeble & Tyler, 1995). This has generated an expansion of the social and business circles within which these economic agents operate. Problems of isolation from 'business contacts' in rural and peripheral areas are thus being reduced still further.

Attention must finally be paid to the changing social and domestic behaviour of rural/urban inhabitants. Commuting and associated dormitory towns have become an acknowledged part of British society and geography. In addition, the shopping and leisure activity of those within rural and urban areas is also changing. The very term 'out of town shopping' implies rural shopping. Furthermore, the continuing popularity of the car encourages rural residents to shop in neighbouring towns (see for example Keane's (1990) three town model) and urban dwellers to utilise the countryside for leisure. Many rural residents now find that their travel to work and 'shopping' areas encompass considerable geographic distance, and more than one town. This area, if viewed as a whole, can often be as large and functionally diverse as any major urban area and may in fact include one or more cities and several towns within its border. It could be suggested that now, more than ever, the English countryside is in many instances merely a city with a lot of grass.

A Working Definition

Whilst it has been shown that rurality is difficult to classify, this alone does not form a justifiable reason for abandoning it. However, the relevance of such a concept and

its definition in modern, particularly post-industrial, societies can be questioned. Marsden, Murdoch, Lowe, Munton and Flynn (1993) found that much of the empirical research conducted to date had failed to engender rurality with any explanatory powers. When using rurality as an explanatory or discriminatory variable, the researcher or practitioner runs the risk of embedding themselves in a mindset that may actually impair their objective understanding of the situation (Hoggart, 1990). Alternatively, by accepting the multiplicity of roles and formations now present in 'rural' areas (Cloke, 1997; Marsden *et al*, 1993), and the merging of rural and urban space (social, economic and actual), the researcher is free to identify and investigate social and spatial relationships.

Earlier work by Cloke (1983) provides us with the two arguments: that a) a definition is useful, and b) a definition is not useful. As society moves towards an increasingly information-orientated economy and relative communications distances fall, it follows that "any attempt at ... a definition [of rurality] is steeped in futility and sterility" (Cloke, 1983, page 9). Although an actual definition of rurality still seems to elude researchers, it is necessary to have some type of working definition if any sense at all is to be made of the rural economy.

Interestingly, despite the fact that the Department of the Environment, Transport and the Regions state that, "there is no precise definition of rural" (DETR, 1999b, page 1), another government agency, by definition of its name, previously existed to serve rural areas¹⁶. The Rural Development Commission (RDC) (which after April 1999 merged with the Countryside Commission as the Countryside Agency, passing its rural regeneration role to the new Regional Development Agencies) listed geographic areas that came within their sphere of responsibility, classifying them as either remote rural or accessible rural.

¹⁶ The word rural is now also used by the Department of Environment, Food and Rural Affairs (DEFRA) since it absorbed MAFF.

This definition of rurality was based on three lists of rural districts – The Office of National Statistics 'Classification of Local Authority Districts', based on 1991 census data and grouping areas with similar characteristics; The National Council of Voluntary Organisations list, based on population density; and the DETR list of districts found within the 1995 Rural White Paper (Countryside Agency, 2000), also based on population density. It is the RDC definition, as used within Tarling, Rhodes, North and Broom (1993), that is used throughout the remainder of this thesis. Blackburn and Curran (1993) also adopted this approach in their comparison of urban and rural areas.

Thus, although it is noted that there are difficulties in using rurality as a predictive variable, the notion of 'core-periphery' or 'remote' and 'accessible rural', as defined by the RDC, has been used within this research to classify rural areas. The study, therefore, utilises the RDC definitions of areas as either remote (core) or accessible (peripheral) rural to provide a basis for comparison of behaviour between core and peripheral areas.

2.3 Defining Economic Linkages and Multipliers

Whilst it is difficult to find consensus concerning a definition of rurality, the definition of economic linkage is far more pragmatic. Central to the study of economics is the notion of supply and demand - the idea that one actor's want¹⁷ is met by another's supply of either a good or service. The relationship between supplier and vendor is, in its simplest form, a type of contract and the process often described as a transaction. It is also possible to view this transaction as a link between the two parties. Of course, as the number and complexity (more numerous and complex contracts) of these links increases, so too does the complexity (Twomey & Tomkins, 1996) and difficulty of their identification and quantification.

One of the theoretical approaches that seek to help understanding of the importance of various industries to a region's growth is the use of economic (export) base theory (McCann, 2001). Within economic base theory the industries within a region are divided into basic and non-basic. Basic industries are those that primarily provide output to purchasers outside of the region whilst non-basic industries primarily have output markets within the region. Non-basic industries are sometimes referred to as service industries, although this is in a different context to the use of the term to describe tertiary industry (the firms service the region rather than form the tertiary sector). These sectors, basic and non-basic, can then be considered on an aggregate regional level. Employment is commonly used as a proxy for the level of output and the region's output is therefore defined as the sum of basic and non-basic sectors. As the non-basic sector relies on the region for its output market, it can be suggested that there need not be a term for non-basic output in any economic base equation as it can be replaced by a proportion of total regional output. This then allows the ratio of total regional output and basic output to be put forward as an economic base multiplier.

 $\frac{\text{Total Regional Output}}{\text{Total Basic Output}} = \frac{1}{1 - n}$

Equation 1: Economic Base

Where

n = a coefficient between 1 and 0 that represents the sensitivity of non-basic employment to total regional employment

(McCann, 2001, page 140)

A measurement of change in output in the basic sector and knowledge of the sensitivity of the non-basic sector to changes in total regional output can therefore be used to predict regional growth levels. The sensitivity coefficient (n) represents the basic sector's demand for non-basic sector output. Higher values of this sensitivity coefficient,

25

¹⁷ Want with the ability to pay - effective demand.

or higher ratio of total regional output to basic sector output lead to greater economic base multipliers. Higher sensitivity coefficients are most likely to occur where there are strong inter-firm linkages and high levels of local sourcing of inputs.

