

# **Urban Regeneration and Human Capital on Merseyside: The Role of Producer Services**

**'Thesis submitted in accordance with the requirements of the University of Liverpool for the Degree of Doctor in Philosophy by Peter Garside'**

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**Abstract**

This research examines the role of producer services within the social and economic development of Merseyside during the 1980's. It questions previous assumptions on their ability to act as a development sector within metropolitan economies and reveals that, in the case of Merseyside, these do not hold true.

The theoretical standpoint of the thesis initially highlights the opposing perspectives of post-industrial and de industrial theories and favours the more critical (Marxist) approach of the latter for interpreting the role of producer services on Merseyside.

Based upon this critical Marxist perspective the research proposes and proves that the reproduction of social and economic structures by the people (agents) in the producer service sector serves to perpetuate the marginalised position of the area.

These theoretical standpoints are empirically examined by utilising a Realist methodology, which comprises both quantitative and qualitative analysis. This multi-faceted approach combines a basic neo-classical (supply and demand) study with advanced statistical analysis (Factor Analysis) and an intensive class based investigation.

The input into the area from the firms is either constrained by the limiting structures of the Merseyside economy or expands the social divisions that already within the area.

Ultimately, the involvement of producer service firms and related human capital, set against the regeneration needs of the area, is not just negative, but proactive in sustaining social polarisation and uneven development.

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## Introduction to the Thesis

### I.i/ Introduction

The purpose of this research is to understand the role of producer services<sup>1</sup> within the regeneration of Merseyside's social and economic fabric. The study predominantly focuses upon the period at the end of the 1980's, when the British space economy underwent some dramatic changes, which supposedly heralded the advent of the post-industrial era (Martin and Rawthorn 1986). These changes mainly involved massive deindustrialisation<sup>2</sup> and a rapid growth in service industry employment (Allen 1988). This of course is an over simplification of the uneven re-development that occurred throughout the country (Massey and Allen 1988), but indicates the primary backdrop upon which the events on Merseyside took place.

The research has been designed to cover the whole spectrum of social and economic issues relating to the involvement of producer services within a metropolitan area. This provides an intimate knowledge of their operations which is used to assess the viability of their role in helping, or even leading the regeneration of Merseyside.

The issue of urban regeneration is an enormous area for

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<sup>1</sup> The exact nature of producer services will be explained at length later, but for now they will be taken as an intermediate service within the production process, not supplied to the final consumer.

<sup>2</sup> The deindustrialisation of the British space economy was not just a feature of the 1980's, but a continual process over several decades.

debate and there are many perspectives on the form it should take; depending upon which political stance is adopted, what is chosen for regeneration and who it is designed to benefit (Hudson and Williams 1986, Short 1989, Hudson 1991, Parkinson et al 1988). The uncertainty surrounding the issue of regeneration will also play a part in the discussions concerning Merseyside and its recent development.

During the 1980's academic interest in producer services gained considerable momentum, culminating in the establishment of the Producer Services Working Party (Marshall et al 1986)<sup>3</sup>, which primarily examined the supply, demand and locational factors of this economic sector in Britain. During this period there was also a developing interest in the formation of new social collectives, especially the 'service class' (Goldthorpe 1982, Abercrombie and Urry 1983, Urry 1986). However, for the most part, these academic interests have remained separate and it has only been through the more contemporary debates, involving social theory and locality studies, that attempts have been made to bring current class analysis and economic analysis together (Thrift and Williams 1987, Urry 1987, Cooke 1989, Savage et al 1992).

This gap in the theoretical and empirical understanding about the ability of producer services, as part of a metropolitan area, to influence both the social and economic development of

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<sup>3</sup> The Producer Services Working Party was commissioned by the Institute of British Geographers to undertake extensive research into the dynamics of producer services. The result was a report in 1986 "Uneven development in the service economy: understanding the location and role of producer services". Mimeo, Department of Geography, University of Birmingham, Birmingham.

a locality, led to a bias in their academic representation. They became perceived as; robust enough to take over centre stage in the development of decaying industrial economies and the stimulus of comparative economic advantage to revive, not just principle (global cities) cities (such as London and New York), but also the peripheral regions of the developed world (Daniels 1983, Marshall 1983, Polese 1982)<sup>4</sup>.

The heightened awareness of the role of producer services was synonymous with the boom in the service industries and the general economy in the 1980's, and as a result research into their operations tended to focus on their economic importance (Rajan 1987, Ley and Hutton 1986). This became entwined with the cultural developments at the time<sup>5</sup> (Harvey 1989, Short 1989) and produced the 'sexy' image of a successful economic sector (Thrift, Leyshon and Daniels 1987, Daniels 1987, Goe 1990), whilst not really scrutinising its social repercussions or structural implications.

In contrast to this biased representation and the lack of an integrated theory for understanding the total impact of producer service activity within an area, this thesis adopts a more holistic approach that is of greater benefit in grasping the nature of their influence. The main of this is, to help understand what Merseyside can gain or lose from the involvement

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<sup>4</sup> The arguments which outline the beneficial effects of producer services are fully discussed in Chapter 1.

<sup>5</sup> The cultural developments tended to manifest themselves as supposedly post modern images of growth and development, involving conspicuous consumption, a demand for heritage and the values of 'deep England' (see Thrift 1987, in Thrift and Williams, Chapter 7).

of producer services, both socially and economically.

To facilitate this approach, a wider scope of literature needed to be examined than had previously been associated with the study of producer services (PWSP 1986, Marshall et al 1988). Therefore, whilst economic issues such as; inter-industry linkages and export markets do make a contribution to the understanding of producer service activities (Beyers et al 1986), they only provide a partial insight into their presence within an area.

In order to paint the whole picture of their effect on a metropolitan area such as Merseyside, there was a need to draw upon a much wider theoretical background than just urban economics or neoclassical economic geography. To this effect, the central critique of the research adopts a Marxist perspective, in that it recognises the (exploitive) social relations within the capitalist mode of production and the uneven development caused by patterns of capital accumulation (Massey 1984, Smith 1984, Walker 1985, Harvey 1982 & 1985).

Even though this 'political-economy'<sup>6</sup> approach utilises some of the basic concepts developed within Marxist geography (as above), it is not restricted to the extremes of structural Marxism (Peet and Thrift 1989). It allows a greater flexibility in understanding the role of the state, class, locality, culture and gender because it tries to conceptualise the role of agency and structure (Giddens 1984), by following the various pathways of influence that the existence of producer services has on the

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<sup>6</sup> For a full explanation of the development of the 'political-economy' approach refer to Peet and Thrift (1989).

Merseyside area; such as the reproduction of class relations by members of the service class, manifested in exploitive relations of production and social polarisation<sup>7</sup>.

As will be shown (Chapter 2), the use of the ideas of agency and structure is particularly relevant, as it allows a movement away from the confines of economic geography toward plugging the theoretical gap between the sociology of the service phenomenon and the economics of the service industries.

This study will not try to unravel the theoretical discourse concerned with the 'existence' of society, but will touch upon the work of social theorists such as Giddens (1984), Weber, (1968), Marx (1976), and others working on this project more associated with geographical study (Urry 1981, 1985, 1987, Harvey 1982, 1985, 1989, Thrift 1981, 1983, 1987). The aim being; to show 'human beings as knowledgeable agents' (Giddens 1984), to account for motivations and to understand the contextually situated activities of definite groups of actors. This will reveal that people (human agents) make and reproduce the structures of which they are a part, whether they are economic, political, or educational, and that they do not just function as a result of abstract forces (structures).

This approach will be clarified in Chapter Two, but for now it is sufficient to realise it allows the study to move outside a single (economic geography) perspective which cannot accommodate the idea that:

"...Capitalism is not just a phenomenon of economic

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<sup>7</sup> The concrete effects of these processes are reflected in residential and lifestyle patterns.

geography. It is also at one and the same time a social, cultural and political geography which is equally made and disputed in each of these other realms". (Peet and Thrift 1989, p. 22).

This section is only a brief introduction to the strands of the theoretical approach informing this research, so as to set the scene for the discussions to follow. But this synopsis focuses at the very heart of the research, which will attempt to unravel the complexities of urban development utilising the specific social relations of a particular labour market and economic sector: producer services.

As an introduction, this approach of explaining the nature of the research rather than introducing the subject material (producer services) is of far more benefit to the reader because; apart from being the most innovative facet of the work, it offers a more challenging discourse than traditional service industry analyses and familiarisation was essential sooner rather than later.

The rest of this introduction will explain the structure of the thesis, providing an insight into the development of the research and the way in which its constituent parts are interrelated.



## I.ii/ Thesis Structure

Chapter one is devoted to previous research on producer services. This includes; the inevitable questions of definition and classification, the reasons for the prominence of service industries in certain areas, the role of producer services within regional and national economies, export markets, economic restructuring, the role of information technology, locational influences and labour markets. It also considers how the discussion surrounding these developments depends on problematic primary data sources.

The chapter concludes with some general research questions that guide the basic analysis of producer services on Merseyside. These consider the capacity of producer services to trigger economic regeneration, including; providing an area with comparative economic advantage, facilitating employment growth, generating economic networks, providing flexible production processes and encouraging innovative and dynamic links between research facilities and economic institutions.

All these themes are explored in detail, drawing upon existing research into producer services. They do not necessarily relate directly to Merseyside, as the processes and effects of their activity, which have been examined in other parts of the world, are initially taken as non-place specific. Using this approach, some general hypotheses are established about the role of producer services in a metropolitan economy, which will be assessed later in the thesis through empirical analysis conducted on Merseyside.

The final section of the chapter outlines some of the less abstract economic theories, which are evaluated against concrete events illustrated by primary data research in later chapters.

Chapter two discusses theories relating to producer service research which have not already been fully explored before in the thesis, and opens up the theoretical understanding of this research into the realms of social theory. This is done by exploring certain hypotheses about; the individual operative (agent) within various types of producer service firms, social structures and class relations.

One of the main aims of this second chapter is to establish a new working hypothesis about the production processes of producer service firms, utilising ideas of how 'the individual' influences the operations of a particular firm, depending upon its size and function. This line of inquiry enables the assessment of the main determining characteristics of particular firms' operations.

Additionally, other contemporary geographical debates are touched upon where they make a contribution to the this type of 'political-economy' approach. These include Realism; (Sayer 1984, Tallis 1988), which allows a way of developing a methodology to identify the resultant causal effects of social entities and the contingent conditions under which they occur, and Locality theory; which, assumes there are forces and influences acting upon the causal powers of defined entities, that emanate from the place where the events occur and that, places are not purely structural or passive (Cooke 1989, Lovering 1989).

The final section of Chapter Two directly deals with the issue of class analysis. The role of people working in the producer service sector is discussed in relation to the causal powers of the various classes of which they are a part. This is the last component of the theoretical development of the thesis and provides the final element in understanding the complete role of producer services on Merseyside.

Chapter Three is divided into three sections. The first provides a clear insight into the past and present processes operating on Merseyside, both economic and social. It is very important that the stages in the development of the metropolitan area are examined, so that its internal relationships can be understood and the possibility that it operates as a locality questioned.

This first section also focuses upon the development of the service industries on Merseyside, and particularly producer services, including the wider structural development of the Merseyside economy. It examines the economic and social mechanisms that have culminated in the marginal economic situation of the area and resulted in the issue of urban regeneration gaining in importance to policy-makers.

The second section of Chapter three examines the level of producer service activity on Merseyside in the 1980's. This involves a breakdown of employment levels and types on a local authority district basis. This reveals the level of involvement this economic sector has had in the Merseyside labour markets, and the quantity and quality of human capital employed. These statistics also reveal the numbers of firms involved, along with

the location of their operations. This provides a clear indication of their spatial distribution and their potential to generate employment.

The third section of Chapter Three tackles the concept of regeneration. As one of the central themes of this thesis, it is essential to understand the motives, needs, resources and aims behind ideas of regeneration in relation to the perceived problems of the area. Only in this way is it possible to assess if producer services, in whatever capacity, can aid the general process of regeneration.

The topic of regeneration, as mentioned above, is the subject of considerable debate and is at the forefront of public policy (Parkinson et al 1989, Jacobs 1992). If it was solely in the domain of the public sector, it would not be related to the operations of the 'free market' and the influence of (private) producer services. However, the operations of public organisations and programmes deeply influence all facets of a local economy such as Merseyside. Therefore, the third section of this chapter considers the policies and the effects of the public-led or partnership regeneration schemes, to assess the compatibility between these goals and the consequences of producer service development.

Chapter Four addresses the specific methodological approach of the thesis and the research questions which are distinct from those in Chapter One. The chapter reflects the three stage methodological approach of the work and explains the various approaches adopted. These stages include the development of

extensive quantitative techniques<sup>8</sup>, which involve both simple and advanced statistical analysis<sup>9</sup>, and concludes with an intensive qualitative approach based upon semi-structured interviews.

The chapter assesses the success of these methods, which in the case of the questionnaire is based upon its response rate and representativeness, and retrospectively questions their effectiveness; both in terms of results and application.

Chapter five presents the results from the first of the three stage methodology. This is presented as a general statistical analysis, aimed at teasing out some of the simpler economic relationship patterns within the producer service sector on Merseyside. This section, apart from providing very robust quantitative data, also allows direct comparison with other studies of producer service activity (especially Beyers et al 1986).

The simple quantitative approach employed in this chapter, gives a readily accessible insight into a range of business characteristics specific to the firms on Merseyside. These reveal the difference (or similarity) between firms' operations and the more theoretical understanding of how producer service firms operate, highlighted in the review of previous research (Chapter one).

Chapter Six reveals the results from a more complex series of statistical computations, involving principal component

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<sup>8</sup> The extensive quantitative research of the thesis is based upon questionnaire analysis and its initial findings are analysed using simple statistical techniques (see Chapter five).

<sup>9</sup> The advanced form of statistical analysis is based upon common factor analysis and principal component analysis (see Chapter 6).

analysis and common factor analysis. For the reader who is not familiar with these research methods, a technical appendix is provided which explains the use of these techniques and how the results have been interpreted.

The primary concern of this chapter is to illuminate the main influences on the activities of producer service firms, based upon the questionnaire responses. This is done by extracting different types of variance, total and common, in order to explain the main variations in their operations. This links directly with the hypotheses developed in chapter two, which consider the interface between structure and agency, and makes it possible to assess the influence of an individual with relation to economic and social structures.

Chapter Seven concludes the primary research, with a class analysis of various actors involved in producer services on Merseyside, based upon a series of semi-structured interviews. This is done by assessing the various life profiles of those involved in the producer service sector and their particular relationship to the production process. Different class groups are constructed from those studied and, from this, their causal powers are assessed.

The main aims of this final stage are to evaluate two qualitative questions; firstly, the relationship and constraining influences upon the individuals operating in this economic sector, such as their ability to control capital within bureaucracies, and secondly, the influences of the presence on Merseyside of social collectives, such as the service class.

These seven chapters pull together all the threads of the

research and provide a comprehensive understanding of the role producer services play in the social and economic fabric of Merseyside. Each section can be construed as an individual piece of research, as each provides a vital aspect of the inquiry into producer services on Merseyside, but their primary strength lies in their ability to inform and support each other.

The main themes and findings of the thesis are considered in Chapter Eight (the conclusion), which provides an analysis of the key elements of the work, rather than a chapter by chapter summary. The conclusion also develops a reflective critique of the work and poses future possibilities for similar research.

## Chapter One

### Producer Services, Service Theory and Economic Development

#### 1.1/ Introduction

The following sections are mainly derived from existing research into the service industries and producer services in particular. They assess the general body of knowledge relating to this heterogeneous economic sector and highlight the structural changes in metropolitan economies that have been characterised by an increasing dependence on service industries and a massive decline in manufacturing (Gershuny and Miles 1983, Riddle 1986).

To initiate a study of producer services, it is important that the subject material is defined and consideration given to the various taxonomic approaches that have been used to categorise these services (Urry 1987, O'Farrell and Hitchens 1989).

The style of previous research must also be examined, as the theoretical roots adopted by researchers in this field are as important as the empirical analysis undertaken. The majority have tended to focus on supply and demand functions, and this has had repercussions for understanding the role of producer services within wider urban development<sup>1</sup>.

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<sup>1</sup> The main repercussions of this neoclassical approach have been to ignore the social effects of producer services operating within an area, which includes issues such as the social division



## 1.2/ Definition of Services

Problems with defining the service industries have existed for as long as this economic sector has been under investigation (Smith 1937). During the course of the 1980's, as the issue of producer services became more prominent within geographical debate (Marshall 1984, Wood 1985), the problems of definition became more acute (Allen 1988).

Issues of definition and classification have become more complex because of the growing awareness of complexity of the operations within this economic sector (Riddle 1986, Daniels 1986). The greater the knowledge of the service industries, the more illusive a definitive explanation of their operations became. As the plethora of definitions and classificatory frameworks reveal, there is a perceived justified need to theoretically conceptualise what services are (O'Farrell and Hitchens 1989).