More advanced versions of the economic base model allow exploration of the cumulative effects on labour productivity through growth in a region's output. This cumulative causation was first proposed by Kaldor (1970), and is sometimes referred to as a Kaldorian approach, an approach which was later further developed by Dixon and Thirlwall (1975) (both quoted in Armstrong and Taylor, 2000). Recently, empirical evidence for cumulative causation within the European Union has been presented by Cheshire and Carbonaro (1996) who found that regional growth was closely linked to growth in the national economy, the growth rate of neighbouring regions, the size of the region and the number of research and development establishments per capita of population.

An explanation for varying degrees of cumulative causation, and for variation in economic prosperity between regions, is provided by earlier theories relating to growth poles. Perroux (1950) is attributed with the early development of the theory of growth poles. Perroux suggested that certain key nodes (firms or groups of firms) dominate the surrounding area and in so doing represent important bases for development growth. By encouraging development within these nodes it is possible to create a spread effect to those areas and industries which supply the key node. One important aspect of Perroux' work was that he applied "the temporal notion of development simultaneously in social, economic and geographic space" (Moseley, 1974, page 4). It is important to note that the key industry's domination may be in terms of innovation as well as size, although it is often most effective when innovation and size are combined (McCann, 2001). Whilst there has been some debate concerning negative effects of growth poles (most notably the

backwash effect created by demand from the growth pole increasing prices in the surrounding area), the concept remains popular with some policy makers¹⁸.

An alternative to the economic base multiplier is the Keynesian regional multiplier. In broad terms this is similar to the Keynesian national income and expenditure model (Y=C+I+G+X-M). The key differences are that in the regional model, consumption and imports are treated as partly exogenous of regional income, rather than purely dependent on it, and investment and government expenditure are related (inversely in the case of government spending) to regional income rather than purely exogenous.

A third method of establishing multipliers for regions, with the added advantage of disaggregating the information into industry sectors, is regional input-output analysis (Bishop, Brand & McVittie, 2000). Originally conceived by Wassily Leontief in the 1930s, input-output (I/O) analysis (inter-industry analysis) seeks to identify and study the relationship between different companies' *factor inputs* and *outputs* (Pass & Lowes, 1993). The economy is appreciated for what it is, that is, a complex interconnection of companies, many of which exist only to produce the *factor inputs* of another (for example: quarries *output* of gravel is the construction industries *factor input* of aggregate required in concrete).

Basically, information is collected concerning the expenditure flows of a range of different industry sectors and consumers within a region. This enables a matrix (transaction table) to be created which shows the flow of expenditure between different industries, industries and consumers, industries and factor inputs and regional imports (McCann, 2001). It is then possible to calculate the proportion of each industry or consumer's total inputs provided by each of the other industries, regional imports or factor

¹⁸ Boudeville (1966) is originally credited with translating Perroux's work into planning terms.

inputs. For example, Bishop *et al.* (2000) showed that Devonport Dockyard and Naval Base had weak, though still important, links with the economy of Devon and Cornwall as a source of manufacturing inputs. These proportions (expenditure coefficients) can then be used to model the impact on the output of the regional economy, and on individual industries, of an increase in expenditure by any of the industries or consumers within the table. Harris and Liu (1998), for example, showed that, in the Portsmouth area construction firms had the greatest local multipliers (4.59), and paper and board producers the weakest (1.25).

A basic regional multiplier can also be calculated by dividing the total increase in output by the original increase in expenditure. By constructing an inverse matrix of the expenditure coefficients it is also possible to calculate sectoral output multipliers than can show the impact of increases in expenditure within the region. As with Keynesian multipliers, the eventual increase in output (income) is greater than the original increase in expenditure due to subsequent rounds of spending. This is due to the sector providing the initial increase (round) in expenditure also providing other sectors with inputs (subsequent rounds), which in turn requires additional expenditure to produce.

One important aspect of input-output analysis is that it allows researchers to consider the different impacts on overall regional output as they relate to individual industry's expenditure coefficients. For example, an industry that has regional imports as a high proportion of its total input will, when compared to an industry with a low import expenditure coefficient, have a reduced first round impact for any given increase in its expenditure. This reduced first round expenditure will subsequently lead to a reduced total regional increase in output.

In economic base theory, Keynesian regional models and input-output analysis the impact of increases in expenditure in a region relates in part to the number, or more

specifically the value (Turok, 1993), of local linkages. This increase in expenditure, whether due to inward investment or expansion of indigenous expenditure, leads to an increase in output in the region, and often an increase in employment. The total number of jobs and wealth created within the area is not simply a matter of *direct* jobs but also the indirect effect of embeddedness (local purchasing by the firm) and the induced effect created by employees spending their new-found wealth locally (Armstrong & Taylor, 2000). It is important at this point to separate the definition of embeddedness into two. Embeddedness in the context used throughout this thesis refers to the economic embeddedness discussed by Gripaios (1997), McCann (1997) and Turock (1993) which is concerned with the quality and quantity of local economic linkages. The term embeddedness can also be used to relate to the integration of the firm with the local economy and community, expanding the study of economic linkages to include noneconomic linkages. This second use of embeddedness is found within Curran and Blackburn (1994, page183) who discuss the "social, political and cultural life, which...have strong embeddedness effects...". Whilst this use of the term embeddedness has clear advantages in widening the debate surrounding local economic linkages, it goes beyond the scope of this thesis.

When considering economic linkages, different industries will source different proportions of input from within the local area. Turok (1993) found, for example, that local linkages within the Scottish electronics industry were low (12% of total material inputs) and were also of low value-adding significance. Similarly, service-specific findings were encountered in Devon and Cornwall by Gripaios (1997) and in the Scottish whisky industry by Love (1989), who suggest that "linkage adjustments from external takeover are generally negative, and fall most heavily on the service sector" (page 114). The value and

strength of linkages, plus their sustainability, is of interest to policy makers simply because they are seeking to gain maximum benefit from limited injections of capital.

Recently, interest has moved towards the higher benefits (stronger linkages) offered by smaller independent firms, and particular interest has focused on growing indigenous SMEs rather than importing branch plants (Chaston & Mangles, 1996; Dobson, 1987; Grimes, 1993). As Dobson (1987) states, "Policy should recognise the potential key role they [small independent firms] may play in fostering local linkage..."(page 55). This policy shift has come about through an enhanced understanding of the role and value of linkages.

As previously stated, although a linkage in its most simplistic sense is relatively easy to comprehend, both the number and nature of linkages adds to the complexity of the situation. Turok (1993) has suggested that linkages can be characterised as either a developmental or dependent relationship and refers to this as the linkage *tendency*, and has developed the following table from the literature:

Table 1: Developmental and Dependent Linkage Relationships

	Developmental	Dependent		
Nature of local linkage	Collaborative, mutual learning. Based on technology and trust. Emphasis on added value	Unequal trading relationship Conventional sub-contracting Emphasis on cost-saving		
Duration of linkage	Long-term partnerships	Short-term contracts		
Meaning of 'flexibility'	High-level integration to accelerate product development and increase responsiveness to volatile markets	Price-cutting and short-term convenience for multinationals		
Inward investors' ties to the locality	Deeply embedded High investment in decentralised, multifunctional operations	Weakly embedded Branch plants restricted to final assembly operations		
Benefits for local firms	Markets for local firms to develop and produce their own products. Transfer of technology and expertise strengthens local firms	Markets for local firms to make standard, low-tech components Sub-contracting means restricted independent growth capacity		
Quality of jobs	Diverse including high skilled, high income	Many low skilled, low paid, temporary and casual		

From Turok (1993) page 412

One of the most obvious implications of Table 1 is the ongoing tension between economic development and political expediency. Whilst certain types of linkage offer long term development potential, numerous unskilled jobs are offered by the linkage type not usually associated with growth. In order to foster economic development it is necessary to establish which types of firm have a greater propensity to link locally. This, of course, depends in part on the availability of local services/goods (see page 51). However, assuming that services exist locally, it has been shown to relate also to firm sector (Moseley, 1974), ownership (Dobson, 1987; Gripaios, 1997; Love, 1990; Twomey & Tomkins, 1996), stage in growth (Basu & Johnson, 1996; McCann, 1997) and service/product type (Gripaios, 1997; Love, 1990; Marshall, 1989a). In addition, very simple pragmatic considerations may also come into play. It is certainly more efficient, as Harrison (1993) has pointed out, to purchase frequently required inexpensive items (e.g. petrol) locally, whilst more expensive, less frequently purchased items (e.g. vehicles) may be purchased with more consideration as to cost which may lead to greater distances.

Whilst Turok (1993) makes a strong case for the role of the more embedded developmental firm, other authors have produced contradictory evidence - Basu and Johnson (1996) and McCann (1997) have argued that the situation is more complex than the one portrayed by Turok (1993). Basu and Johnson (1996) contend that there is "a decrease in the density and complexity of linkages as an economy industrialises and develops" (page 710), suggesting a weakening rather than an embedding as the economy takes on its new role. This is at odds with Turok's (1993) cumulative expansion of the industrial cluster (Table 1). McCann (1997), in direct response to Turok, suggests that the

entire dependent/development approach is too simplistic and not evidenced empirically, with many potentially dependent firms behaving in a developmental way. Turok (1997) has responded directly to this criticism with further empirical evidence. Whilst contradictory evidence exists, Turok's development/dependent model still provides a useful starting point¹⁹.

The formation of the link is often fostered by membership of a network (Curran, Jarvis, Blackburn & Black, 1993) and, whilst this is not an essential ingredient of links, "networks [have] increasingly become the vogue in theorising and describing contemporary organisational relationships, particularly linkages between firms located in the same geographic locale" (Huggins, 1998, page 814).

Groups of firms working in one geographic area, or servicing a particularly demanding large incomer, will develop and boost each other's skills and knowledge base (Garmise & Rees, 1997; Huggins, 1998; Turok, 1993). This comes about partly through competition and partly through co-operation. If co-operation is the driver, this can again take two forms. Relationships that move the companies towards a contractual joint venture are referred to as *hard* networks by Rosenfeld (1996), whilst the more casual 'networking' approach generates *soft*, more informal, networks.

Turok (1993) suggests that these firms may move closer (or stay closer) together in order to further reduce transport and transaction costs, and thus a cluster, resembling an "internally generated growth pole" (page 402), is formed. This is supported by Garmise and Rees (1997) who talk of "networked relationships provide[ing] powerful resources of 'social capital'" (page 104).

. .

¹⁹ BIDS ISI Citation database list 34 papers that reference Turok (1993), including three in 2000, and 2 that reference Turok (1997), suggesting that the work is still of great interest.

However, Huggins (1998) has also drawn upon Garnsey and Cannon-Brookes (1993) to show that, in one of the most successful areas of technology growth (and a good example of an economic district) in the UK (Cambridge), co-operation exists but stretches far beyond the region. In fact, it was shown that the networking was occurring on a global level. Whilst this brings in new working practices and helps the firms compete internationally, it reduces the localised linkage effect, unless firms' output and subsequent demand increases.

The formation of networks may, in part, be linked to the influence of indigeneity (a measure of how 'local' a person is). Fielding (1998) has explored indigeneity in terms of its effects on people's perception of land, politics and culture. However, this debate can be developed in two distinct ways. Firstly, this can be done by adopting a less anthropological interest in the importance of identity and culture *per se*, focusing instead on economic benefits gained through indigeneity's effect on local economic linkages, the economic manifestations and implications of the presence or absence of indigeneity. Secondly, the debate may also be developed by showing that indigeneity has an influence on decision-makers and sourcing and, therefore, linkage decisions.

Previous work has looked at factors influencing SME decision-makers. In many ways this research includes elements of indigeneity, although none have investigated the subject *per se*. The following paragraphs seek to highlight work that can be linked to the indigeneity concept. This work can be considered in terms of analysing the Firm, the Location or the Decision-makers.