A clear definition of the service industries is necessary if we are to explain how producer services differ from the rest of the economy. Under different regimes, different aspects of the service industries have been used to define their operations, such as; market place, product or mode of distribution, resulting in statements which typically define services as 'intangible', 'labour intensive' or 'ephemeral'. A great deal of time and effort has been devoted to conceptualisation, but definitional problems have consistently plagued analysis (Marshall et al 1987).

A major contribution to this definitional problem is the  

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of labour and class structures.

heterogeneous nature of the service sector which, covers a vast array of, sometimes totally unconnected, disparate operations (Marshall 1984).

One early technique adopted to avoid these problems was definition by exclusion, which meant all activities not described as primary or secondary fell into the category of tertiary (services). The resulting terminology which developed to define the service sector; 'tertiary' (Fisher 1935) and 'residual' (Clark 1957), has been objected to for implying the service sector has lesser importance than, and a parasitical dependence on, manufacturing activities (Riddle 1986).

More recent attempts at defining the service sector have tried to examine its role and attributes within advanced economic capitalist systems, and to draw out any common links to illustrate the essence of what is a highly complex and dynamic sector. However, to define the lowest common denominator within all services, thus providing a succinct and simple definition, is impossible.

Existing definitions tend to be too open-ended or too complex to serve as a useful tool in analysis, drifting into the realms of description rather than definition. Riddle (1986) outlines the common inadequacies found in definitions which generally pick on one of several attributes supposedly ubiquitous in the service sector; intangibility, labour intensive, simultaneity of production and consumption, and perishability. Table 1.1 highlights how these attributes have been used in previous research.

Table 1.1

Examples of Inadequate Definitions of Services

- 1/ "Service industry. An industry that produces services rather than goods. The chief service industries are transportation; retail trade; insurance;....."  
(Ammer and Ammer 1984, page 421).
- 2/ "[Services are]....consumer or producer goods which are mainly intangible and often consumed at the same time as they are produced.....Service industries are usually labour intensive."  
(Bannock, Baxter and Rees 1972, page 372).
- 3/ "Services. The component of the gross national product that measures the output of intangible items."  
(Greenwald 1973, page 533).
- 4/ "[Services]...are sometimes referred to as intangible goods; one of their characteristics being that in general they are 'consumed' at the point of production."  
(Pearce 1981, page 390).

Source: Riddle 1986.

It is not that the definitions shown in Table 1.1 are wrong, as the majority of services do contain these attributes, but that it is impossible to be specific. As a result, other authors have openly incorporated a certain vagueness into their definitions:

"(Services) the exchange of a commodity, which either may be marketable or provided by public agencies, and which often does not have a tangible form (Daniels 1985, page 1)."

The definition ultimately depends upon exactly what is being described; in the above case it is the nature of the product. This is a popular approach adopted by writers such as; Hubbard and Nutter (1982), Gershuny and Miles (1983), Massey (1984), and Howells and Green (1986). One alternative format is to define the function of the 'service' and its mode of transaction. For example:

"Services are economic activities that provide time, place and form utility while bringing about a change in or for the recipient of the service. Services are produced by (1) the producer acting for the recipient; (2) the recipient providing part of the labour; and/or (3) the recipient and the producer creating the service interaction." (Riddle 1986, page 24).

As producer services are part of this elusive goal, it is not surprising that there is no one accepted definition of their operations. There is much disagreement as to what constitutes a producer service (Producer Services Working Party 1986). This is reflected in the protracted definitions which try to encapsulate every facet of producer service operations:

"Producer services supply business and government organisations whether in agriculture, mining, manufacturing, or service industries. They supply expertise which enhances the value of the output of other sectors at various stages in the production process. They are 'traded', whether within companies, on the open market, or indirectly through their contribution to the competitiveness of other sectors. Their demand and supply need not occur in the same areas and, by contributing to the supply capacity of local industry, they may influence uneven development more generally."  
(Marshall, Damesick and Wood 1987, page 576).

Even though the above definition gives an indication as to what function producer services provide, it does not identify exactly what producer services are, as this is not possible because they are so varied.

Just as there is no one definition of the service sector, there is no one 'correct' definition of producer services. The decision as to what constitutes a producer service is primarily influenced by the type of research undertaken (primary or secondary) and definitions do not always directly relate to the subject material<sup>2</sup>.

As this research progresses, it will become apparent that it is not limited to any one fixed definition of a producer service. Instead, it uses the general criteria already outlined and where possible, operations (firms) are scrutinised to assess if they have an intermediate role in the production process.

The function of producer services will guide their definition, based upon their ability to provide; a facilitative

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<sup>2</sup> When undertaking primary research, the researcher is free to choose what constitutes a producer service (within limits), but these may not relate to previous definitions or classificatory groups, which is ultimately dependent on the information available.

milieu in which production can take place, and are indirect from the production processes' final interface of supply and consumption (Riddle 1986).

"(Producer Services)...supply business and government organisations rather than private individuals, whether in agriculture, mining, manufacturing or service industries." (PSWP 1986, page 4).

### 1.3/ Classification of services

The next stage of the research involves transforming this general rubric, which informs our definition, into a classificatory framework. This entails identifying specific industries as particular types of services and has been the source of further disagreement between research methodologies.

This is borne out by the various classifications that have been drawn up and the contradictory stances as to which industries can be classified as a producer service (Greenfield 1966, Marquand 1979, Gershuny and Miles 1983, PSWP 1986, Urry 1987, Allen 1988).

Classification of subject material enables manageability and a clear conception of the issues involved. As the producer service sector is an integral part of the 'service sector', classification of the various divisions within the services has not only compartmentalised its operations, but also displayed the various divisions within this economic sub-group.

There are a multitude of approaches to classifying the service industries, but it was one of the simpler techniques, primarily developed by Greenfield (1966), which drew attention to the existence of producer services by highlighting the producer-consumer service dichotomy.

The lack of homogeneity within the service sector, with respect to market place, labour force, production of service, etc. encouraged this type of division by functional group. But, the consumer-producer dichotomy is too simplistic and whilst it enabled research to concentrate on two distinct aspects of the

service sector (see Daniels 1985, chapter 8), it does not provide a clear enough resolution for accurate examination of the components within the service sector.

In response to this original, inadequate, classificatory framework, there have been several attempts to segregate the more diverse activities within the service sector. The focus of these approaches narrowed throughout the 1980's, with one of the more informed starting points being the criteria and classification of the service sector by Urry (1987), primarily based upon the work of Walker (1985).

The framework eventually formalised by Urry (1987) is shown in Table 1.2, and it is possible to visualise the extent of the classificatory problem through this elaborate regime. Even though it attempts to divide the service sector into its constituent groups, the categories are not mutually exclusive. This is primarily because of the highly complex business networks developed by some modern firms which deal in a multitude of markets and economic sectors (Taylor and Thrift 1982 and 1986).

The classificatory problem highlights the contradictory forces present within the service sector, which contains extremely diverse operations, but also highly flexible and interdependent services. The same service function can be performed by service industries categorised into different groups. For example, information networks can provide a distributional service as well as a managerial service, a consumer service and a welfare service. In addition, some service operations such as clearing banks, provide a consumer as well as a producer service function.



## Table 1.2

### Criteria and Classification of Service Industries

#### Criteria

- 1/ **Ownership:** whether the industry is predominantly publicly or privately owned.
- 2/ **Nature of Market:** whether the demand for the service comes from the final consumer, or from producers, or from a mixture of the two.
- 3/ **Nature of the product:** whether the service takes the form of a material product, which can be bought, sold or stored, or can only be consumed at the point of production.
- 4/ **Degree of commodification:** whether the service is bought or sold on the market and its supply is dependent upon the conditions of profit maximisation; or where the service is marketed, but conditions of profit maximisation do not apply.
- 5/ **Functions in the processes of production and circulation:** whether the service is concerned with services for management, services for the workforce, or services to convey money and/or people, and/or goods, and/or information.
- 6/ **Character of the exchange involved in significance of the quality of the service delivery and difference between:**
  - sale or repairs to material objects,
  - transfer of ownership,
  - temporary use,
  - transfers of information,
  - repairs to humans.

#### Classification

- 1/ Public Consumer Services
- 2/ Private Consumer Services
- 3/ Private Managerial Producer Services
- 4/ Private Distributional Producer Services
- 5/ Circulation Services
- 6/ Privately Owned Welfare Services

Source: Urry 1987.

The problems of classifying the 'services' are manifestly difficult and there is no real solution at this aggregated level. However, it does provide an insight into the complex nature of the service sector and the difficulty in classifying not only consumer and producer services, but also the divisions within these sub-groups.

Ultimately, producer services cannot be isolated as a discrete group from the rest of the service industries, but it is possible to segregate the overall classification of producer services into smaller, almost self contained units. These do have similar characteristics to each other, yet are distinctive enough to be classified as individual groups.

Previous research has revealed various approaches to classifying producer services, some based on stringent guidelines and some on arbitrary judgements. An example where the selection and grouping of producer services was primarily based upon the discretion of the researcher, is the work of Beyers et al (1986). This method involved the compilation of a list of Standard Industrial Classification (SIC) codes representing producer services which were:

"...derived from the judgement of the District Staff as being industries very likely to be tied to business or government markets and having the potential to be traded inter-regionally." (Beyers et al 1986, page 2).

Because it is an arbitrary process, it does not conform with alternative industrial classifications, such as those selected by Gershuny and Miles (1983), or Noyelle and Standbach

(1983). A comparison of these categories, specifying producer service operations, is displayed in Table 1.3. It indicates that even though the classifications differ, the types of firms selected are very similar.

Other researchers (Cuadrado 1986 and Pederson 1986) have tended to avoid any formal construction of a classificatory framework, by utilising official firm classifications. For example; Cuadrado (1986) determined that producer services were service activities, selected from the Spanish National Classification of Economic Activities, which indicated an intermediate involvement with other firms. This approach resulted in the classification shown in Table 1.4.

The reliance upon official classifications to determine categories of producer services is a pragmatic approach which, whilst avoiding complex classificatory strategies, can isolate the work on a national basis. However, there are countless problems with official classifications, which can lead to inconsistency over time and between places. These problems are examined in more detail below but, prior to this, the most comprehensive attempt at classifying producer services is discussed.

The most extensive research into producer services was conducted by the Producer Services Working Party (1986) (Marshall et al 1987, 1988). The PSWP developed one of the most complete classification frameworks for distinctive groups of producer services.

Table 1.3

Alternative Industrial Classifications  
for Producer Services

Gershuny and Miles

Noyelle and Stanback

III. Distributive \*

III. Distributive Services \*

IV. Producer Services:

IV. Complex of Corporate  
Activities:

Banking and Credit \*  
Insurance \*  
Real Estate \*  
Engineering and Arch \*  
Acct and Bookkeeping \*  
Misc Bsn Services \*  
Legal Services \*

Central Admin Offices \*  
Finance/Insur/Real Est \*  
Business Services \*  
Legal Services \*  
Membership Organisations \*  
Misc Professional Orgs \*  
Social Services

V. Social Services \*

V. Nonprofit Services \*

Note 1: \* Services included in the Export of Services (EOS) Study,  
Beyers et al 1985.

Note 2: The classification IV. predominantly covers Producer Services.

Source: Beyers et al 1986.

Table 1.4

An Example of Official (Spanish) Frameworks used  
for Producer Service Classification

- |                                |  |
|--------------------------------|--|
| 1/ Assistance and Legal Advice | 18/ Design                               |
| 2/ Investment & Finance        | 19/ M. P. Quality Control                |
| 3/ Project Feasibility         | 20/ Finished Products Quality<br>Control |
| 4/ Placing of Shares           | 21/ Technological Development            |
| 5/ Fiscal Advice               | 22/ Info and Technological Advice        |
| 6/ Accounting Advice           | 23/ Market Surveys                       |
| 7/ Accounts                    | 24/ Advertising                          |
| 8/ Personnel Management        | 25/ Home Marketing                       |
| 9/ Tax Management              | 26/ Foreign Marketing                    |
| 10/ Customer Management        | 27/ Customer Research                    |
| 11/ Data Processing            | 28/ Local Transport                      |
| 12/ Management Control & Audit | 29/ Regional Transport                   |
| 13/ Personnel Selection        | 30/ National Transport                   |
| 14/ Staff Training             | 31/ International Transport              |
| 15/ Cleaning Services          |  |
| 16/ Engineering Services       |  |
| 17/ Productivity Control       |  |

Source: Cuadrado 1986.

The classification framework developed by the working party is based upon the medium of the production process in which the service is involved, with a separate distinction made for the market place in which the firm operates (Table 1.5).

The criteria for the PSWP classification show a strong similarity with those used by Walker (1985) and Urry (1987). This is because both frameworks focus upon the function, market and nature of the product. However, each adds a new dimension to the analysis by examining the ownership of the firm (Urry 1987) and its economic linkage with other firms (PSWP 1986).

Ultimately, layers of criteria could be added to existing frameworks, including use of technology or specific labour markets, so that the taxonomic description almost pin points individual firms. Yet this process will eventually negate the purpose of classification, which seeks to understand the common characteristics of groups that exert a significant amount of influence on their surrounding environment.

The PSWP classification is one of the more advanced frameworks and is used to develop one of the working hypothesis in the thesis concerning the operational characteristics of producer services on Merseyside (Chapter 2). However, it is not strictly adhered to because, as with many general classifications of this type, it displays several problems which can hinder or distort the research.

One problem occurs when attempting to transfer the conceptual distinctions made by the classification (for example; markets or product service) into practical classifications using

Table 1.5

Producer Services Working Party  
Classification of Producer Service Firms

INFORMATION PROCESSING SERVICES

Product/process, research and design  
Marketing, sales, advertising, market research, media  
Engineering (civil, mechanical, chemical, electrical, etc.) and  
architectural design  
Computer services, management consultancy, administration  
Financial planning, accountancy, investment management, auditing  
Banking, other loan institutions  
Insurance  
Legal  
Training/education/personnel and industrial relations  
Purchasing  
Office services  
Property management/estate agency

GOODS-RELATED SERVICES

Distribution and storage of goods, wholesalers, waste disposal,  
transport management  
Installation, maintenance and repair of equipment; vehicles,  
communication networks and utilities.  
Building and infrastructure maintenance

PERSONNEL SUPPORT SERVICES

Welfare services  
Cleaning, catering, security, safety  
Personal travel and accommodation

Market Area for Service Provided

1/ Services produced by firms for themselves. Here we are concerned with the internalised supply of services within firms. The demand for this component will be influenced by the product, production technology and organisational characteristics of the firm.

2/ Services produced by firms solely to meet demands from other firms, that is 'pure' specialist producer service suppliers. The degree of service internalisation by firms will obviously be an important determinant of the size of this market. However, the characteristics of the service itself may influence barriers to entry into the market, and the degree to which production can be carried out by non-specialist producers.

3/ Services produced for other firms by firms which meet both intermediate and final service demand. In these 'mixed' service activities, the business sector and personal consumer demand will both influence the nature of the market.

conventional government frameworks. In the past this has caused particular difficulties, with regard to what can be classified as a producer service set against (clumsy) official classifications. This is revealed by the lack of consensus when using government frameworks shown in Table 1.6.

Other problems occur when trying to define producer services as a separate entity from consumer services, as it is impossible to make a clear distinction in the case of certain firms and a separate category has to be created for 'mixed' services. This difficulty is compounded by the division that must be made between public and private services, as nationalised industries (ie. public transport) are widely used by private business organisations. These must be kept separate, due to the political involvement in public services, placing them outside of the market economy and within subsidised financial structures.

Considering these difficulties, the PSWP constructed a classification of all industries using the revised 1980 U. K. Standard Industrial Classification. The result is shown in Table 1.7 and reveals how it is impossible, utilising official structures, to accurately designate individual service industries to specific categories (i.e. producer services). This is because even within categories such as consumer services, certain firm types, e. g. the 'Hotel Trade' (Table 1.7), may contain operations that derive the majority of their turn over from corporate business, and therefore should be classified as a producer service. Equally, there are other firm types, such as publishing and printing (SIC Group 475), which, according to the

PSWP classification (Table 1.7), should be assigned to production activities. However, sectors of these operations display service characteristics concerning the transferal of information and, therefore, could be classified as services.

Throughout the 1980's varying classifications of the service sector were developed, none of them identical. Yet all research seeking extensive geographical comparisons and relying on secondary data, had to adapt to official classifications. In Britain, the Standard Industrial Classification (SIC) is the official grouping for all economic activities. The service industries are classified into several Divisions within the overall classification: Division 6 - Distribution, hotels, catering, repairs; Division 7 - Transport and communication; Division 8 - Banking, finance, insurance, business services and leasing; Division 9 - Other services (Central Statistical Office 1980).