The Firm and Indigeneity:

Gripaios (1997), McCann (1997), McQuaid, Leitham and Nelson (1996), O'Farrell, Moffat and Hitchens (1993), and Turok (1993), have all considered the importance and

behaviour of branch factories and independent firms. O'Farrell, et al. (1993) demonstrated, for example, that independent firms have a greater propensity than branch plants to use external services (i.e. to buy-in services), and that this relates, in part, to the size of firms (small independent firms cannot afford to employ certain service related staff). However, they also argue that the rise in the number of producer service firms is as much related to a growing demand for services as it is to an outsourcing of service activities. Gripaios (1997) found evidence in Devon and Cornwall of an economic (producer service) leakage when indigenous firms were taken over or when new firms funded by foreign investment moved into the area.

Although Gripaios (1997) has noted the leakage of spending on business services, McQuaid, *et al.* (1996) suggest that local availability of services is an important part of relocation decisions (though not as important as access to output markets, particularly for larger firms, and suppliers of goods). Turok (1993) suggests that incoming firms' linkages with local firms are, what he calls, 'dependent' rather than 'developmental'. In other words, linkages exist but tend to exhibit an unequal trading relationship characterised by low skilled work and short-term contracts. As already discussed (page 31), McCann (1997) has suggested an alternative interpretation of Turok's (1993) data.

Location and Indigeneity:

McQuaid, et al (1996), in their work on location decisions, include such variables as origin (new firm, branch, etc.) of company at these premises, location of parent company and address of previous location. This allowed observations to be made concerning the relationship between previous location and supplier utilisation. For example, it was observed that intra-regional movers tended to change suppliers less than firms moving inter-regional. O'Farrell, et al (1993) have drawn attention to the fact that

firms located in peripheral regions (Scotland in their case) tend to use fewer local services than firms in core areas (South East) (61% v 70% proportion of services sourced locally).

Westhead (1995) also examined urban-rural differences with regard to the opinions of new owner-managers. By comparing the replies of new owner managers to the following statements concerning reasons for starting the company - *The customers were mainly local;* The local economy was booming; There was a large number of new businesses in the area I live; There was a large number of new business failures in the area I lived, Westhead (1995) found no significant differences between rural and urban areas. It is interesting to note that whilst differences exist between urban and rural areas with regard to size and type of firm, attitudes of entrepreneurs are, at least in this limited set of statements, relatively similar.

Decision Makers and Indigeneity:

Birley and Westhead (1993) collected data on a wide range of factors concerning the characteristics of firms when investigating the differences between 'novice' and 'habitual' business founders, including whether parents were immigrants to this country, (but again without mention of past or present location). Westhead (1995) also looked at the personal backgrounds of founders but concerned himself mostly with differences in educational background between urban and rural areas, whilst McCann (1997) identified an increase in local sourcing when decision-making power is given to local managers (of branch factories). (Please note that decision-making in SMEs is discussed in more detail on page 47).

Finally, whilst Dodd (1996) found participation in organised social activities not to be significantly greater amongst business owners than employees (detracting from the significance of local networks), the use of family and friends for advice has been identified by Haughton (1993).

However, the research discussed above has failed to fully take account of the influence that present and previous location may have on decision-makers, assuming that such an influence exists. If this is the case then there are implications for local economic linkage development.

2.4 The Role of Service Industries

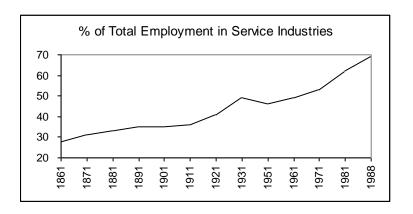
Whilst there are numerous interactions between organisations (purchase and supply, formal and informal), this particular thesis focuses on producer services. These services, as defined in the previous chapter, have become an increasingly important part of the economy (Illeris, 1989b; Marshall, 1992) and yet are still poorly understood (Begg, 1993). In addition, services in general differ from the production of either goods or raw materials in one important aspect. Service industry firms do not require a large input of raw or part-finished materials. Thus, a service firm's location decision is based mainly on the supply of labour, the cost of space and demand (when the service needs to be delivered in person) with less need to consider the supply of raw materials.

It has been suggested (Marshall & Jaeger, 1990) that service industries tend to have their location determined principally by the location of their customers. There is, however, a debate concerning whether the service firm needs to be physically close to the customer or can rely on the use of information communication technology (ICT) to service customers from a distance (where there may be, for example, lower rents). Whilst the full implications of this technology has yet to unfold, there exists evidence that producer service firms still exhibit the tendency to agglomerate in core urban areas (Bennet & Graham, 1998; Marshall & Jaeger, 1990; Potter, 1993).

Although, as previously mentioned, there is concern over the lack of research focusing on the service sector (both producer and consumer), its study is by no means new.

Early researchers, such as Buckley (1958), Daly (1940), Hinerbrand and Mace (1950), Hoyt (1954) and Innis (1920) (all cited in Stadler & Howe, 1988), have examined the role of services, although during this period it was seen as dependent on the region's export industry.

Service sector growth during the 1980s and 1990s has seen the total share of employment accounted for by this sector grow sharply. Throughout the twentieth century there was a movement from primary and secondary towards tertiary industry, but the decline of manufacturing during the 1980s saw the proportion of employment accounted for by services grow more sharply (see Figure 1) (Marshall, 1992).

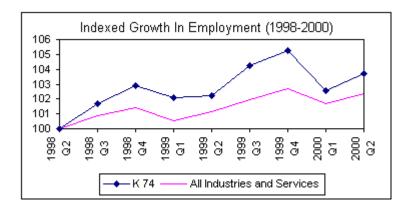


Data from: Marshall (1992)

Figure 1: Percentage of Total Employment in Service Industries (1861-1988)

The importance of service-sector jobs (see also Figure 2) was recognised by policy makers when the sector was included within regional assistance schemes in 1984. The key driver within service sector growth is growth of producer services (Marshall, 1992). However, in addition to the direct employment effects of services, which are significant given their share of employment, there also exists the symbiotic relationship between producer services and other businesses (Bryson, Ingram & Daniels, 1999). The growth in all services illustrated in Figure 1 has continued. Figure 2 illustrates how growth in

employment in producer services²⁰ has outperformed growth in employment in the economy as a whole.



Data from: ONS (2000)

Figure 2: Indexed Growth in Employment (1998-2000)

As already indicated (page 36) agglomeration of services has been identified by numerous researchers (see for example; Bennett & Graham, 1998; Marshall, 1989a; Marshall & Jaeger, 1990; Potter, 1993). What has occurred has been a "spatial contraction of service activities" around core urban areas (Marshall, 1989a, page 140). However, research has begun to move towards understanding and appreciating the role and market relationships of business service providers. Marshall (1989a) describes this change in research focus as "A dynamic market-based perspective which appreciates the fluidity of corporate structures and the interdependence of services and other activities..." (page 140). This is a sentiment echoed by Bryson, Ingram and Daniels (1999) who cite numerous authors as having moved towards research that focuses on external service expertise and "[the] direct impact on ...productivity, competitiveness and profitability" (page 1). These two points taken together suggest an important role for services, not just in employment but also in total industry competitiveness.

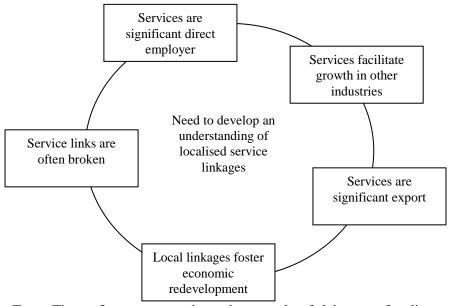
20

²⁰ K 74 refers to the SIC class "Other Business Activities" and includes: legal activities, accountancy, market research, management activities of holding companies, architectural services, advertising, recruitment, security, industrial cleaning and miscellaneous business

References above have explored the important development and/or economical regeneration role which business services exhibit. This is what Bryson et al (1999) see as the 'third stage' in services research, the first two being location and distribution of service activities and location and development of urban-based offices. The reason for this shift is, in part, related to the changing nature of business within the developed world. There now exists a greater emphasis on market research, design, selling, value adding, training, information, staff development and recruitment, and a more sophisticated management of money (Bryson et al, 1999; Hansen, 1990a; Marshall, 1989a; Marshall & Jaeger, 1990). This emphasis has seen a movement from services as facilitating the delivery of physical produce (e.g. restaurants, retail, transport, etc.) to services as an integral part of production and as an export in their own right. As Hansen (1990a) puts it "the goods-producing and service sectors are so interrelated that policy considerations for one cannot be meaningful without carefully examining impacts [of policy] on the other" (page 465). Service firms are viewed as crucial to a region's growth (Westhead, 1995), largely due to the more sophisticated (e.g. increasingly global as a result of developments in information technology) markets that now exist, and yet the linkages that exist between firm and service provider are often easily broken (Gripaios, 1997; Love, 1989; Turok, 1993). Given that services now make up a considerable amount of employment and employment growth, are essential for development and form a useful (regional) export, it is important to understand the strength of their integration and linkages within the local economy.

activities. It does not include IT, research and development, real estate activities and renting of machinery and household goods (which form the remainder of the SIC class K – "Real Estate, Renting and Business Activities").

Figure 3: The Importance of Understanding Service Links



From Figure 3, we can see how the strands of debate so far discussed suggest that localised service linkages may be worthy of further study. In a recovering rural area the agglomeration of services (in other areas) coupled with the increasing demand for services by firms of all types may create a significant leakage from the local economy (O'Farrell, Wood & Zheng 1996). In a declining rural area the lack of a local market (insufficient demand; Shonkwiler & Harris, 1996) or local market shrinkage (through external competition) prevents local service firms from developing, therefore failing to provide a vital local development role.

The lack of a local market may be due to the inability of local service firms to compete with firms in the service agglomeration. Moreover, this becomes self-perpetuating when lack of demand reduces the local service firm's revenue and hence development funds (referred to as the deindustrialisation view by Marshall, 1990). As discussed previously, other authors have noted that service provision attracts other firms (Hansen, 1990a; Illeris, 1989a & 1989b and Stabler & Howe, 1988) (in addition, Hansen, 1990a quotes Bailly & Maillat, 1988; Gillis, 1987; Monnoyer & Philippe, 1985; Pederson,

1986; Quinn, 1988). It may also be the case that service agglomeration is reducing both the number and quality of service providers in developing rural areas.

The use of service providers is simply part of the ongoing outsourcing of services (Breheny, Hart & Errington, 1996) and functions that has been the hallmark of the late 1980s and 1990s. However, thought must also be given to those firms that never had these services internally. Many smaller companies do not have clearly separate internal functions. The personnel manager is often the general manager who is, in turn, the owner. Certain specialist services have always been sourced externally (accountancy, legal advice, insurance, finance, delivery, etc.), and so the outsourcing movement has not affected these services. However, it might be reasonable to assume that smaller firms have to make more use of service providers in order to remain competitive (e.g. Web page design companies).

Smaller firms will always find it more difficult to influence the markets of their suppliers simply because of their size. Whereas larger firms may represent anything up to 100% of their supplier's market, smaller firms usually represent small proportions. Although Marshall (1989a) has suggested that "dense networks of local suppliers in central locations" (page 140) are emerging to provide firms with previously internal functions, networks of local (non-central) suppliers still exist to provide firms with services, despite the attraction of service provision offered by firms in the central location. Perhaps the smaller local firm does not have the wealth or expertise to engage the service of distant business service providers? Perhaps there is more to the supplier/purchaser relationship than cost and quality, and these other factors encourage localised provision. There has been, after all, geographical agglomeration of services despite new technology and cheaper rents in non-central areas (Bennett & Graham, 1998; Marshall, 1989a; Marshall & Jaeger, 1990; Potter, 1993). It would seem appropriate to consider whether service agglomeration is having an effect on local linkages.

2.5 The Importance of SMEs in general

Industrialisation (circa 19th century) gradually drew the interest of economic scholars away from the merchant and farmer and towards the factory and company. Industrialisation also led to ever more complicated market structures and regional variations, both of which have provided important and interesting fields for the researcher. However, changes in the nature and structure of firms have recently led economists back towards the artisans and merchants (traders).