One of the key problems with using official classifications of this type is the change that has occurred in its structure over time. In 1980 a revised decimal structure was introduced, radically altering the 1968 SIC which was based upon Minimum List Headings (MLH). The 1968 SIC was divided into 27 Orders (I - XXVII), with subsequent MLH for specific groups. Whereas the 1980 SIC has ten divisions (0 - 9), each of these in turn is divided into Classes (two digits), Groups (three digits) and Activity Headings (four digits), resulting in 60 Classes, 222 Groups and 334 Activity Headings. Table 1.8 shows a comparison of the 1968 and 1980 SIC and indicates that any accurate longitudinal study which incorporates this change is



Table 1.6

Comparison of Producer Service Classifications  
with an Official Government Framework

<u>MLH</u>	<u>NIEC Greenfiled<sup>S</sup></u>		<u>Gershuny<sup>IDS</sup></u>		<u>Hubbard<sup>Y</sup></u>
	(1982)	(1966)	<u>Miles</u> (1983)	<u>Marquand</u> (1979)	<u>Nutter</u> 1982)
<u>Transport/Communications</u>					
701 Railways				*1	
702 Road/Passenger Transport				*1	*
703 Haulage for hire	#			#	#
704 Other road haulage	#			#	#
705 Sea transport	*			#	#
706 Port transport				#	#
707 Air transport				#	*
708 Postal services/Telecom				*1	#
709 Miscellaneous	#			*	#
<u>Distribution Trades</u>					
810 Wholesale Food/Drink	*	#		#	#
811 Wholesale Petroleum	*	#		#	#
812 Other wholesale	*	#		#	#
831 Dealers in builders' materials & agri supplies	*	#		#	#
832 Dealers in other industrial materials	#	#		#	#
<u>Insurance, Banking, Finance Business Services</u>					
860 Insurance	*	*	#	*1	#
861 Banking	*	*	#	*1	#
862 Other Institutions	*	*	#	*1	#
863 Property Management	*	*	#	*1	#
864 Advertising/Market re.	#	#	#	#	#
865 Other business services	#	#	#	#	#
866 Central offices	#	?	?	#	#
<u>Professional/Scientific</u>					
871 Accountancy	#	*	#	*1	#
873 Legal services	*	*	#	*1	#
876 R & D	#	#	#	#	#
879 Other Proff. services	#	*	#	*1	#
<u>Miscellaneous</u>					
884 Hotels/Residential					#

Notes

X - Based on Browning and Singelmann (1975)

D - Gershunny and Miles (1983) regarded distributive services as a separate category

S - These definitions are not totally consistent with the UK SIC

Y - Defined as "basic" services, but excluding consumer activities

1 - These "mixed" producer-consumer services produced a higher  $r^2$  with population than employment

\* - "Mixed" consumer-producer services

# - Producer Service

Source: Producer Services Working Party (1986)

Table 1.7

Classification of Industrial Activities Using the  
1980 U. K. Standard Industrial Classification

PRODUCTION ACTIVITIES

SIC            Extractive and Manufacturing Industries

0            Agriculture/Forestry/Fishery  
11-15       Energy resource supply industry  
2            Mineral extraction and processing  
3            Metal goods, engineering, vehicles  
4            Other manufacturing

SIC            Utilities

5            Construction  
16           Production/distribution electric, gas, etc.  
17           Water supply  
92           Sanitary services

SERVICES

SIC            Producer Services

61-3        Wholesale distribution/scrap dealing, etc.  
723         Road haulage  
831/2       Auxilliary services to banking/insurance  
837/8       Professional and technical services; Advertising  
839         Business services  
841-3       Hiring out machinery, equipment, etc.  
849         Hiring out other moveables  
94          Research and development  
9631        Trade unions, business and professional associations

SIC            Consumer Services

64/65       Retail distribution  
661         Restaurants, snaks bars, cafes  
662         Public houses and bars  
663         Night clubs and licensed clubs  
665         Hotel trade  
667         Other tourist/short-stay accommodation  
672         Footwear/leather repairs  
673         Repair of other consumer goods  
721/2       Road passenger transport/urban railways  
846         Hiring out consumer goods  
931         Higher education  
932         School education  
936         Driving and flying schools  
95          Medical/health/veterinary  
96          Welfare/religious/community services  
97          Recreational/cultural  
982/9       Personal services

SIC	Mixed Producer/Consumer Services: predominantly private
664	Canteens
671	Repair/servicing of motor vehicles
71	Railways
726	Transport not elsewhere specified (nes)
74	Sea transport
75	Air transport
76	Support services to transport
77	Miscellaneous transport services nes.
7901	Postal services
7902	Telecommunications
814	Banking
815	Other financial institutions
82	Insurance
834	House and estate agents
835	Legal services
836	Accountants, auditors, tax experts
848	Hiring out transport equipment
85	Owning and dealing in real estate
933	Education nes. and vocational training
981	Laundries, dry cleaners, etc.
SIC	Public Services
91	Public administration, national defence

Source: Producer Service Working Party 1986.

Table 1.8

Broad Comparison of 1980 SIC with 1968 SIC

<u>Divisions SIC 1980</u>	<u>Orders SIC 1968</u>
0 Agriculture, forestry, fishing	I
1 Energy and water supply industries	II (MLH 101 & 104), IV, XXI
2 Extraction of minerals and ores other than fuel; manufacture of metals, minerals and chemicals	II (MLH 102, 103, 109) V, VI, XVI
3 Metal goods, engineering and vehicle industries	VII to XII inclusive
4 Other manufacturing industries	III, XIII to XV, XVII-XIX
5 Construction	XX
6 Distribution, hotels and catering; repairs	XXIII, XXVI, (MLH 884- 888, 894, 895)
7 Transport and communication	XXII
8 Banking, finance, insurance, business services and leasing	XXIV, XXV (MLH 871, 873)
9 Other services	XXV (remainder), XXVI (remainder), XXVII

Note: These are rough comparisons, precise equivalents are not possible.

Source: Employment Gazette, Supplement No. 1, May 1983.

impossible.

An example of another difference in the two structures caused by the 1980 revision occurs in the 1980 SIC classification of the service industries (Divisions 6-9) which makes a distinction between 'principals' and 'agents'. This separates dealers buying or selling on behalf of others from those who actually own the firm, taking the total risk upon themselves.

In addition to these time-series problems of change over time, use of the classifications has varied between research. Channon (1978) incorporates Order XX (building and construction) into his classification of the service industries, yet omits Order XXVII (public administration and defence). Marquand (1979) on the other hand, omits Orders XX (building and construction) and XXI (gas, electricity and water) and includes order XXVII (public administration and defence).

Consistency is obviously lacking in previous research due to a lack of consensus on classification between writers and because of the problems with official data. Problems have also occurred where rigid frameworks have been applied, when there is, perhaps a stronger case for developing an alternative classification method based upon a more flexible regime.

One key characteristic concerning classification, not really impressed dealt with in previous analyses, is that the criteria upon which it is based function differently in different contexts and locations. For example, the contingent conditions of a locality may make the influence of external markets redundant, or the use of public services by private

firms may alter their function because of the client market. Therefore, classification under the criteria previously defined may not apply directly to all firms in all locations.

It would be preferable to adopt a flexible framework for classification based upon general processes of operation which allow the key influences upon firms' operations to be highlighted and examined. As a result, classification becomes directly relevant to the dominant operational characteristics of a firm and is not merely an abstract framework superimposed upon separate groups.

This section has dwelled upon the classification process not just because of the problems involved, but because it forms a crucial part of the working hypothesis of this thesis which develops an alternative approach to classification. This is fully explained in Chapter Two and applies directly to the methodology and primary research of this study. The problems with the SIC are inescapable and figures generated from official statistics will have to be used in conjunction with the caveats already stated.

#### 1.4/ How Important are Service Industries ?

At this stage it is necessary, not only to justify the study of the service industries, but to highlight the role this sector plays in economic development.

Historical evidence indicates that the service sector in Britain has, since the mid nineteenth century, been equal to, or greater than, manufacturing in terms of the distribution of national income (Table 1.9). During this time, employment in the service sector was only a few percent behind manufacturing, depending on which figures are accepted (Table 1.10 and Table 1.11).

Since the 1920's service employment has increased in significance and these patterns of growth have been maintained upto the present day, resulting in an increasing difference between service and manufacturing employment (Figure 1.1 and 1.2) (see also Greenfield 1966, Lee 1984, Daniels 1985, Urry 1987).

Even though services played a strong role in the British economy, early economic theorists such as Adam Smith (1904) downgraded their importance, viewing the manufacturing sector as the motor/driving force behind advanced capitalist economic development. Smith described the manufacturer as someone who:

"adds generally to the value of the materials which he works upon", whilst "The labour of a menial servant, on the contrary, adds to the value of nothing." (Smith in Greenfield 1966, page 42).

It was the perceived intangibility of the services which

theorists could not relate to the value of production, hence not only were menial servants viewed as unproductive, but also:

"lawyers, physicians, men of letters of all kinds: players, buffoons, musicians, opera singers, opera dancers, etc." (Smith in Greenfield 1966, page 42).

It was not until the twentieth century that the service industries began to generate considerable interest through the works of Fisher (1935) and Clark (1957), from which stemmed the Fisher-Clark model based on types of production. However, this did not dispel the widely held opinion that services were merely a subsidiary to manufacturing. This line of thought was also advocated by Mathias (1969), who stressed that industrial production (manufacturing) was the main economic indicator. Inevitably it became:

"The widespread assumption that economic growth and industrialisation were synonymous", which, "has not only resulted in the neglect of the large service sector but has allowed the idea that services were substantially derived from growth, to remain both untested and unchallenged." (Lee 1984, page 140).

This is not to say that economic development is purely service-led, but that there has been a bias in the literature which has created an asymmetry in this type of economic research. This problem is compounded by the fact that research considering the social implications of a service based economy (Urry 1987) is virtually non-existent.

Recognition of the importance of the service sector eventually came to light through the works of Greenfield (1966) and Fuchs (1965 and 1968), and more recently Gershuny and Miles



Table 1.9

Distribution of national income by different sectors  
in Great Britain, various years (figures rounded up).

	Agriculture, forestry, fishing	Manufacture, mining, industry	Services*
1851	20.3	34.3	45.3
1901	6.4	40.2	53.5
1907	5.9	36.3	57.8

\* Trade, transport (domestic and personal), housing income from abroad, government, professions, etc.

Source: Urry 1987.

Table 1.10

Distribution of the labour force (%), various years.

	Agriculture, forestry, fishing	Manufacture, mining, industry	Services
1851	21.7	42.9	35.4
1901	8.7	46.3	45.0
1911	8.3	46.4	45.3

Source: Urry 1987.

Table 1.11

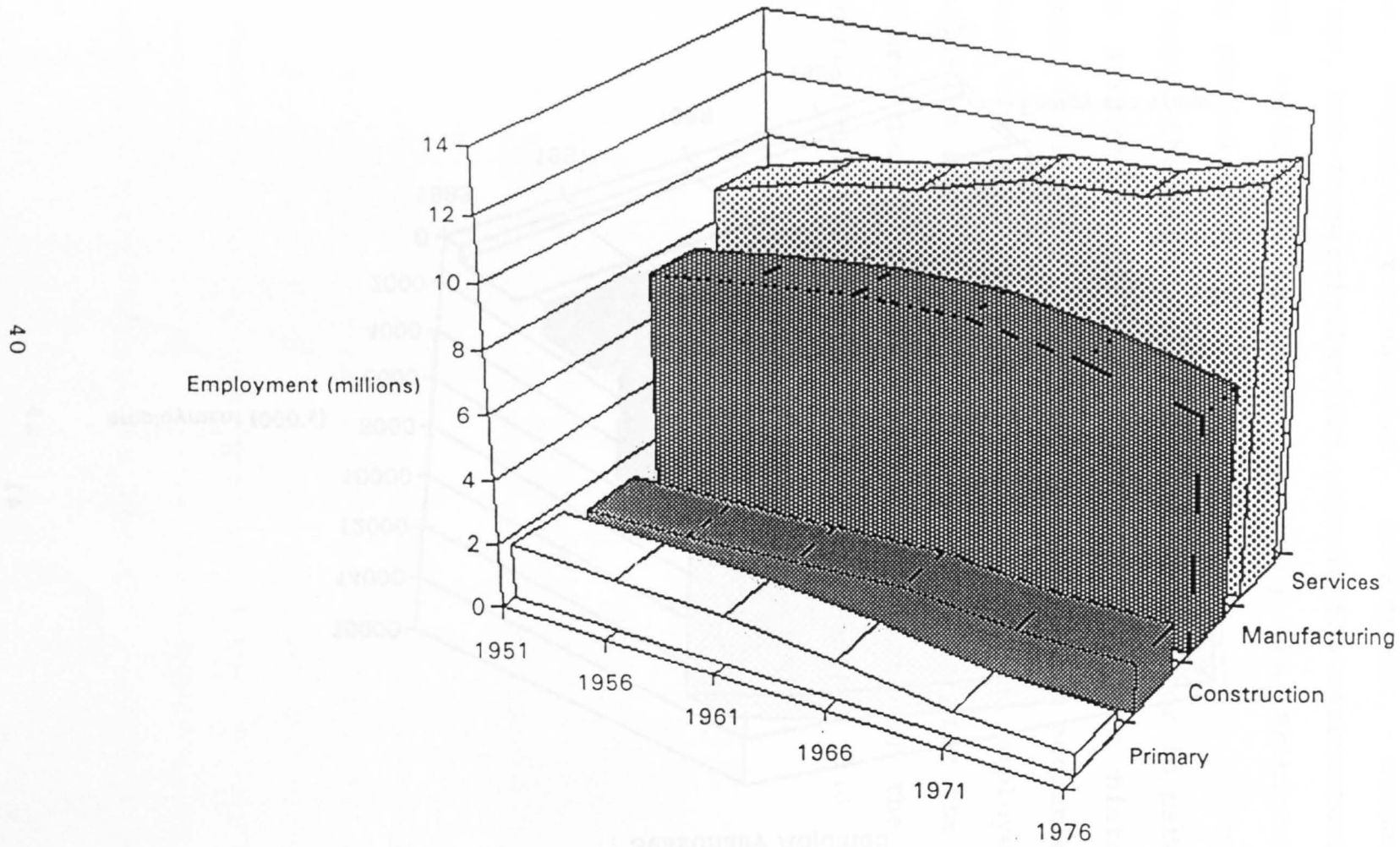
Employment by sectors in Great Britain (%).

	Agriculture	Manufacturing	Services
1861	18.8	49.9	31.3
1881	12.5	52.6	34.7
1911	8.1	50.5	41.4

Source: Lee 1984.

Figure 1.1

### Employment Trends in Great Britain 1951-77

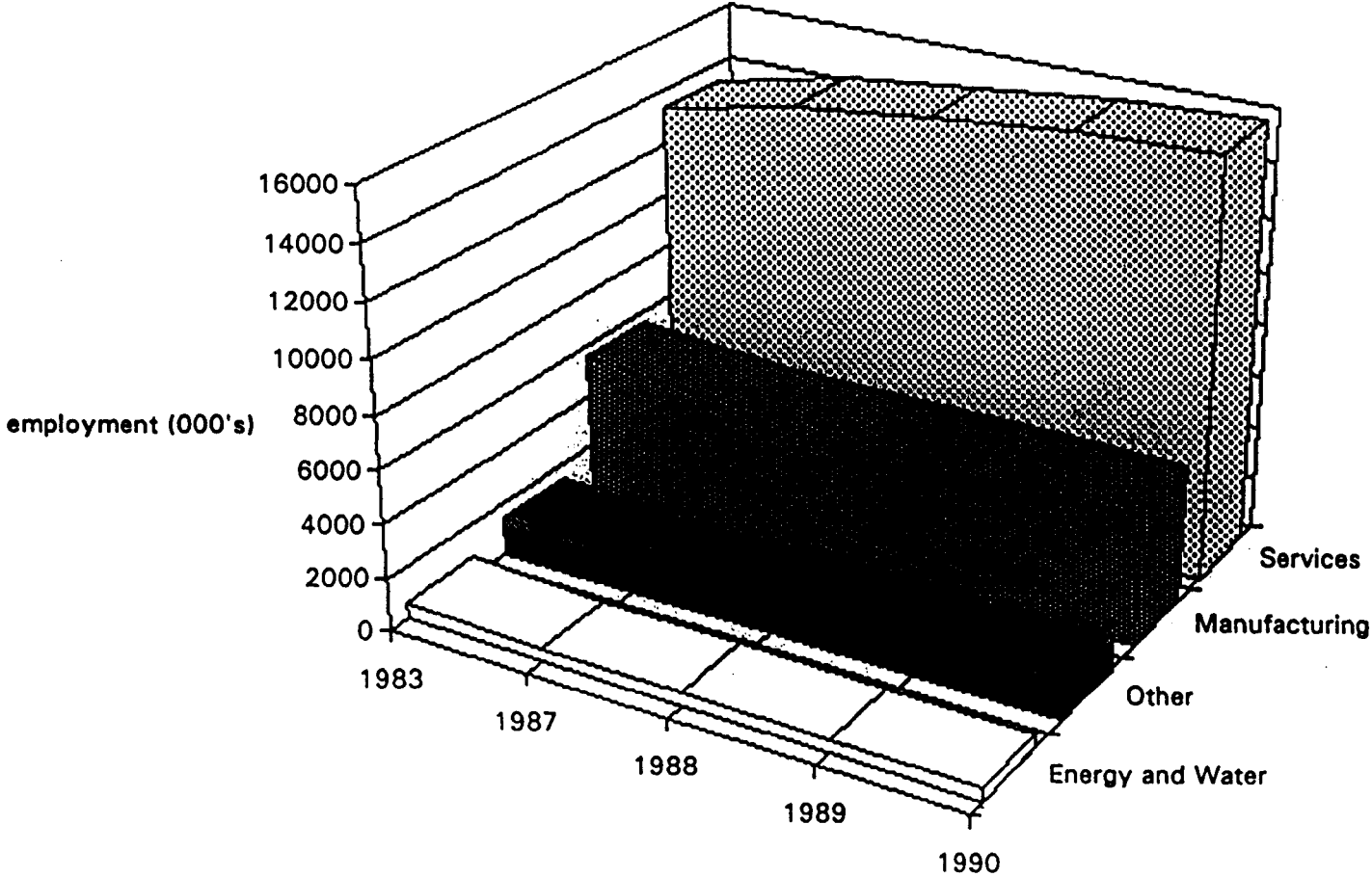


Source: Harris and Taylor 1978

Figure 1.2

### Employees in Employment, United Kingdom Seasonally Adjusted

41



Source: Employment Gazette 1991

(1983), Daniels (1985), Riddle (1986) Marshall et al (1987), Howells (1988) and Wood (1991).

These works revealed the importance of the service sector with regard to many features of economic development; labour markets, exports, technological development, comparative advantage, but in particular its role in the restructuring of advanced capitalist economies including the British space economy (Daniels 1986).

Today, the importance of the service sector is paramount to the British economy, even more so than its historical influence. During the 1980's, service activities accounted for over half the Gross Domestic Product (GDP) and employed two thirds of the workforce in each region, except for the South East where they accounted for three quarters of the areas employment (PSWP 1986).

## 1.5/ Service Theory and Economic Development

The restructuring of the British space economy and the development of the service sector are integrated into a mutually reinforcing process, which over time has generated progressively more complex networks of economic and social development. As a result of this, theoretical developments have progressed to conceptualise the processes involved.

Originally, the Fisher-Clark model (Fisher 1935 and Clark 1957) dominated the literature from the early 1950's up until the 1970's, when the limitations of its simple approach became apparent. It advanced the idea that societies passed through an industrial transition, from Primary (agricultural and extractive industries), through Secondary (manufacturing) to Tertiary (services), each sector consecutively dominating the economy. The empirical evidence against this, regionally (Lee 1984) and internationally (Singlemann 1978), is overwhelming. A series of analyses from a regional perspective in Britain suggested:

"The results point to a divergence through specialisation between different areas of Britain with a relative concentration upon services or manufacturing." (Lee 1984, page 143).

Therefore, each region appeared to adopt a specific role in the production process, dominated by either manufacturing or service employment. This resulted in the national development pattern being considerably more complex than the Fisher-Clarke model had proposed.

Lee (1984) indicated service employment dominated the

South East of England in 1911 with 52.3% working in this sector, whilst Anderson and Stoney (1983) revealed that employment in northern areas, before the turn of the century, indicated a historical tendency to either the service or manufacturing sector (Table 1.12).

In the international arena, countries such as Canada and the United States have always maintained large service sectors approximately equal to that of manufacturing, due to an employment transition of equal magnitude from primary extractive industries into services and manufacturing. In Japan the decline of agriculture led directly to a labour market dominated by services (see Singlemann 1978).

Recognising the flaws in the Fisher-Clarke model, other writers have developed more complex theories which have tried to encapsulate the progressive steps leading to the dominance of the service industries in certain advanced capitalist societies (Bell 1974, Gershuny and Miles 1983, Walker 1985, Urry 1987).

Gershuny and Miles (1983) highlighted five factors (shown in Table 1.13) which they consider have had a crucial effect on the development of advanced capitalist societies, and which are specifically related to the rise in prominence of the service industries.

The conclusion from Gershuny and Miles' work is that the main growth in the economy, resulting from a combination of the five factors, will be in the intermediate service sector. The direct consumer market will be increasingly catered for within a 'self-service' economy, whilst accelerated production processes will require high levels of intermediate support.

Table 1.12

Occupational Structure of Selected Towns  
(Males 1871, selected sectors as percentages)

	Liverpool.	Manchester	Birmingham
<b>Manufacturing</b>			
Engineering	3.2	5.0	5.6
Textiles	6.8	17.4	8.4
Metals/minerals	3.2	5.3	18.8
Other manufacturing	2.4	5.2	9.6
% total male labour force	15.6	32.9	42.4
<b>Services</b>			
Learned professions	2.5	2.9	2.4
Domestic service	1.4	1.2	0.9
Transport	14.8	5.9	3.7
Commercial	7.5	8.0	4.6
% total male labour force	26.2	18.0	11.6

Source: Anderson and Stoney 1983.

Table 1.13

Gershuny and Miles's Key Factors  
of Economic Restructuring

(1) Engels Law - the increasing affluence of a nation reflects in its demand for less 'basic' goods, and an accelerated demand for progressively more complex service activities.

(2) Self Service Economy - demand from households to cater for themselves and services to be provided directly for them.

(3) Intermediate Subcontracting - activities that are part of the production process, once internally organised, are now being performed by external agencies.

(4) Productivity Gap - labour intensive services restricting productivity, yet market forces accelerating relative price increases.

(5) Occupational Restructuring - a decline in 'hands-on' work of goods due to a declining manual labour force.

Source: Gershuny and Miles 1983.



Yet, their approach, even though more advanced than the original three stage model, is viewed as a predominantly economic exercise involved within the post-industrial debate (Bell 1974). Marxist writers such as Walker (1985), trying to develop a political-economy approach, rejected this type of analysis as it did not begin to consider wider social issues. Walker (1985) writes:

"As for the political debate over the social implications of economic change and the potential for human liberation, that too remains open - and little aided by the contribution of the post-industrial theorists." (Walker 1985, page 83).

Walker's approach to the restructuring of the economy gives a detailed account of the various forms of concrete labour within modern production processes. This includes the various changes that have taken place within 'the industrial system'; labour changes, changes in production systems, spatial reorganisation, technical change and the changing division of labour.

The essence of Walkers' work is that, even though there may have been a radical change in the types and products of labour that make up the dynamic capitalist economy, the industrial system, which still operates under the guise of the 'service economy', is still driven by the production and accumulation of surplus value. This system is based upon the exploitative relationships within the production process, manifested as the social relations of production through the class system. It is because of this Walker (1985) rejects

previous 'service theory' as misconceived and misguided, as it falsely heralds a new dawn of post-industrial development and ignores exploitative class relationships.

Using the concept of capitalism as a mode of production, the 'industrial capitalist system' and/ or 'the corporate-finance capitalist system' are still recognisable through processes of restructuring, unlike specific commodities and jobs. Whilst the changes in production processes and labour types must be understood, the post-industrial theorists have ignored the 'deep insights of Marxist theory'. These are encapsulated by the notion of:

"...increase productivity of labour, or increasing relative surplus value and lowering the cost and time of circulation...resulting in an increase in the rate of capital accumulation" (Walker 1985, page 82).

Urry (1987) utilising Walker's arguments also dismisses Gershuny and Miles's account of economic restructuring on the grounds of it being:

"...far too economic and technological, concerned with relatively superficial determinants of demand and supply. It is insufficiently social, both in the sense of ignoring the social relations of capitalist production and the causes and consequences of diverse forms of social struggle." (Urry 1987, page 10).

The inclusion of 'social struggle' into theories of economic development is very important, as it forms the basis of a great deal of class analysis. These exploitative relationships are touched upon by Walker (1985) and Urry (1987), with regard to the rise in service employment, but in general are kept

separate. More recently, the work of Savage et al (1992) has called into question the theories of economic development and class analysis, incorporating the development of the service industries. But the introduction of how these processes specifically apply to 'place' is still lacking in the literature and this thesis will move towards drawing these threads together.

The aim of the research is to answer critics on both sides of the fence; the neoclassical post-industrialists and the social theorists. Both these schools of thought have contributed much to the 'service theory' debate, but from many different perspectives. Pulling these together in terms of methodology and theory is essential for a complete understanding of how intermediate production operations effect the development of a specific area: Merseyside.

## 1.6/ Producer services and economic development

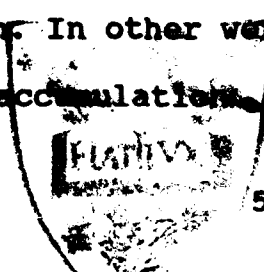
The description of existing classificatory frameworks has already given an insight into what has previously been considered to constitute a producer service (PSWP 1986). The following sections will help to clarify the nature of their operations, including; spatial distribution, labour markets, product market, production processes, economic linkage and technological adaptation.

As the body of this work has been conducted by economic and urban geographers from the neoclassical school, questions relating to the social relations of production or class based analysis are not considered in this section.

The development of producer services and their determinants of supply and consumption have already been researched in certain parts of the world; Seattle (Beyers et al 1986), Valencia (Cuadrado 1986), Vancouver (Ley and Hutton 1987), Esbjerg (Pederson 1986) and other provincial centres. In the main, these studies showed that the development of successful and dynamic advanced services is a significant ingredient in the adjustment of metropolitan economies to the new national and international economic order of the late twentieth century (PSWP 1986).

However, it should be stated that the context in which these studies took place was in line with economic development policies which adhere to the main principles of the capitalist mode of production. In other words, they promoted the processes of accelerated accumulation of surplus labour value and

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concentration of capital, without considering the structural implications for social development.

The full consequences of relying upon producer services to play a part, or the lead role, in economic regeneration strategies are not yet fully understood. But, with regard to their economic characteristics, general assumptions can be made based upon existing research.

The main generalisations concerning producer services derived from the results of research over the past decade are:

1/ Producer services are tradeable both within organisations and on a commercial basis on the open market;

2/ From the work of Beyers et al (1986) and Pederson (1986) it is known that producer services have a strong export function and as a result they are not dependent solely upon local demand;

3/ These services are part of the supply side of a metropolitan or regional economy;

4/ They have a role to play in adjustment to structural change;

5/ Producer services are not necessarily footloose (even though they are tradeable);

6/ Large producer service organizations are seeking to maintain market share through active market-making and integrated global strategies;

7/ Small producer service firms are oriented towards regional and possibly national market niches allied with specialisation in their output (global strategies are less

significant);

8/ Internationalisation is a major part of the growth and development strategies of large producer service organizations;

9/ Agglomeration and urbanisation economies are significant for the location of many producer services, with telecommunications helping to sustain rather than to dilute the importance of these economies.

Advanced economies have become much more integrated as rapid advances in telecommunications technology, growing mobility of labour at international level, the innovativeness of producer service firms and the growing pressure for liberalisation of trade in services (Bernier 1987, Siegel 1987) has made it more difficult for service organisations and metropolitan areas to survive purely on the basis of trade/interaction within the confines of their own national boundaries. These circumstances, together with some of the attributes listed above, have increased competition at the global scale and as metropolitan areas are the key nodes in international communications networks they have become the foci for the globalisation strategies of producer service organizations (Daniels, Thrift and Leyshon 1986).

As the internationalisation of services continued to gain momentum it brought about a dramatic effect on the trade in services, which has witnessed an enormous and diverse increase into many geographic and economic areas (McConnell 1986, Noyelle and Dutka 1986). It has also meant an increase in the complexity of the division of labour (Bertrand and Noyelle 1986), innovation for methods of delivery and an increase in the

specialist knowledge embodied in many of these services.

The spatial consequences of these processes are important both at the global level (Dunning and Norman 1987, Noyelle and Dutka 1987) and within national space economies (Daniels, Leyshon and Thrift 1986, O'Connor 1987), especially for the relative growth of the urban areas which are usually the focus of locational choice by producer services.

The locational choices of producer services have become associated with employment effects, the re-enforcement of information and related linkages and the stimulation of commercial office and residential property markets (Noyelle 1986, 1987).

However, the ability of this sector to create employment and bring about economic regeneration in the deindustrialised northern English regions has not as yet been proven (Daniels 1987).

Previous research has also revealed a distinctive lack of public policy geared to stimulate not just producer services, but services in general (McEnery 1981, Marquand 1979). This is in part a result of ignorance concerning the activities of producer services, but is mainly caused by the government's financial aid (regional and urban policy) being predominantly directed at manufacturing (PSWP 1986, Marshall and Batchler 1987).

Central Government has made little or no attempt to understand how producer services operate at any geographical level, which includes intra and inter-regional patterns of business. Therefore, export operations have not been measured

and policy initiators (DTI) are ignorant about the characteristics of these firms and the business they undertake.

As these services are not totally 'footloose', and depend on their market product and geographic market, the demand for these services is obviously a crucial factor in their location. This demand will emanate from throughout the production process and in certain parts of the world (Seattle -Beyers et al 1986), it is known that producer services supply the vast majority of their output to other service operations. This process tends to be centred within agglomeration economies, where key urban networks have been established. However, the studies of the spatial distribution of these firms has revealed some very complex locational factors (Marshall 1985 and Green and Howells 1987) .



## 1.7/ Economic restructuring and the spatial

### distribution of producer services

Economically, the distribution of producer services is an integral force of uneven development (Marshall et al 1987). The locational patterns of producer services and the development of the British space economy have become synonymous (see especially Massey and Allen 1988, section III). This is also connected to the hypothesis of the North/South divide, which received a great deal of attention in the 1980's, and the general economic restructuring in Great Britain during the same decade (Massey 1984, Martin 1988, Green 1988).

As already noted, there is a tendency for producer services to locate in areas which could be described as nodal points in the urban hierarchy. During the 1980's the spatial concentration of producer services in the larger urban areas, indicating a strong connection with high population and employment rates, was very apparent (Marshall 1985, Green and Howells 1987). However, this urban concentration was far more acute in the south of Britain, especially in the South East (Daniels 1986, Dunning and Norman 1987, Gillespie and Green 1987, Bailly et al 1987). This spatial distribution is a combination of historical development and late twentieth century restructuring (Table 1.14):

"This evidence suggests an urban bias in the location of producer-service activities, and this is confirmed by the fact 45% of producer-service employment in Great Britain is contained in London and the erstwhile Metropolitan Counties, London accounts for almost half of this. In addition the conurbations contain more than half of the producer-

service employment in the South East, Yorkshire and Humberside, West Midlands, and the North West Economic Planning Regions." (Marshall et al 1987, page 581).

The South East has a history of international investment, conspicuous (but tasteful!) consumption and a reliance on (international) financial markets (Lee 1984 and Urry 1987). It has a prominent position within the world economy and, as a result, international organisations have developed their operations in and around the City of London (Leyshon, Thrift and Daniels 1987). This created a mutually reinforcing process of development and concentration in and around London (Marshall et al 1987).

The analysis conducted by the Producer Services Working Party (1986) has revealed that even though there were some signs of decentralisation away from the dominant areas in London and other conurbations, they were still the critical areas of producer service activity.

In contrast to post-industrial theorists (Bell 1974), the PSWP found that there was a link between manufacturing decline and poor performance in producer services. This gave more credence to the deindustrialisation approach (Martin and Rawthorn 1986), which tended to acknowledge the importance of the industrial sectors and the inability to create a self sustaining service economy. Therefore, the older industrial areas in Great Britain which suffered drastic economic decline during the 1980's (Damesick and Wood 1987), did not benefit from the growth in producer services relative to the South East. In this region the benefits of their growth around London aided the

Table 1.14

Location of Producer Service Employment 1981

	<u>National Producer Employment (%)</u> <sup>1</sup>			<u>Deviation (thousands)</u> <sup>2</sup>		
	PSE	NPEM	PSIE	PSE	NPEM	PSIE
North	4.3	4.9	4.0	-73.1	-8.1	-65.0
Yorkshire and Humberside	7.7	8.3	7.4	-72.2	-8.1	-64.1
East Midlands	5.9	7.7	5.3	-64.7	13.0	-77.6
East Anglia	3.3	3.2	3.3	-7.0	-3.7	-3.3
South East	40	34	42	461.7	15.3	446.5
South West	7.2	7.1	7.2	-33.8	-11.9	-22.0
West Midlands	8.8	12.0	7.5	-40.0	-48.4	-88.4
North West	11.3	12.6	10.8	-18.1	17.5	-35.6
Wales	3.4	3.1	3.5	-71.0	-25.2	-45.7
Scotland	7.9	7.1	8.2	-82.1	-37.3	-44.9
Great Britain	100	100	100			

Source: Marshall et al 1987.