Table 2: Number of Businesses, Employment & Turnover (1998)

Size	Number	•	_	Percent		
(number of employees)	Businesses	Employment ('000s)	Turnover ¹ (£million)	Businesses	Employment	Turnover
None	2,339,645	2,749	88,634	64.0	12.7	4.6
1-4	922,585	2,356	214,258	25.2	10.9	11.1
5-9	204,290	1,483	123,017	5.6	6.9	6.4
10-19	111,800	1,568	154,360	3.1	7.3	8.0
20-49	48,300	1,496	152,716	1.3	6.9	7.9
50-99	14,945	1,043	110,925	0.4	4.8	5.8
100-199	8,145	1,127	116,995	0.2	5.2	6.1
200-249	1,520	338	37,781	< 0.05	1.6	2.0
250-499	3,215	1,123	154,639	0.1	5.2	8.0
500+	3,445	8,311	773,663	0.1	38.5	40.1
All	3,657,885	21,595	1,926,987	100.0	100.0	100.0
All with employee(s)	1,318,240	18,846	1,838,353	36.0	87.3	95.4

¹ excluding VAT. Finance sector turnover excluded from turnover totals.

Number of businesses, employment & turnover by size of enterprise, at the start of 1998

Source DTI 1999a

Firms with less than 200 employees, which represent 99.8% of all firms, account for 50% of total turnover and 55% of employment in the UK (Table 2). Perhaps more surprisingly, firms with less than 100 employees represent 50% of employment and 44% of the total turnover. Thus the smaller firm (<200 employees) represents a significant part of the economy's production and employment. It also represents the sector that has seen most growth; "Most of the growth [since 1980] in the business population has been in one person businesses" (DTI, 1999a, page 1).

During the 1980s, it became increasingly apparent that redevelopment of lagging regions of the UK through the relocation of branch plants was not as effective a solution as it was once considered (Armstrong & Taylor, 2000). This policy had not been without its successes, but changes within the wider economic world (globalisation, new technology, etc.) were negating the competitiveness of British manufacturing. The decline in manufacturing coincided, and perhaps fuelled (Atkin, Binks and Vale, 1983 quoted in Armstrong & Taylor, 1993), a growth in the number of self-employed and of small firms. When this change in industrial structure was combined with the new government's political agenda (1980s Conservatism), a renewed interest in the small firm sector was inevitable.

There are five clear arguments as to why SMEs have come to be seen as the prime engine of economic growth.

- 1. Their ability to create large numbers of new jobs;
- 2. Their ability to improve industrial relations and to provide a superior working environment for employees;
- 3. Their ability to create a diversified and flexible industrial base by creating a pool of entrepreneurs willing and able to take risks;
- 4. Their ability to stimulate intensive competition for small and large firms alike, leading to an energetic enterprise culture;
- 5. Their ability to stimulate innovation.

Armstrong & Taylor (2000) page 248

The above list also reveals a combination of structural and cultural goals addressed by SMEs. There is evidence to suggest that some of the more quantifiable aspects of the above list reached fruition. Between 1979 and 1994, there was a 54% increase in the number of firms in the UK. Given that 99.8% of firms employ less than 100 staff this shows an increase in the total number of SMEs (Keeble, 1997) (points 1 and 3 above).

Whilst there was improvement in absolute numbers of firms, it is debatable as to whether the economic situation has improved. The UK currently enjoys a period of low unemployment, however there is suggestion that the employment available in smaller firms is inferior to that offered by larger firms, being typified by low pay and abuse of statutory entitlements and controls (Rannie, 1989; Storey & Johnson, 1987), contradicting point 2 of the above list.

Debate also exists as to the regional implications of SME growth. Much of the important work done in this field has focused not so much on increases in number of firms but on the number, increase and performance of innovative firms (see for example Bishop & Wiseman, 1999a; Keeble, 1997; Vaessen & Keeble, 1995; Keeble, Bryson & Wood, 1991). Whilst the seemingly inevitable core-periphery remains (core regions have faster rates of growth (Keeble, 1997)), there appears to be evidence of more innovation amongst peripheral SMEs. As Vaessen and Keeble (1995) suggest "there is some indication of higher innovation rates amongst growing peripheral medium-sized firms compared with South Eastern enterprises" (page 502).

Table 3: SME Innovation

Product Innovation

Process Innovation

% of respondents whose firms had introduced $\frac{\text{innovation (1992-1995)}}{\text{South East}} \frac{\text{Other Southern}}{52.7} \frac{\text{Periphery}}{53.9} 48.3$

39.9

Adapted from Keeble (1997) page 287

44.1

As can be seen from Table 3, innovation amongst peripheral SMEs lags slightly in terms of product innovation (new products), but is superior with regards to process innovation (new ways of producing products). It has been suggested that what peripheral SMEs lack in terms of agglomeration they make up for in terms of a harsh environment that ensures only the most innovative firms survive.

43.3

Whilst the above discussion suggests that there are interesting inter-regional differences in terms of the growth and innovation of SMEs, it also partly validates reliance on their economic potential. The current (New Labour 1997-) government appears to be continuing SME initiatives with the introduction of, amongst other policies, the Small Business Service to help 'champion' smaller businesses, currently somewhat overlooked by Business Link whose primary responsibility is firms with between 10-250 employees (Lowe & Talbot, 2000). It would seem that the role and importance of SMEs within the economy is now firmly established. However, in addition to establishing the effectiveness of such policies, there is still much to be established concerning the operation and behaviour of SMEs, both urban and rural.

Much research and thought has been given to the running and structure of large firms. One only needs look at the average MBA syllabus to confirm this. Whilst these large firms create interesting scenarios for the researcher and students, there is something to be gained from studying the more pure form of transaction encountered within the SME. The SME manager is often also the company owner and, as such, operates in a more personalised way than would be found within a large corporation. Whilst the corporate manager attempts to balance risk and enhance the company shareowners' wealth, decision making is inevitably done within a structure of policy and procedure. On the other hand the SME manager operates in a way that more closely mirrors a private consumer (decisions based on one persons preference rather than policy). However, the SME manager is a consumer who is operating within a complex environment and often lacks information, and needs to form alliances as often as aggressively seek low costs. Part of the decision making process relates to the localised nature of information, but this does not provide a full explanation. As Casson (1993) suggests, "different people have access to different information, but, even where access is similar, opinions differ as to reliability" (page 35).