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<sup>1</sup> PSE total producer service employment, NPEM nonproduction employment in manufacturing, PSIE producer service industry employment.

<sup>2</sup> Deviation from expected given share of national total employment.

industrial towns around its periphery, due to their close proximity and the 'overspill' effects. However:

"On the other hand, producer service employment is unlikely to aid the conurbations, industrial towns and rural areas of the north, whose dependence on public investment and on consumer services is likely to continue and grow unless area development policies succeed in reviving established industries or in attracting new production investment from outside". (Wood 1988, page 104).

The reason for the lack of decentralisation and the concentration of producer services into key urban dominant areas, is because the growth factors and the location factors for this sector during the 1980's were inextricably linked into a centripetal development process.

There were several factors upon which this concentration of operations was based. First, the growing international markets and the internationalisation of producer service firms. This has already been mentioned in the previous section, but it is important to note that the growth of financial and related services in and around the City of London, due to the steady development of international trade in services, further strengthened the concentration in southern Britain.

Second, centralisation of ownership of manufacturing and service industry further constrains the development of producer services in non-metropolitan or lower order urban centres. Markets that were once the prerogative of regional producer service firms were lost to national-scale and international competitors.

Third, the British Space Economy became highly competitive

as a result of the penetration of international capital, and there was a rapid expansion and diversification of firms, enabled through merger and acquisition. These processes allowed international organisations direct access into well established and new markets resulting in concentrated, diversified and internationalised activity (Leyshon, Thrift and Daniels 1987, Aaronovitch and Sawyer 1975).

"Acquisition and diversification activities may create an overlap within corporate structures, resulting in responsive reorganisation. Expanding services are grafted onto existing organisations, often becoming the basis of a new division or subsidiary organisation. Where organisations have become more specialised, local offices have been replaced by more specialist teams in more central offices." (Marshall et al 1987, page 589).

Fourth, as the production processes of large organisations became more complex and the technical division of labour became more fragmented (Walker 1985), the use of external services became more prolific. Inhouse operations can only be maintained if they are cost effective and this means if they are being used constantly. However, highly specialised services are only required under certain conditions and inhouse facilities are generally not able to meet the rigorous infrequent demands of corporate establishments. The solution was for this excess demand to be filled by external sources. This has further implications for the development of dominant urban areas, as external suppliers tend to locate in close proximity to their clients. Ultimately, this inter-linkage of operations creates a dynamic growth concentrated around these key locations (Daniels 1987).

Fifth, the labour markets upon which the producer service sector draws have also been a strong influence in their locational patterns. In some respects this has meant a decentralisation of operations, but in others, it has highlighted the spatial division of labour acting in favour of the key urban areas. The availability of female clerical labour outside the dominant areas of London and the need to employ senior, mainly male, managerial staff, have favoured the Greater South East (PSWP 1986). Therefore, the key dynamic employment sectors are kept central and decentralisation of menial tasks were still kept within the confines of the South East.

Sixth, a composite set of factors worked together to focus the locational growth of producer services in the South East and especially the City of London. These involved, along with internationalisation, a deregulation of financial markets, which culminated in the 'Big Bang' in the mid 1980's (Thomas 1986, Hamilton 1986) and massive investment in technology and communications (Heath 1986, Financial Times 1986). These, together with the tendency of corporations to make their existing sites the focus of attention rather than develop new areas (Marshall et al 1987), meant that the influence of any decentralisation factors were minimal.

Finally, there are certain economic factors which have generated disagreement and uncertainty about their effects on the producer service sector. Economies of scale (Rothwell and Zegveld 1982, Storey 1983, 1985), have been deemed to produce a 'dual economy' in terms of firm size, as medium sized firms are being 'squeezed' from their markets (Ganguly 1985). This is

because Multinational Corporations (MNC's) and global corporations took a strong hold of the world economy at an international level during the 1980's (Taylor and Thrift 1986), leaving small independent operations to compete at the local level. However, it is uncertain as to which has the greater ability to generate economic growth. Research (Cross 1981 and Storey 1985) has shown the small firm sector to be innovative with the ability to develop self-sustaining economic growth, but in marginal regional economies they are highly vulnerable to macro economic changes. Small independent businesses have also displayed high levels of economic linkage, which directly benefits their surrounding area more than any branch or regional office of an MNC (Scase and Goffee 1980, Shaffer and Pulver 1985), but it has yet to be proven that small producer service firms, which have shown to be highly dynamic and innovative operations in the South East, can help generate economic growth within deindustrialised and declining traditional service economies such as Merseyside.

Another unresolved debate concerns the use and impact of information technology, which has been argued to be both a stimulus and a constraint to economic growth within the producer service sector (Marstrand 1984). This is also linked with the issue of whether or not future developments within producer services have the ability to provide an increase in the quantity and quality of employment (see Daniels 1985, Chapter 10).

The arguments concerning information technology are mainly directed at the division of labour within producer services which have become more polarised into highly paid professional

and managerial staff and low paid, often part-time, non-professional staff, grouped together as administrative, technical and clerical staff, ATC's (Marshall 1984, Wood 1985). This division of labour is thought to be enhanced by technical innovation, as mundane routine (back) office jobs undertaken by ATC's are constantly replaced by the advance of information technology (Jenkins and Sherman 1979, Rajan 1984). Therefore, ATC staff will become more prone to part-time employment, operating as a flexible workforce to meet fluctuations in demand. It is believed there will be a long term negative impact by IT on producer services, with the only jobs surviving being those that contain a use value in themselves, based on professional skills operating through the contact systems of urban areas (Thorngern 1970).

However, other authors like Gershuny and Miles (1983), and Barras and Swan (1984), do not believe that the increasing application of IT within producer services will be harmful in terms of employment quantity or quality. They advance a contrary view that, as IT improves the quantity and quality of production, new services and innovations will take place generating demand and employment. Thus:

"...a return to full employment growth can be achieved only by stimulating innovation in service industries, and not by resisting technical change in the mistaken belief that this will somehow preserve jobs." (Barras and Swan 1984, page 12).

In addition to the extra demand created by technological advances, it is argued that operations performed by ATC staff



will become less mundane. This is because, through the introduction of front-end user friendly systems, back office workers will be able to deal with many different tasks almost simultaneously and not be constrained to just one detailed section of the production process.

The evidence in favour of the negative impact of IT is more substantive than that given in its support. Studies (Daniels 1986, Marshall et al 1987) have shown that growth in producer services does not necessarily mean growth in ATC employment, as there were 74 000 jobs lost in this sector from 1970-1981. In addition, the quality of jobs being provided tends to support the idea that companies are utilising more part-time labour (Townsend 1986, Table 1.15), and that the majority of part-time appointments are female, offering no career development and none of the security provided by full time work (Bosworth and Dawkins 1982, Hunt 1988).

This section has briefly covered the distinctive characteristics, which have provided the key research topics, concerning the economic activities of producer services. As these issues are also examined within this thesis, how they are approached needs to be outlined. Whilst economic topics compliment the social issues to be addressed in the thesis (Chapter 2), they are distinctive enough to merit independent discussion prior to the analysis of issues such as, class.

Table 1.15

Part-time employment as a proportion of all female  
employment in the service industries, 1974-1988

<u>Service Industry</u>	<u>1974</u>	<u>1978</u>	<u>1984</u>	<u>1988</u>
Distribution, hotels catering, repairs.	50.1 <sup>1</sup> 1052.7 <sup>2</sup>	53.8 1168	60.3 1353.4	64.2 1521.2
Transport and communication.	20.4 51.7	20.8 54.0	20.7 54.0	21.4 55.2
Banking, finance and insurance.	24.1 154.4	23.9 176.2	28.3 253.1	31.2 311.2
Other Services.	45.6 1473.7	47.2 1708.3	51.9 1975.4	55.3 2231.4

Source: Employment Gazette Historical Supplement No. 1, August 1984 and Employment Gazette September 1988.

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<sup>1</sup> % of total female employment

<sup>2</sup> Thousands

## 1.8/ Economic Research Issues

The research is predominantly directed at private producer service operations, as these are considered to be the main growth dynamic of the sector (Daniels 1987, Beyers et al 1986), and because research into all inhouse and external producer service operations on Merseyside would be an impossible task.

The key topic areas examined in this section of the research relates to previous studies conducted in the UK (PSWP 1986, Daniels 1987) and abroad (see especially Beyers et al 1986, Pederson 1986). The framework for the economically orientated research follows several principal themes, directly related to the existing body of knowledge (discussed above) on producer services, but with particular reference to Merseyside.

Firstly, an understanding of the function of human capital within these services is essential; as producer services are dependant upon the skills and knowledge of key personnel, and in many cases the cognitive base of the Founder/ Managing Director<sup>3</sup> is a crucial factor in the development of the firm. It has been ascertained that the educational credentials of the founder are an important indicator of the innovative and dynamic ability of the firm. Beyers et al (1986) discovered that, even excluding those services for which it is essential to hold a higher degree (lawyers, architects, accountant, etc.), two thirds of the remaining founders they surveyed held at least a bachelor's

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<sup>3</sup> In many cases the Managing Director will not in fact be the founder, especially in long established operations. Therefore, the terms will be considered interchangeable and merely refer to the person in charge of operations at a specific location.

degree. It has also been suggested that educational factors are the single most important influence in maintaining the growth of these firms, both in terms of new births and sustaining existing operations (Daniels 1987). Therefore, the cognitive base and formal credentials of founders on Merseyside is examined.

The places where the founders originated and where they were educated is also established to ascertain if the area itself has been providing or has the ability to provide the required personnel and educational standards needed to sustain any active growth in the sector.

In addition to the founders' profiles, local labour markets are also examined from the firms point of view, to understand how they approach recruitment and at what levels. A breakdown of the workforce will be necessary to indicate the quantity and the quality of the jobs being provided, including the pattern of gender domination operating at different levels of responsibility within the firms.

Second, the issue of entrepreneurialism is examined by establishing how, why, and when businesses were started in the area, and the business backgrounds of the founders. For example, what line of business, if any, were they previously involved in and their motivations for establishing the operation<sup>4</sup>? The sources of capital used to start the business are explored along with any difficulties encountered when starting the business? These may include refusal of loans, protected markets, inability

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<sup>4</sup> Obviously this will not apply to key employees in charge of regional or branch operations of large organisations based on Merseyside. But their background and motivations for moving into the position will still be of importance.

to acquire suitable premises or a lack of business training.

Third, the trading patterns of the case study firms are documented; including the sectors and markets (product and geographic) they are aimed at? This enables the analysis of threshold levels for firms within the area, whose capacity to supply outstrips demand. These levels occur if the service provided is extremely specialised and the firm is operating at a national or international level. The trading patterns, apart from being a function of demand, are also effected by the functional and organisational structure of the establishment. The characteristics of the founder will influence these patterns (Beyers et al 1986), reflecting what can be described as 'innovative drive'.

Fourth, an attempt is made to establish how these export trading patterns were developed, or in some instances why very little or no export takes place. Links are suggested between export levels and the characteristics of the firm, including commitment to marketing and sales staff, and connections with the founder's characteristics. Beyers et al (1986) found that the level of education did not have an effect on out-of-state (Seattle) sales unless the founder had an advanced degree. Of those companies that did export, it was shown that those with founders possessing less than a master's or Ph. D. had roughly the same export levels.

Fifth, the external influences on the operations of producer service firms on Merseyside, whether positive or negative, is determined. For example, the effects of government contracts and legislation or the influence of large (public or

private) institutions within the area is traced along with the role played by other firms who, through subcontracting, can carry producer services into the export market.

Sixth, a distinction is made between external trading patterns and the internal transactions of corporations. Where internal transactions are used, branch offices do not turn to indigenous services within the local area, but will have services assigned to them. This is to be done by increasingly higher levels of authority within the company depending on the importance of the service. These services are either bought in from outside the company (and the area) or are an internalised function, depending on the inhouse viability of the operation. As a result, branch offices tend to interact very little with the surrounding area.

Seventh, the question of information technology and the uncertainty about its effects on employment and markets, as discussed by Gershuny and Miles (1983) and Jenkins and Sherman (1979), is analysed. The analysis examines its effect on; productivity, competitiveness, employment levels and the division of labour. Previous research by Daniels (1983) and Hepworth (1985) concluded that:

"...office technology has yet to make its full impact on employment, both in terms of reducing numbers, and further emphasis of the shift towards professional and technical office occupations which has been apparent for some time." (Daniels 1983, page 1118).

Eighth, the effects the public sector have upon producer services is examined. Very few schemes are designed especially to aid this sector (PSWP 1986). But, there are a multitude of

government programmes which indirectly affect the ability of this sector to function on Merseyside, such as the influence of the Merseyside Development Corporation and Business Opportunities On Merseyside, both developing an image and possibly business for this sector.

It is also useful to establish what is needed to stimulate producer service growth if it is not at its full potential, whether this involves training programmes, export advice or improved infrastructure. This is central to the question of whether producer services are economically viable to regenerate Merseyside, and if public sector finance should support these operations or be better utilised elsewhere.

Ninth, links between producer service firms and academic institutions on Merseyside along with any evidence that they are used as a dynamic seedbed for 'innovation' development or 'technology transfer'. Such links could be based on formal arrangements for collaborative work, or on informal networks.

Finally, the demand market for producer services on Merseyside is assessed through a study of the firms' market areas and developmental stages. Growth will only occur in certain areas where demand is strong, and this will also reveal the market patterns (geographic, product and sector).

All these lines of inquiry assess the economic potential of the producer service sector on Merseyside and its ability to stimulate and generate growth in other sectors. They determine whether or not the area itself is capable of sustaining growth in this sector, in terms of a supportive environment; which is highly dependent upon its nodal position within the national and

international economy. And if this is not the case, where the problems lie, and the possibilities of artificially stimulating growth through public intervention or adopting viable alternatives.



## 1.9/ Conclusion

This first chapter is one of the more wide ranging sections of the thesis, primarily because it has to introduce a varied array of topics. These cover issues of; general economic development in advanced economies, to the specifics of producer service activity within metropolitan economies. It is designed to give a brief but clear insight into how all these issues relate to each other and the various ongoing debates, all of which constitute the body of knowledge concerning producer services.

It also provides an understanding of the schools of thought, that have generated different perspectives on service industry analysis. The two main camps, have tended to either support post-industrialisation theory (Bell 1974, Gershuny and Miles 1983), or a deindustrialisation theory (Martin and Rawthorn 1986, Massey and Allen 1988)<sup>5</sup>. The former arguing that advanced economic development entails moving away from an industrial base and hence, the industrial relations embedded in the capitalist mode of production. The latter, argue that the social and spatial relations of capitalist production are still present, but are manifested in different forms (Walker 1985, Harvey 1987).

Beyond these two perspectives, there is a more fundamental (ideological) division within service industry studies which

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<sup>5</sup> The ideas of post-industrial and deindustrial economies can be considered as different facets of the same economy. But, the idea of separating these out as differing perspectives is to draw attention to the differences in the way economic development can be conceived.

overlaps the post-industrial/ deindustrial debate; that between neoclassical economic geography (Daniels 1987, Wood 1987) and the introduction of Marxist/ Social Theory into human geography (Walker 1985, Urry 1987)<sup>6</sup>. The distinction between these two perspectives is made obvious in their different approaches to understanding the development of advanced economies (see above). The neoclassical school bases its analysis on economic determinants, particularly those of supply and demand and the economic linkages which these generate. Whilst, the introduction of Marxist/ Social Theory into the economic development debate, has meant a refocusing of attention upon the social relations of production, involving class analysis, and the implications for societal development.

Although social theory has informed general theories within human geography, such as those concerning gender issues (McDowell 1992), global development (Peet 1990) and conditions of social development (Harvey 1989), no attempt has been made to utilise this approach for a specific area such as producer services. As the above sections have shown, the study of producer services and their characteristics has been dominated by neoclassical economic geographers.

Therefore, the task for this thesis is twofold; firstly to answer the questions posed by the existing body of literature on producer services, by assessing their economic viability operating within an area such as Merseyside, and secondly, to

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<sup>6</sup> These differences in ideological perspectives are applicable to the whole range of studies within human geography, and are a result of a more integrated social science approach, rather than simple differences within the service industries debate.

introduce a new dimension into producer service research, by considering the developments made in the field of social theory and assessing their implications for understanding the role of producer services on Merseyside.

## Chapter 2

### A Conceptual Framework for Producer Service Analysis

#### 2.1/ Introduction

This chapter has three main objectives; firstly, to introduce the reader to a different concept of producer service classification than has previously been attempted (see Chapter 1)<sup>1</sup>, secondly, to introduce the reader to a range of literature which tries to conceptualise the actions of agents (people) and the influence of the structures of which they are a part<sup>2</sup>, and thirdly, to demonstrate how contemporary class analysis can be used to formulate an understanding of the collectives from which key producer service personnel are drawn and the causal powers they exhibit<sup>3</sup>.

These objectives may not appear interlinked, but they are three different perspectives used to understand the social relations of production within the producer service sector on Merseyside. This is a complicated process which draws primarily

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<sup>1</sup> The classification to be developed in this chapter is not unique, as it utilises categories drawn from the PSWP (1986) report. But as will be revealed they are used in such a way to allow far more flexibility in their application.

<sup>2</sup> During the 1980's the structure-agency debate became highly influential in human geography, but the vast majority of work dealing with its application and ideas remained in the realms of sociology (see especially Giddens 1979, 1984).

<sup>3</sup> The theoretical developments in this section are primarily drawn from existing work into 'class' and particularly the 'service class' (Giddens 1981, Abercrombie and Urry 1983, Urry 1986, Thrift and Williams 1987, Savage et al 1992).

upon Marx's conceptualisation of the inner logic of capitalism (Mandel 1977, Harvey 1982)<sup>4</sup> and the way contemporary political-economy approaches in human geography have developed the 'structure-agency' debate (Gregory 1978, 1984, Pred 1983:

"Like the debate in the social sciences as a whole, human geography's version of the structure-agency debate was wide ranging, but in particular it intertwined three themes; the relative importance of structure and agency and how they might be reconciled in a single approach; the efficacy of a realist methodology; and the importance of localities." (Peet and Thrift 1989, page 15).

The 'structure-agency' debate and Marxism, inform the theoretical discourse of this thesis and in particular this chapter. It is not within the scope of this study to discuss all the detailed topics implicated in these arguments. However the background discussions provided, allows not only an insight into the theories themselves, but also, how they feed into the three key objectives of this chapter.

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<sup>4</sup> For a brief summary on the reductionism of Marxist service sector theory, see Daniels and Thrift (1987).

## 2.2/ Relations of Production and Classification of Producer Services

The geography of the service industries has proved to be a very diverse and, sometimes, abstract concept (Urry 1987), but, as described in chapter one, the majority of geographical studies have mainly concentrated upon a neoclassical empirical approach. This has resulted in explanations for: the spatial distribution of producer services (employment and firms) (Daniels 1982, Marshall 1982, Gillespie and Green 1987, Wood 1988), the key criteria of their supply and demand (PSWP 1986, Marshall et al 1987), producer service linkages within urban economies (Marshall 1981, 1984) and their general effects on economic development (Ley and Hutton 1986, Hansen 1990). In all these studies, especially the key texts (PSWP 1986), there has been no attempt to understand the (social)<sup>5</sup> relations of production within this economic sector, and how these can be used to understand the dynamics of producer service operations or develop a classificatory framework.

Before the importance of the relations of production in the study of producer services are explained, a brief description of what constitutes these relationships is presented. This allows the uninformed reader to clearly understand not only the ideas used, but also the context in which they are used for the task

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<sup>5</sup> The phrases 'relations of production' and 'social relations of production' are taken to be interchangeable, because within the production process all relationships i.e. between labour and capital, "embody the essential social relations that lie at the heart of the capitalist mode of production." (Harvey 1982, page 15).

of illuminating the functional characteristics of producer service operations.

The term 'relations of production' is used in this context to describe the various relationships that occur within the capitalist mode of production<sup>6</sup>, but primarily focuses upon the general relationship between capital and labour and how it has manifested itself in various forms<sup>7</sup>. This general relationship, which operates dynamically, continually changing so that capitalist society is reproduced, is dominant within social formation<sup>8</sup>.

There are other relationships, particularly gender, culture and racism, which play a crucial role in social reproduction and the deficiencies in Marxism to appreciate how these have become an integral part of capitalist development are also discussed<sup>9</sup>.

Through the work of Massey (1990), Bondi (1990) and other feminist geographers, the idea that capitalism directly equates with modernism and all facets of human existence has been challenged. Exploitation, referred to in Marxism as surplus

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<sup>6</sup> These relationships can occur in many different forms, the relationship between use value and exchange value, class relationships (struggle), the relationship between producers and the relationship between capital and labour.

<sup>7</sup> In order for the reproduction of the capitalist mode of production to take place (survival of the capitalist), the social division of labour plays a crucial role in facilitating the production process (Walker 1985).

<sup>8</sup> This idea that the relations of production are dominant within social reproduction is central to Marxism, as explained by Marx in Capital (1967) and the many commentators upon his work (see especially Harvey 1982, Castells 1977, Mandel 1968).

<sup>9</sup> This problem is now at the forefront of geographical debate and it is only through the empirical analysis of this thesis that the issues are confronted.

labour value, has developed throughout capitalist society along many different axes, some not directly connected to the relations of production (female exploitation not just within the 'household' but society in general). These exploitive relationships are not reducible to the relations of production, yet they have been 'exploited' (used) by the processes of capitalist reproduction (patriarchal capitalism).

Even though this thesis will not consider the historical developments of these social relations<sup>10</sup>, it clearly acknowledges their existence, as they are played out as much within the producer service sector as within any other area of social life.

The main focus of this thesis is, however, the relations of production and how these feed into the social divisions of labour within producer services (see Walker 1985). This is taken as the central theme because, even though the relations of gender and race do have serious implications for producer service analysis, the dominant relationship by which these operations can be conceptualised, classified and understood in the first instance, is found in the logic of capitalism.

The relations of production have several constituent parts, all of which can be used to view the capitalist mode of production, and all of which provide an alternative view from different angles of the same central theme: the reproduction of capitalism. The main processes this study examines to understand the operations of producer services, are those concerning the

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<sup>10</sup> The scope of the debate cover the introduction of alternative axes of exploitation into geography, apart from the relations of production is enormous and a cause of academic 'mudslinging' at the highest level (Massey 1990).



relationship between capital and labour. Through this key relationship, which has primarily meant the accelerated production of surplus value, there have been various developments to facilitate the accelerated rounds of capital.

These developments have taken many forms, such as the division of labour, and are well documented (Urry 1981, Massey 1984, Taylor and Thrift 1986, Scott and Storper 1986, Lash and Urry 1987<sup>11</sup>), as they apply to the changing processes and systems of production throughout the capitalist economy. In concrete terms, the developments have; increased the efficiency (surplus value) of labour, and directly affected the growth of producer services, as these services are part of the 'productivity-increasing interrelations' of metropolitan areas (Hansen 1990).

In the post war era the relations of production were enhanced through two key practices, the introduction of technology, and, an increased division of labour. Over the past two decades, flexibility has also been incorporated into the equation, which for some has meant less secure part-time employment<sup>12</sup> (Nelson 1986), and for others an increased opportunity to link highly specialised operations, such as sub-contracting (Holmes 1986), into the production process.

Throughout the 1980's there were many different debates within geography trying to illuminate the changing structure of

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<sup>11</sup> These are some of the key geographic texts which have mapped out changing production systems and processes, but the range of literature on this general topic is vast, covering issues from; changes in working practises to the integration of expert/intelligent computer systems.

<sup>12</sup> This development is especially prevalent amongst female employment and has meant a massive increase in part-time and shift share employment (Townsend 1986).

capitalism<sup>13</sup>; the development of producer services was part of these discussions (Daniels 1986), albeit on the periphery. Because the majority of research into producer services have been conducted by post-industrial (neoclassical) theorists, the studies are positivist in nature (see Chapter 1), and the relations of production were ignored<sup>14</sup>. But this thesis shows these relations to be crucial determinants of a firm's operational characteristics and can be used to dissect the producer service sector along key axes of exploitation.

The classification model developed for this thesis basis its assumptions on two key themes:

1/ Merseyside operates as a marginal economy within the spatial division of labour and there is very little local autonomy over the development and operational strategies of the offices of large multi-site establishments within the area.

2/ The primary 'product' of private producer service operations in the area can be distinguished by their input of predominantly 'mental' or 'manual' labour into the production process.

These themes combine the locational characteristics of Merseyside within the spatial division of labour, with the relations of production within producer service operations. They also reveal the key characteristic, which has previously been omitted from other classifications, that tensions exist between

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<sup>13</sup> The debates mainly covered three topics; post-fordism, flexible specialisation and regulation, but also incorporated discussions on the distinctions between post-modernism and modernism. See Harvey (1989).

<sup>14</sup> For one of the few discussions of the relations of production and service theory, see Walker (1985) and Urry (1986).

the relations of production and the spatial divisions of labour, which distort the actual operations of firms depending on their location. This will become apparent as these themes are developed below.

The development of Merseyside as a marginalised economic area has been well documented with regard to its general position within the national economy (Lawton and Cunningham 1970, Gould and Hodgkiss 1982) and its service sector development (Hubbard and Nutter 1982). The area is continually operating on the periphery of economic development and, even though there has been decentralisation of operations to the area, 'strategic decentralisation' is very limited<sup>15</sup>. As a result the area has also suffered from its dependency on 'branch plant' economies; Chapter Three reveals some of the key processes which caused this and shows that during the 1980's this position did not change.

The second theme, the distinction between 'mental' and 'manual' labour, requires far more elaboration before the classification framework can be explained.

The reproduction of capitalist societies<sup>16</sup> has relied upon increasing surplus value through the extension of the division of labour and employment of technology (as described above), which has led to increasingly complex production systems:

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<sup>15</sup> The ideas of operational and strategic decentralisation are an integral part of corporate strategy, where the former means restricted autonomy of any strategic development (Johnson and Scholes 1989).

<sup>16</sup> As noted earlier, this thesis will examine the reproduction of capitalist societies through an understanding of the relations of production, yet concedes there are other key exploitive relationships; sexism and racism.

"Co-operation and division of labour within the labour process imply the concentration of work activity in one place and the setting up of means for coordination and control under the despotic authority of the capitalist...Hand in hand with this goes an hierarchical organisation and forms of specialisation which stratify the working class and create a social layer of administrators and overseers who rule - in the name of capital - over the day to day operations of the work place...The employment of machinery and the advent of the factory system have even more profound results for the labourer. A reduction occurs in the individual skills required - the artisan becomes a factory operative. The separation of 'mental' and 'manual' labour is emphasized, while the former tends to be converted into a power 'of capital over labour'. (Harvey 1982, page 31).

This distinction can be made in relation to the production process in general where firms have taken on roles of highly specialised mental or manual organisations, in more traditional terms; the division between blue collar and white collar operations<sup>17</sup>. This is particularly relevant to producer service operations and the distinctions between information based services, circulation services and goods related services (Walker 1985, PSWP 1986, page 17), because it questions the actual value of the service; its labour value, its surplus value and whether particular services can be considered productive or non-productive.

There is a certain amount of disagreement between writers who have developed a Marxist critique of service industries, which centres on the problem of dividing mental and manual

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<sup>17</sup> The terms white collar and blue collar are used here because they indicate more than labour process used for product or service production, they signify the class relations built into the production process (Lockwood 1989, Crompton and Jones 1984).

operations. Whilst some believe that services are non-productive in the classical Marxist sense, because :

"...as capital is gradually accumulated in increasing abundant quantities, and a substantial part of social capital no longer achieves valorisation at all, the new mass of capital will penetrate more and more into areas which are non-productive in the sense that they do not create surplus value" (Mandel 1975, page 387, in Urry 1987, page 11),

Others believe this is too narrow a view of the relations of production and that the development of the services should be seen as an extension of the division of labour within the capitalist system, which is integral to the processes and forces of production (Walker 1985). As the production of surplus value requires only that labour be applied to useful products, regardless of their nature, and as services can be regarded as useful products, even though it may be 'indirect labour', an 'information' use-value and 'insubstantial materials'<sup>18</sup>, then they can be considered productive and to create surplus value.

In terms of concrete labour, both sides of this argument can be considered correct, as during the course of daily work someone engaged in a service activity may actually produce an item which may be a report or a receipt. The question is, at which point in the operation is the actual value of the labour involved revealed, is it the cognitive base and research of the consultant or his/her report, and similarly, is it the act of transporting goods by the haulier or the receipt/invoice for the contract ?

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<sup>18</sup> The insubstantial materials Walker (1985, page 80) refers to, with regard to the service product, are "paper and printing, electrical impulses and disk drives".

The question of labour value is purely relative and can be considered in relation to its exchange value, use-value and surplus value (Marx 1976). However the problem is, as described with surplus value, these concepts are 'moving targets' both over time and space. Therefore, for the purpose of this research, the general value of labour within each producer service operation<sup>19</sup> is examined on the basis of its exploitative relationship with other social divisions of labour within the general system of production. This approach is achieved by considering the division between 'mental' and 'manual' labour and the contention that the former, within producer services, can be converted into a power of capital over labour (see above) and that, even though this is separate from capitalist ownership, it is dominant in the functions of capital (control, reproduction and reconceptualisation)<sup>20</sup>.

This is not based upon the conception of manual labour having less value than mental labour, but that through key specific processes of legitimation (i.e. the state<sup>21</sup>), aspects of class struggle (such as social closure) and relations of production, various social divisions of labour have become dominant in the reproduction of capitalist relations. As these ideas involve more than the separation of mental and manual

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<sup>19</sup> The general value of labour in each operation is the combined contribution to the production process of the operations' output.

<sup>20</sup> Urry (1986) outlines this social division of labour as the places involved in the management and supervision of the functions of capital.

<sup>21</sup> Under many conditions the state has played a key role in legitimising the role of the professional within the production process.

labour, the terms used to broadly separate the divisions, white collar and blue collar, are used to encapsulate the wider concepts involved.

Blue collar producer service operations are distinctive from the white collar establishments because the social division of labour involved provides more of a circulation service rather than control and development which, through various operations (transport, security, wholesale), facilitates the production process. The value added contribution of this sector is minimal and it is debatable if it occurs at all (Walker 1985), but it is really dependent upon the particular service in question<sup>22</sup>. Because the social division of labour within this sector is generally indirect to the production process and lacks direct control over production functions, it is subdominant to capital.

This is not a direct representation of the internal labour relations of these (blue collar) operations, as within the firms themselves divisions of labour exist which separate 'mental' and 'manual' and this affects their internal structures.

In contrast, the relationship of the general labour provided by the white collar operations to the production process, is dominant of the functions of capital. The value added and expertise offered by this labour (in addition to its class relationship), even though it may be indirect to production, places the social division of labour which specialises in 'mental' labour in an exploitative relationship

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<sup>22</sup> It would be a difficult analysis to assess how a 'smart', efficient security force effects the image of an organisation and to what extent this provides added value to the firm.

within the production process. This collective labour may not directly own the means of production (capital), but the input it has into the production process either directly controls, or is used to control, capital.

All these ideas, including the social relations of production, social divisions of labour and the operation of Merseyside as a marginalised economy, are not particularly new. However, in this thesis they are used to develop a new classification of producer services, which does not rely on simple dichotomous relationships. The approach developed combines the two key themes in a matrix, which highlights the tensions between these two concepts of production and space so that it provides an understanding of the concrete events in the area.



## 2.3/ Classification of Producer Services in a Marginal Economic Area

The application of the theoretical discourse described above allows generalisations to be made about distinct groups of producer service firms within Merseyside. These are empirically tested in the later chapters to assess their validity. The purpose of this section however, is to detail the classification approach adopted, based on the above themes.

The classification matrix, as shown in Figure 2.1 is based upon integrating two sliding scales. The first axis represents the sliding division between the smallest single site establishments (founder/owner controlled operations) and the operations of large multi-site establishments. There is no definite cut-off point between where these operations become one or the other and there are many different structures between the extremes. However, the matrix presents this as an abstract concept and the empirical work will highlight the concrete differences.