It is the personalised nature of decision making that makes SME research complex. Generalisations as to decision-maker behaviour become more difficult as various forms of bounded rationality are encountered. The reasoning behind purchasing decisions is not as obvious or explicit as 'company procedure' (Burpitt & Rondinelli, 1998). Even if the set of purchases by the firm is restricted to the acquisition of services, behaviour patterns remain complex. Although direct cost of service supply remains a central factor, the decision-maker may also be influenced by the need to form alliances and by other location and market-based factors. Importantly, it is unlikely that the small firm owner/manager is operating in accordance with a prescribed policy. It has been suggested by Daniels (1995) that "The role[s] of small and medium sized firms...in shaping the demand for producer services could fruitfully be pursued further" (page 85).

As an example of small firm decision making, research by Errington (1993) revealed that farmers were *more likely* to delegate (to other members of the business) crop decisions, including planting and selling, than to delegate negotiation with providers of finance. Similar work on this theme (Errington, 1992) suggested that farmers were more likely to discuss their retirement plans with their accountant (45%) than their family (35%) (where the respondent listed more than one category). Whilst this represents only one, and perhaps in many ways unique, subset of all small businesses, it does begin to illustrate that the decision making is not always obvious and that the relationship between the firm and the service provider is often important.

Further evidence of the influence of service providers is provided by Curran and Blackburn (1994) who explored sources of help used by SMEs to solve business problems:

Table 4: Sources of SME Advice

Sources of advice from external bodies on solving business problems (%)								
Accountant	Solicitor	Bank Manager	Small Firms	Enterprise	Educational			
			Service	Agency	Institution			
74.4	67.6	36.3	19.5	18.8	12.7			

It could almost be suggested from Table 4 that governments should abandon development agencies and instead subsidise professional business services (accountant, solicitors, etc.). It is certainly clear that firms will often pay for advice rather than receive it free from an agency. However, a significant amount of the advice and help provided by the professions is in fact specialist (e.g. tax advice, contract law, etc.) (Curran & Blackburn, 1994).

There also exists a differing level of service demand between different industry sectors. Dobson (1987) and Curran & Blackburn (1994) found evidence of low demand for business services amongst manufacturing firms, which has linkage implications. However, by combining the three previous sections, it could be suggested that an understanding of the local economic linkages between SMEs and their producer services, that are so useful to firms and to local economic development, could improve understanding of SME economics.

2.6 Decision-making in SMEs

The decision making process is often described as a series of steps. Broadly, the steps are: identify problem; gather data; build model and generate solutions; choose a solution (Baillette, 2001; Davis, McKeown & Rakes, 1984). When considering the decision making process as it relates to the purchasing of services, it can be assumed that the problem is already defined (i.e. the need for a service provider). The methods used by the decision-maker to collect the data (e.g. systematic market research, word of mouth, etc.) and issues (e.g. local influences, networks, etc.) that may influence the decision-maker in choosing a solution need to be considered alongside the nature of services as a transaction.

Within the service purchasing market there are usually no real costs of holding stock for the purchaser. In exceptional circumstances, there may be a retainer or a service contract that needs to be honoured for a certain amount of time (for example, the mobile phone service that often requires a year's contract). Where this does occur, it amounts more to a contractual relationship rather than to a cost for physically holding (e.g. warehousing).

However, there are still additional costs to the direct cost of the service. The decision-maker has various choices that add transaction costs to the direct costs of the service (O'Farrell, *et al.*, 1993). These transaction costs, first identified by Coase (1937), include "*the time and expense of negotiating, writing and enforcing contracts*" (Besanko, Dranove & Shanley, 2000, page 134) in addition to the cost of research. In part, the transaction cost reflects the risk of doing business, representing, as it does, the relationship between the cost of the consequences of opportunistic behaviour and the cost of preventing it through research, contracts and enforcement.

Whilst the decision-maker is using a combination of internal and external information to inform the decision (Errington, 1984), it is apparent that this information will not be perfect. In addition, Perren and Atkin (1997) have noted that few owner-managers actually use any form of systematic planning, and that owner-manager decision-making is an area that is under-researched. The observations of Errington (1984) and Perren and Atkin (1997) can be considered against general theories of decision-making that suggest humans are influenced by 'hindsight bias' (overestimation of ability once proven correct – Fischhoff, 1975) and have difficulties in returning to their original beliefs even when their new beliefs have been discredited (Loewenstein, Moore & Weber, 2001).

In addition to the complexities of decision-making in general, services, and specifically producer services, can represent a type of 'arm's length' transaction that experiences transaction-cost-related problems (O'Farrell, *et al.*, 1993) as it may be unlikely

that smaller firms will enter into long term formal relationships with their suppliers (partly due to the cost of such arrangements in terms of reduced flexibility). It is also unlikely that firms, for reasons of size (available capital), will seek mergers with their upstream or downstream suppliers of services²¹. Thus one of the few mechanisms available for significantly reducing transaction costs is removed.

Given the longstanding inability of both firms and legal experts to create complete contracts, a purchasing firm is left with an incomplete contract arrangement with the supplier (Besanko *et al* 2000). The tolerance of incomplete contracts can be explained by reference to two situations that business managers generally experience. First, all parties to the contract are operating within the limits of bounded rationality (Casson, 1993) and are attempting to deal with the complexities of the real world situation. This ultimately leads to difficulties in interpreting contract arrangements through a lack of clarity. For example, when a business asks an accountant to 'go through their books at the end of the year', do they mean 'prepare them for tax returns' or 'prepare them for tax returns and also offer us advice on how to better run the business finances'? Even if the situation is clarified by a written contract, the terms of this contract can in themselves be vague (*to deal with the complexities of the real world*). Secondly, the two parties are also at risk from asymmetry of information (Besanko *et al* 2000).