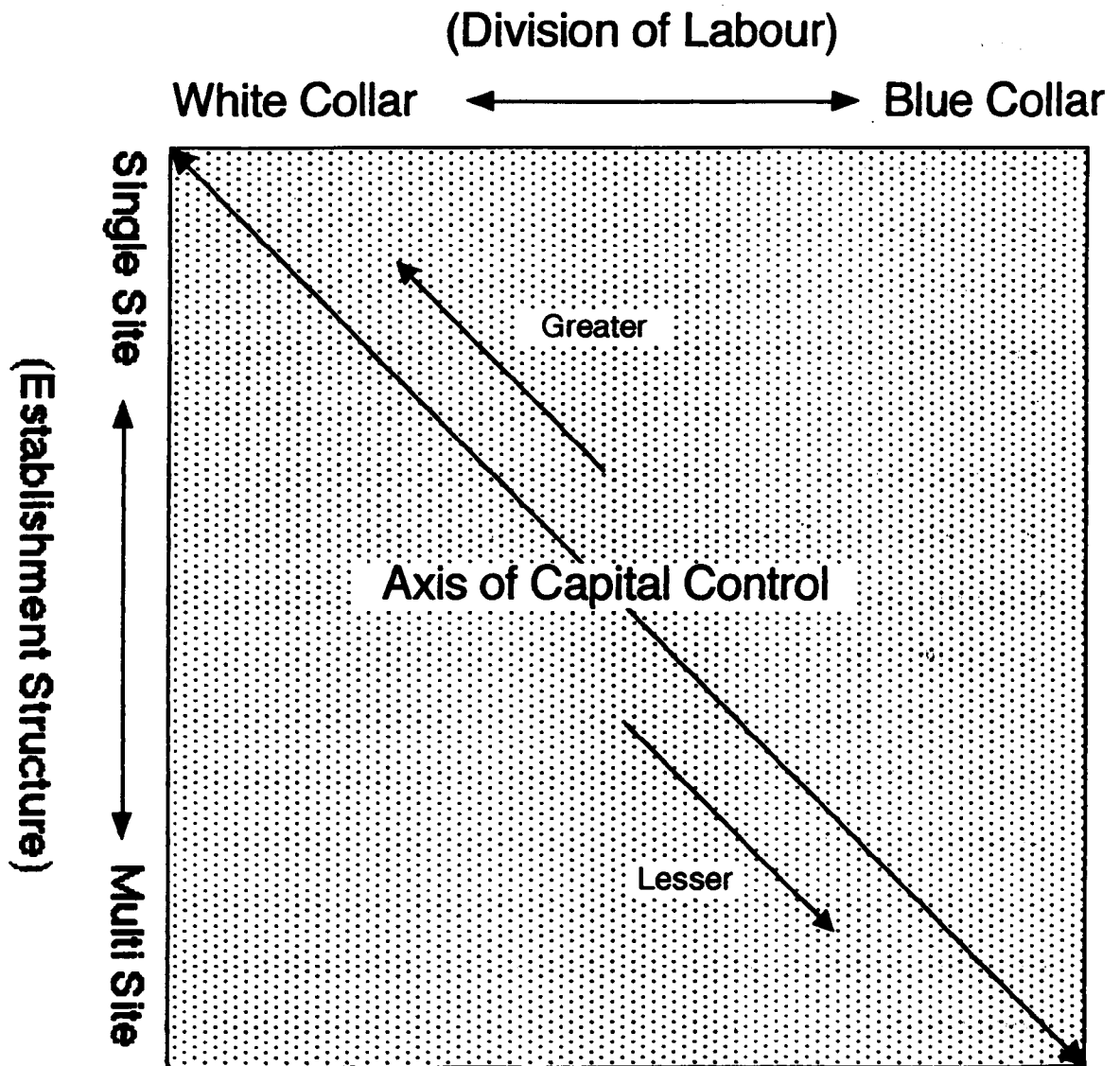
The second axis displays the theoretical distinctions made above, regarding the division between white collar and blue collar operations. Again, this is not a discrete division, because actual firms may, under certain circumstances, provide both types of facilities<sup>23</sup>. Also, firms may employ a considerable number of both white and blue collar workers, and the service product may be either blue collar (distribution) or white collar

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<sup>23</sup> Some of the larger multi-site establishments such as property management operations provide both consultancy and maintenance facilities.

**Figure 2.1**

**Classification Matrix for Producer Service Firms in a Marginal Economic Area**



(property management). However, the theoretical distinction made for firms is whether or not their general labour product feeds into the production process with a distinct tendency towards either white or blue collar.

Considering the underlying characteristics involved within these two relationships (as explained in the previous section), it is now possible to conceptualise how they directly influence each other within the matrix. For example, the ability of white collar operations to control the functions of capital are played out through externally controlled branches of multi site operations.

As the matrix is based upon continuous formulations, there are no fixed boundaries into which groups of producer services will fit. The only way to assess the validity of its assumptions is to abstract from it, general areas, which contain discrete enough groups of firms for empirical analysis.

The best way of clarifying and summarising the various stages developed above, is to explain the reasons for approaching the classification of producer service firms in this way and what is expected to be achieved. This will guide the reader through the transition from abstract ideas to empirical analysis.

The ideas behind utilising the two main themes for the axes of the matrix are explained in the previous section, which considers the social relations of production and the spatial effects of Merseyside's position as a marginal economic area. These are utilised to develop the classification because they

are the key influences upon not just the external operations<sup>24</sup> of private producer service within marginal economies, but also their internal operational characteristics<sup>25</sup>. Previous classifications were too dependent upon product and process and did not incorporate any clear spatial element into the framework.

The two themes are represented in a matrix because previous classification approaches did not indicate how the various dichotomous lists could be interrelated, or explore the tensions between the influences of the criteria used. As this study is only examining private producer services, the distinctions between public or private, and consumer or producer services do not apply. This is not to say that future research on wider service industry issues could not incorporate these concepts into more elaborate classification matrices.

Within the confines of the matrix there are conceptually an infinite combination of firm types, based upon the two axes. As these firm types fall into different areas of the matrix they are subject to either counteracting or mutually reinforcing influences, which allow either a greater control or a lesser control over the functions of capital.

To take an immediate, and extreme, example, the differences in the way the functions of capital are controlled by a highly specialised white collar single site establishment producer

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<sup>24</sup> The external operation of a firm is considered to be how the service fits into the general production process. In other words, how it facilitates the accumulation of capital.

<sup>25</sup> The internal operational characteristics of a firm cover issues of labour force, training, use of IT, location of premises and research development.

service operation (management consultant firm), as apposed to a branch of a blue collar multi site establishment (commercial cleaning firm), can be ascertained from the matrix. This is possible because within certain areas of the matrix the overlapping influences of the two axes (themes), indicate a dominant social division of labour and a strong control of the functions of capital.

As there are no values for the sliding scales of the matrix, it is only possible to pin point general areas for different firm types. The closer to the top left hand corner of the matrix a firm is placed, the greater will be its control of the functions of capital and its exploitive power in relation to the collective labour within the production process, and the opposite conditions apply to a firm at the bottom right hand corner of the matrix. In the case of the former, this relates to firms such as the management consultant described above, whilst the latter includes such firms as cleaning organisations. These are extreme examples which, perhaps, best relate to the structure of the matrix. Other areas within the matrix are not as clearly defined and firms displaying different, but counteractive forces, such as blue collar single site establishments and white collar multi site establishments are relatively adjacent to each other within the matrix. Therefore, their ability to control the functions of capital, and their exploitive position within the production process is relatively similar.

The empirical testing of this classification theory is described in chapter 6 and relies upon the use of factor

analysis to ascertain the dominant variable groups (factors) which influence the operational characteristics of case study firms.

The operational characteristics of a firm cover issues such as market exports, use of information technology, locational decisions, contact with other firms, contact with educational institutions and the class assets of the key personnel within the operation<sup>26</sup>. These variables are tested in relation to the matrix, by analysing different groups of firms extracted from it, along with larger aggregate groups which act as a control.

Even though the underlying theories within this working hypothesis are, by definition, structural, the method allows an understanding of the potential ability key personnel have of controlling the functions of capital, and their position within the exploitive relations of the production process. This (potential) ability to act in relation to structural influences, whether they are constraining or enabling (Giddens 1984), is the agency of the person. This working hypothesis and the extensive empirical tests employed, to ascertain its validity, allows for theoretical and methodological inquiry into the realms of the structure-agency debate (Pred 1983, Gregory 1984).

This debate is explored in the next section, in relation to the working hypothesis already described, and in relation to the third stage of the methodology, which also incorporates ideas of class analysis and the causal powers of; the 'service class' (Urry 1987) and other classes (Savage et al 1992). The last

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<sup>26</sup> The class assets to be analysed are property and educational attainment, which are fully explained in chapter 6.

section of this chapter fulfils its third objective, to formulate an understanding of the social collectives from which key producer service personnel are drawn.

## 2.4/ Social Theory, Structure-Agency and Producer Services

The arguments outlined above tend to emphasise the structural elements of producer service operations (economic, spatial, social). However, within this format, it is also possible to develop an understanding of how individuals are able to influence the structures of which they are a part. Prior to describing how this is achieved, the terms used (structure, agency) and the background literature from where these concepts are drawn are discussed.

The general subject heading under which debates such as the structure-agency discourse have arisen, is social theory. The idea of social theory<sup>27</sup> is not a precise one, as there are no real truths, and it is open to a vast range of different interpretations (Bhasker 1983, Gane 1983, Gregory 1984). There does appear to be a certain amount of consensus about what it is trying to achieve. This is summed up in the words of Giddens:

"'Social theory' is not a term which has any precision, but it is a very useful one for all that. As I represent it, 'social theory' involves the analysis of issues which spill over into philosophy, but it is not primarily a philosophical endeavour. The social sciences are lost if they are not directly related to philosophical problems by those who practice them. To demand that social sciences be alive to philosophical issues is not the same as driving social science into the arms of those who might claim that it is inherently speculative rather than empirical. Social theory has the task of providing conceptions of the nature of human social activity and of the human agent which can be placed in the service

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<sup>27</sup> These concepts of social theory are drawn from the work of Anthony Giddens (1984), who has been one of the key influential forces behind the development of social theory within geography (Bleicher and Featherstone 1982, Thrift 1985), along with other key authors (see especially Gregory and Urry 1985).



of empirical work." (Giddens 1984, Introduction XVII).

In other words, social theory poses questions at the highest level of theoretical discussions (abstractions); Why and how do groups and individuals do what they do as they exist in different places and at different times? And it also demands the need for empirical research. Otherwise, the theoretical debates are confined to a relativist position, with no way of evaluating between them (Gregson 1987).

As a result of wider theoretical trends within the social sciences (see Peet and Thrift 1989, chapter 1), the general idea of accepting social theory as a plausible approach to aid geographic analysis has become ever more prominent. This movement has incorporated a theoretical swing against previous functionalist and structuralist social development theories:

"There has hence been a movement away from theoreticism (where empirical investigation was disparaged), over-generalization (in which specific variations between places or countries were ignored), and against structural determinacy (in which human agency was dispelled from social scientific explanation)." (Savage et al 1987, page 28).

The only problem has been, to develop a theory which encapsulates human existence (in all its forms), informs the practice of social science through empirical research, and offers emancipatory possibilities, through critical analysis. This endeavour has produced an infinite number of interpretations, all of which can be examined for theoretical faults, but ultimately there is no right or wrong solution.

The key developments within social theory which have influenced recent geographic thinking include: Realism (Sayer

1981, 1984, Benton 1981), Transformation (Bhasker 1979, 1983, Smith 1983), and Structuration (Giddens 1979, 1984, Moos and Dear 1986). However, social theory has also manifested itself as more specific geographical thought through the developments of 'Locality Studies' (Savage et al 1987, Cooke 1989) and 'Time Geography' (Thrift and Pred 1981, Pred 1983).

The debates concerning the intricate details of these theoretical positions are vast<sup>28</sup> and can not be discussed here. What will be attempted however, is an extraction of some (simple) common themes from various approaches, which can assist this thesis in the study of producer services, without becoming embroiled in the multitude of debates concerning social theory.

The realisation that social theory does provide an additional and alternative level of inquiry to traditional neoclassical studies within geography, has previously been noted by authors studying various forms of economic geography:

"Whatever approach is adopted in studies in industrial location research, there should be more awareness of the traditions in social theory from which organisational concepts are borrowed, and of the position held on major political, social and philosophical questions. Industrial location studies should be more firmly grounded in social theory." (Marshall 1982, page 1681).

But as yet, social theory, in connection with any form of

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<sup>28</sup> See for example the 'Symposium on Giddens' in *Theory, Culture and Society*, 1982, No. 1, pp. 63-113, and the debate involving Harvey, Sayer, Thrift, Cooke, etc. in *Society and Space*, 1987, Vol. 5, p. 367.

empirical analysis<sup>29</sup>, is still restricted to a very narrow band of research within the social sciences and an even narrower one within human geography<sup>30</sup>. This is reflected by its lack of use in the study of service sector. Those that have advocated its use have either relied upon an approach more akin to functionalism (Walker 1985), or have applied it to issues more traditionally related to social theory; class analysis (Urry 1987).

The benefit derived from incorporating social theory concepts into the analysis of producer services, as the nature of its proposed in this thesis are outlined. Common elements are drawn from existing theories and used to inform not only the theoretical understanding of the processes involved in specific firm operations, but also the empirical research of these concepts.

The main focus of the literature concerning social theory is how to conceptualise 'structure' and 'agency', which, as described above, has become termed the 'agency-structure' debate (Peet and Thrift 1989). The idea of agency and structure have become extremely complex (see for example Giddens 1984, Chapter 1) and can not be fully discussed in this thesis. However, they are described in terms of how they can used to understand the operations of producer service firms.

Within society there are many structures (e.g. economic, political, class, law and spatial) which can be understood as

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<sup>29</sup> There appears to be a tendency within the social sciences to relate social theory and empirical research through studies into cattle farming (Smith 1983, Pile 1989).

<sup>30</sup> Within human geography the application of social theory and empirical analysis is virtually non-existent (Gregson 1987).

embedded in social practice, as they are constantly changed and reproduced through social action. For some authors, these structures are understood better as characteristics or properties in the reproduction of social systems:

"...the concept of structure may be used in a technical way and in a more general way. Understood as rules and resources, structure is recursively implicated in the reproduction of social systems and is wholly fundamental to structuration theory. Used in a looser fashion, structure can be spoken of as referring to institutionalized features (structural properties) of societies." (Giddens 1984, page 185).

For the purpose of this research, rather than presenting a detailed discussion about 'structures'<sup>31</sup>, some generalisations are assumed about their nature:

Firstly, they are inherently spatial and they exist at a multitude of different spatial levels; global capitalism or the traditional family unit.

Secondly, space is not passive, it constantly effects the reproduction of the structures which are constituted in places. For example the characteristics of class struggle on Merseyside are reproduced differently than those in London.

Thirdly, structures are inherently social, because they are embedded in social practice which can itself take many forms. Therefore, while it is possible to discuss economic or political structures such as corporations or government, they must be

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<sup>31</sup> Within the social sciences the concept of structure is a very diverse and complex topic. It has been discussed in relation to many issues such as; Phenomenology (Habermas 1979, Harre 1980), Marxism (Althusser and Balibar 1970, Massey 1984), Realism (Sayer 1984) and hermeneutics (Pile 1989). And within each of these structure has been used differently to develop our understanding of human existence.

understood in terms of the social practice (relations and interactions) which change and reproduce them.

Fourthly, as structures extend over time and space<sup>32</sup> their influences overlap, both, on an internal basis and where different societies come into contact. These overlaps, together with the individual actions of agents, produce concrete social events.

Fifthly, and perhaps most importantly, the relationship between structures and the people which change and reproduce them, is not one of strict domination. Even though structures can be referred to as institutions which articulate the rules and resources of social systems, they can not be understood as external dominating forces which control the individual (Giddens 1984<sup>33</sup>).

The five generalisations described above provide an additional basis for understanding the matrix of the working hypothesis developed in the earlier part of this chapter. The structures involved within the matrix are very much part of the spatial processes of production, the distribution and organisation of firm structures and the spatial divisions of labour, as they relate to a marginalised economic area. As already stated, these structures relate to the exploitive relationships within the capitalist mode of production and, at

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<sup>32</sup> Apart from being inherently spatial, structures are also temporal. Therefore they extend through time (how long they last), which obviously has implications for their ability to influence the reproduction of societies.

<sup>33</sup> The idea of trying to conceive the relationship between individuals and structures (the 'structure-agency' debate) has become a central theme of social theory not just for Giddens, but for people throughout the social sciences.

this stage, do not incorporate ideas of other exploitive relationships (gender and race).

Apart from the working hypothesis demonstrating how structures are spatial and 'overlap', it also incorporates the other generalisations concerning structure; that place makes a difference, because in relationship to other areas, Merseyside's development is integral in reproducing its present position as a marginalised economic area. Also, that individuals are not just the bearers of these structures, because they have an ability to act as individuals and through the intended or unintended consequences of their actions they reproduce and change (modify) the structures.

This is, however, within the very narrow confines of private producer service operations, which are used as the context, modality or interface<sup>34</sup> between structure and agent. The working hypothesis attempts to illuminate the enabling and constraining influences of structures in relation to the social practices of individuals within these firms. This is done to reveal the mutual process of social reproduction that occurs between agent and structure, and perpetuates the exploitive relationships that occur within areas such as Merseyside.