Decision-making can be further complicated by the development of relationship-specific assets. Although this asset generally refers to physical location or investment (Besanko *et al* 2000; agglomeration to reduce transaction costs - Turok, 1993), it can be adapted to describe the symbiotic relationship that develops between certain suppliers and the firm. Investing time and effort in developing a close working relationship with an

٠,

²¹ Williamson (1971) explains that the transaction cost of external relations during times of market uncertainty can be such that disintegration becomes more cost-effective.

accountant, for example, means that the company is less willing to move to another firm because the accountant, partly at the cost of the company, has developed transaction-specific knowledge.

Arguably the need for trust is high in certain service/firm relationships. Certain service providers (accountants, banks, lawyers, etc.) are often party to very sensitive information concerning the firm and, whilst these providers maintain professional working practices, it is perhaps easier to trust a professional already known to the company. Trust both reduces the need for expensive contract negotiations (or risk allowances) (Casson, 1993) and increases co-operation between the two parties (Besanko *et al* 2000). This, in turn, leads to a situation where the firm gains more for less cost from the provider, but moves the firm away from a competitive market situation.

When decision-making is considered within the context of the small firm, the situation becomes more focused on a smaller number of people. Due to the fact that within small firms the owner and key decision-maker are often the same individual there is less bureaucracy than would be the case where ownership and control have been divorced. This lack of bureaucracy leads to a more rapid form of decision-making (Vossen, 1998). However, it can also be suggested that individual decision-makers have more trouble than teams of decision-makers in processing the wealth of information available to them (Hunnicutt, 2001). Baillette (2001) emphasises the sense of risk felt by decision making owner-managers in small firms, highlighting not only the speed by which decisions can be implemented, but also the link between the owner-manager and company's wealth. Arguably, "SME directors have very little room for error because practically all decisions taken are of strategic importance" (Baillette, 2001, page30)

In summary, the service purchaser is in a situation where a collection of decisions needs to be made. The cost of searching for alternative suppliers needs to be weighed

against the cost savings that might be available. Also, the cost of developing and negotiating new contracts needs to be considered. Finally, a risk factor needs to be incorporated allowing for the consequences of default. All of these points may lead firms to retain services over long periods of time or source services locally, both of which can remove some of the uncertainty from the decision-making process.

2.7 Availability of Services

One important issue in the purchasing of services is the availability of services in a given district. As stated by North and Smallbone (1992) "supply-side constraints may limit the future creation of new firms and the expansion of existing firms in remote rural areas" (page 2). In addition to this being a restriction on local economic growth (Friedman, 1995; North & Smallbone, 1992), it will inevitably influence sourcing decisions. Research has already identified the departure of high street banks and insurance companies from market towns, particularly with a view to loss of employment opportunities for local people (SWER, 1997). It seems fair to suggest that both the reduction in number of service providers and the reduction in decision-making power within these service units will have an effect on the firms' choice of providers. Simply put, a service purchasing firm may have no choice but to source out of town or county because a) the service does not exist or b) the necessary decision-making power is not devolved to this geographic area.

2.8 Summary

This review had two primary goals. The first was to identify an underdeveloped area of research; the second was to provide a more detailed introduction to the thesis as a whole. This introduction allows the work within the thesis to have a firm grounding whilst

also allowing for the important exploration and clarification of various definitions and concepts.

Whilst most policy makers, businesses and individuals have a working definition of what does and does not constitute a rural area, the literature suggests that the exact boundary of this type of space is difficult to define. This is partly a function of the fact that urban and rural are increasingly merging into a homogenous whole (Cloke, 1997), but it is also due to the subjective nature of such definitions in general. For this thesis, a workable definition was found within the RDC definitions of areas as either 'remote' or 'accessible rural'. Whilst pinpointing the exact location of transition from one to the other is extremely difficult, it is relatively straightforward to identify the two extremes of this condition.

With the adoption of a definition of geographic space it is then possible to examine the business activities within it. The review then considered economic transactions and the linkages which these create. It has been shown that linkage is important for economic regeneration (i.e. Keynesian economics) and thus policy makers often welcome enhanced understanding of linkages. Authors have already found relationships between various firm types and economic regeneration; "Policy should recognise the potential key role they [small independent firms] may play in fostering local linkage..."(Dobson, 1987, page 55) and yet still much of the subject remains undeveloped.

Linkages have often forced, or at least persuaded, firms to locate closely together. Many areas have gained from the pooling of skills and knowledge, and the cost reduction that this creates (Garmise & Rees, 1997; Huggins, 1998; Turok, 1993). However, this has also created an increasing disparity between core and peripheral locations.

In addition to this, evidence suggests that the UK is increasingly becoming a service-sector-dominated economy. Not only do areas of agglomeration derive benefit from the direct employment effects of services, but they also benefit from the close

relationship that exists between business services and business (Bryson, Ingram & Daniels, 1999). This suggests that remote areas are a) missing out on the provision of high-quality services, b) importing services, or c) operating on a local level with services that are able to provide adequate products (i.e. the agglomeration of services is not having a significant impact). Given that it has been suggested that service firms are crucial to a region's growth (Westhead, 1995), it seems essential that more is done to uncover how firms in rural areas are operating with regard to purchasing the services they require.

Arguably, the procurement of producer services by smaller firms represents an important area for research. These firms, after all, amount to 99.8% of the stock of UK firms (DTI 1999a). In addition to the importance created by their number, their management style also engenders interest. These smaller firms are not as constrained as larger corporations by policy and practice; instead owner managers (single, partners, or small boards of directors) often operate them in a relatively independent way. It is this independence that makes decisions, on the face of it, less predictable. And yet their numbers makes an improved understanding essential.

This review has illustrated that, although much has already been established concerning services, linkages and SMEs, research potential still exists. A study that explores the relationship between firms and producer services by concentrating on developing a model of the factors that influenced service procurement decisions would appear timely. In addition, by establishing if differences exist within rural areas, more evidence may be uncovered concerning the rurality and core-periphery debates.