To sum up this section on agency and structure there are three key issues which need to be clarified: Firstly, how these concepts relate to the working hypothesis developed in the first section on the social relations of production, secondly, how it

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<sup>34</sup> To understand the link between structure and agent in concrete terms for empirical analysis the situations of study have been conceived as a context, a modality or an interface (Smith 1983, Bhasker 1983).

can be used to provide a better understanding of producer service operations, and thirdly, how it is possible to understand agency and structure through empirical analysis.

The working hypothesis relies upon representing the tensions between structures in terms of explaining the constraining and enabling influences upon human agency. This can be understood as; how the social relations of production, involving the division of labour and the spatial structures of production (Massey 1984), through institutionalised (firm) spatial structures, places the ability to control the functions of capital into the hands of certain key personnel. The assumption being, that this perpetuates the exploitive relations of capital within an area and inhibits regeneration in places needing development resources<sup>35</sup>.

This theory is used to understand that structures (division of labour and spatial structures) are not the sole reason for the development of the relations which promote capitalist development. If the theoretical arguments of those proposing a structure-agency theory of social reproduction are followed through, then it must be assumed that the reproduction of the structures which enable or constrain key personnel in the control of the functions of capital are also a result of human agency. This process of reproduction must be realised as a constant interaction of structure and agency, which is explained by Smith (1983):

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<sup>35</sup> These resources can be seen in terms of economic development, providing job opportunities (quality employment), but also social needs which feed into growth; education and housing.

"So formulated, the 'structuration/transformation' vision rejects not only the voluntaristic man-makes-society vision and the deterministic society-makes-man vision of social behaviour, but also what Bhasker calls the dialectical man-makes-society-then-society-makes-man-then-etc. view of Berger and Luckmann (1966). The structuration/transformation vision in contrast stresses the reproductive nature of an inherently mutual 'causal' relationship." (Smith 1983, page 3).

Therefore, with reference to the matrix (Figure 2.1), it must be understood that the structures used to distinguish which sectors are able to control the functions of capital are, at one and the same time, constituted by human agency and played out through social practices (Giddens 1976). It thus follows that those in control of the functions of capital, in the top left quadrant of the matrix (Figure 2.1), are, as much as those who have limited control, constantly reproducing the structures through their own ongoing social practices.

The term social practices refers not just to the actions of individuals, but also to the thought processes which produce these actions. This, once again, is a highly complex set of issues, as are the debates concerning structure, and to which a vast bulk of social science literature has been devoted<sup>36</sup>. However, for purpose of simplification, the concept of social practices within this thesis will be based upon the knowledgeability of agents, which can be understood as motives,

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<sup>36</sup> The actions of individuals have been perceived in terms of phenomenology (Harre 1979), time-geography (Hagerstrand 1978), stratification models (Giddens 1984) and other more recent conceptions based upon post-structuralism (post-modernism) were there is no rational for human behaviour, merely different discursive practices (Baudrillard 1985).



reflexive monitoring and intensions<sup>37</sup>.

Therefore, to ascertain how the social practices of the people involved within the producer service sector play a part in reproducing the very structures in which they are constituted; individuals must be studied. These (agents) can be used to provide a window into how social structures are embedded in social practice, and how agency reproduces the structures of labour division and spatial production in areas such as Merseyside.

Nevertheless, there are several theoretical problems with this type of approach which demand a more coherent analysis approach than just the examination of individuals. Firstly, the structures involved are not just restricted to the producer service sector and have wider implications for the development of wider areas. Secondly, an isolated analysis of individuals does not provide an understanding of the interface between agency and structure. Thirdly, the two structures used in the matrix can not be directly reduced to agency. Fourthly, there is a need to understand how social practice can be translated into causal power, which relates directly to concrete social events.

In answer to these problems, the final section of the thesis adopts a class based analysis. This provides an interface between social practice and the reproduction of structures, and allows analysis of agency, social structures and concrete social

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<sup>37</sup> These concepts are primarily drawn from a simplified version of Giddens's concept of agency:

"To be a human being is to be a purposive agent, who both has reasons for his or her activities and is able, if asked, to elaborate discursively upon those reasons." (Giddens 1984, page 3).

events to be combined.

Through the use of class assets (see below), which are used to reproduce the exploitive relationships within class struggle, it is possible to understand how social divisions of labour, and the marginalised economic position of an area such as Merseyside, are influenced by agents in the producer service sector. It also provides the final piece in the puzzle: to understand how the human resource element of producer services (people) influence the regeneration of Merseyside through social practice.

The concepts underlying class analysis, as with the relations of production and the structure-agency debate, need some form of introduction. The final section of this chapter reveals some of the key developments within this field and specifies how they will be utilised to understand not only how agents reproduce social structures on Merseyside, but how it is possible to conceptualise the causal powers of social collectives.

## 2.5/ Class Analysis, the Service Class and the Reproduction of Social Structures

A number of key issues need to be considered concerning the concept of class which will help the unfamiliar reader understand not only the basis of the approach adopted for this analysis, but why it is used in relation to the theoretical assumptions already made. The following discussion provides theoretical continuity in the work and directly relates to the third stage of the methodology, which is led by the need to link theoretical and empirical analysis.

The basic principals underlying what constitutes class, how its formation takes place and how it should be analysed, are by no means a set rubric. There is no clear consensus on class definition, and even though the majority of works stem from either a 'Weberian' or a 'Marxist' camp, there is such an extensive array of perspectives it is difficult to relate contemporary works to one or the other, if they still exist?

These two approaches can be briefly described by drawing upon the work of Abercrombie and Urry (1983):

"Weberian theory concentrates on how classes are produced as a result of the manner in which rewards are acquired and distributed; Marxist theory emphasises the way in which particular social relations within production create and reproduce social classes" (Page 9).

Within this simple comparison however, there are a multitude of problems (such as the 'boundary problem' or conceptualising the

middle class<sup>38</sup>) which have been the cause of endless debate between and within both camps (Poulantzas 1975, Olin-Wright 1985, Thrift and Williams 1986, Bagguley et al 1989).

The main problems that have arisen out of class analysis are: Firstly, the problematic conception of the middle classes through a Marxist approach, which basically relies upon a dichotomous relationship between capitalists and the proletariat, with the concept of class based upon the exploitive relationship (struggle) between the two via ownership of the means of production<sup>39</sup>. Secondly, in the Weberian approach, because class determinants are based upon life chances and the stratification of status, the theory offers a continuous scale upon which classes can be placed and the distinctions, or boundaries, become arbitrary (Weber 1978, Abercrombie and Urry 1983). Thirdly, there have been continual problems with relating abstract conceptions of class to empirical concrete analysis; which links directly to the initial two problems.

Apart from these issues, which have been a focus of concern for many years (Goldthorpe 1972, Lowith et al 1982), there are other more precise problems with class analysis that have become more acute with contemporary economic restructuring and recent interests in structures other than the relations of production

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<sup>38</sup> For a detailed analysis of the differences between Marxist and Weberian approaches to class analysis the reader is referred to Abercrombie and Urry (1983) and Giddens (1981).

<sup>39</sup> Many writers have shown that Marx realised there were more than two classes in the 'real' world, through his descriptions of different social strata on the political stage (Wright 1985, Harvey 1982). But the link between his abstract conceptions and concrete observations were never illustrated due to the abrupt end of Capital (Marx 1967, Vol. III).

(race and gender)<sup>40</sup>.

All these problems have been brought into sharp relief with the conception of the 'service class'<sup>41</sup>, because it not only challenges the Marxist concept of class based upon ownership of the means of production, but it also confronts the Weberian principal of stratification, requiring a decision on who is a service class member (boundary). Notwithstanding these difficulties, the idea of a service class has been developed via a more flexible conception of class, based on the social division of labour:

"The term 'service class' here refers to all those places in the social division of labour which are involved in the management and supervision of the functions of capital (of control, reproduction and reconceptualization), to the extent to which these are separated from capitalist ownership." (Urry 1986, page 46).

This concept of the service class directly relates to the notion of the control of the functions of capital, as incorporated into the classification matrix (Figure 2.1). However, the matrix reveals this only applies to a certain range of operations, because its axes are also influenced by the structures of spatial production (marginalised economic area).

It is not the case that all producer service operations are

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<sup>40</sup> These issues are raised by Bagguley et al (1990) and Savage et al (1992).

<sup>41</sup> The work of Urry (1981, 1987) and Abercrombie (1980) has been instrumental in bringing together earlier concepts of the service class (Renner 1953, Bottomore 1964, Dahrendorf 1969, Braverman 1974).

controlled by service class members, but it is more important to note that within what would be expected to be the same social division of labour, the service class do not exist because of the tensions between the social and spatial structures. In other words, it would be expected that the service class operate in certain firms, but, because they are in a marginalised area (Merseyside), it is manifested as a different class.

These assumptions apply to the left hand axis of the matrix (Figure 2.1), where those in control of the functions of capital are more prominent. Along this axis there is a division between the service class and another group which, as will be shown below, can be termed the 'management class'<sup>42</sup>.

To conclude this section on class, several loose threads are pulled together: firstly, how to approach the problems outlined in previous class analysis (see above), secondly, how to develop an understanding of the classes involved in the producer service sector (assets and causal powers), and thirdly, how to contextualise the actions of individuals within the reproduction of social and spatial structures.

These three points can be tackled together by adopting an approach to class analysis which develops a middle ground between Weberian and Marxist analysis (Bagguley 1989, Savage et al 1992) and focuses on class formation and peoples' capacity for action (Thrift and Williams 1987), rather than just class definition.

The approach developed is based upon classes being formed

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<sup>42</sup> This concept of a management class has been touched upon by Urry (1986), but the basis for the ideas used here are mainly derived from the work of Savage et al (1992).

along lines (axes) of exploitation (Savage et al 1992). These are not entirely tied to the ownership of the means of production, yet are based upon the exploitive social relations of production and exploitive cultures related to this. These relationships are based upon assets in three forms, organisational, cultural and property:

"Organisation assets allow superordinates to control and exploit the labour of subordinates but cannot be stored easily" (Savage et al 1992, page 17).

Organisation assets allow the use of exploitive power over labour and are transmitted through institutions. This may apply in the context of the manager within a firm or the use of female labour to support a household. Therefore, this asset is not always directly related to the relations of production, yet can be used, for example; via exploitation of the female within the household, to feed into the production process. It is difficult to store and pass on, because it is virtually impossible to pass on an organisational position to another person, unless it is translated into a property or cultural asset (e.g. inheritance or patriarchal control):

"Culture is to be understood as a process through which mutually antagonistic classes are formed as each attempts to legitimate its own culture...Cultural assets are stored physically in people's bodies and minds: the body itself materialises class taste. They can be reproduced through the passing on of cultural tastes to offspring...(but)...do not in themselves involve the appropriation or control of other people's labour" (Savage et al 1992, page 16).

The best way of transforming cultural assets into an exploitive power is to develop them in an organisational

context, by acquiring formal credentials, which leads into the autonomy of professionalism and 'social closure'<sup>43</sup>:

"Property assets offer the most robust bases for class formation, since they allow other people's labour to be readily exploited and also can be readily stored as capital". (Savage et al 1992, page 18).

It is assumed that the formation of the middle classes is based upon the relationship between these three assets, which constantly involves converting one into another for class reproduction.

Examining these relations, it can be inferred that the basis of service class formation is reliant more upon cultural assets in comparison to the management class, whilst the latter is relatively more reliant upon organisational assets. Combining this with the service classes ability to control the functions of capital, it must be concluded that whilst both groups have the greatest capacity for action (e.g. ability to change and influence environments, possibly through regeneration) in terms of their position within the classification matrix (Figure 2.1, left side quadrants), the service class have the greatest potential for changing their environment.

The career paths of these two groups are examined, along with their assets in Chapter Seven. This involves individual analysis to assess their reasons, motives and life profiles with regard to living and/or working within the Merseyside area to reveal how individual agents reproduce the types of dominant

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<sup>43</sup> Social closure is concept whereby professional institutions legitimise the defend their position through primarily academic qualifications (Urry 1987).



relations which allows them to control the functions of capital and generate their own environment. Without the actions of these agents the social structures that prevail in the area would not exist.

The structures which do exist, and are reproduced through the actions of agents and the causal powers of classes<sup>44</sup>, are those which perpetuate, and were, the root cause of the inequalities within an area such as Merseyside. It is ironic to assume that these structures and agents can be a source of regeneration for places within the social relations of production, which have suffered as a result of their previous involvement in whatever guise.

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<sup>44</sup> The causal power of the service class is deemed to be very strong in terms of reproducing its dominant and exploitive relations to other subordinate classes, especially through controlling the functions of capital (Urry 1986) and the creation of cultural and residential environments (Thrift and Williams 1987).

## 2.6/ Conclusion

This sections of this chapter fulfil its three objectives: firstly, to introduce the reader to a different concept of producer service classification, secondly, to introduce the reader to how recent developments in social theory can be used to understand the operations of producer services, and thirdly, to demonstrate how contemporary class analysis can be used to formulate an understanding of the collectives from which key producer service personal are drawn, and the causal powers of they exhibit.

By engaging these objectives this chapter has covered a vast amount of material and, of all the chapters, places the greatest demands upon the reader to accept abstract concepts which may appear unfamiliar, especially when used in relation to producer services.

The ultimate aim of the chapter has been to cut through the post-industrial optimism, by revealing that apart from a neoclassical analysis of producer services, it is also possible to understand the underlying structures of their operations in terms of perpetuating exploitive relationships, not just in relation to the production process, but also within the social structures of culture and gender.

Unfortunately, the extensive length of the initial section of this chapter, reveals the dominant use of the relations of production to develop a theoretical model concerning the operations of producer services. Only minimal attention has been given to other exploitive structures, gender and culture, and

race has been ignored altogether. Whilst this is not a complete picture of producer service operations, the original intention was only to examine the relations of production and to touch upon other exploitive structures if uncovered in the empirical analysis because, as Massey (1990) rightly states, these can and should be studied in their own right.

The aim of relying upon the relations of production to develop a working hypothesis (matrix, Figure 2.1) for producer services was to reveal that certain operations (white collar) have a far greater capacity to control the functions of capital, and therefore the people in control of these operations are not as constrained by economic determinants as other operatives (blue collar). However, the tensions that exist between this structure and the spatial structures of production, within marginalised economic areas, such as Merseyside, can eliminate the functions of capital control from multi site establishments.

The second section of this chapter explains how these structures are maintained (reproduced) through the social practices of the people involved. This reveals the exploitive relationships of these structures to be, not just reproduced because they determine the actions and ability of people to act (agency), but are also a result of the actions of people as knowledgeable agents.

It was then possible to explain how and why key people, in control of the functions of capital, reproduce these structures. This is considered in the final section of the chapter which focuses on class relations and determines that peoples capacity for action is related to the way in which they reproduce

primarily their class assets. It is proposed, the people with the greatest ability to control the functions of capital (service class) and to control their own environment (cultural and residential) cannot rectify (regenerate) the uneven development on Merseyside, because their social practices reproduce the structures which are the cause of the inequalities.

The validity of the model (Figure 2.1), and the social practices of individuals which reproduce exploitive structures, are empirically tested in the following chapters. Analysis of way the causal powers of different middle classes (service class and management class) are reproduced through the actions of agents is conducted using intensive qualitative techniques (Chapter 7).

A full explanation of the methodology used is provided in chapter four, because the purpose of the next chapter (Chapter 3) is introduce and discuss the area of Merseyside and its development. This will clarify the various assumptions made in this chapter about the area being a marginal economy, and detail some general observations concerning the involvement of services and in particular producer services.

## Chapter 3

### The Economic and Social Development of Merseyside

#### 3.1/ Introduction

The purpose of this chapter is to introduce the reader to the study area: Merseyside. This is achieved by examining several key elements of its social and economic development and is, therefore, by no means an exhaustive analysis<sup>1</sup>.

The approach of separating out particular aspects of the area's development has proved very popular for others writers because of the complex nature of its evolution. For example: Lloyd (1970, 1979), Lloyd and Mason (1985) and Cornfoot (1982) have demonstrated the extreme weaknesses of the Merseyside (sub-regional) economy and the persistent failure to discover a new economic rationale to fully compensate for the chronic decline in port related activities. Furthermore, Parkinson (1985, 1989) has focused upon the continual conflicts in inter-organisational relationships, particularly between central and local government, highlighted by the confrontation between the left wing Militant-dominated City Council and the Thatcher administration. Meegan (1989) has examined the possibilities of developing local structures to counteract the devastating effects of ill conceived planning regimes for the outer estates of Merseyside, and Lane (1987) has traced the effect of the area's seafaring tradition

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<sup>1</sup> The range of material charting Merseyside's development is vast, but for a general introduction the reader is referred to Anderson and Stoney (1983), and Lawton and Cunningham (1970).

(as the gateway to the British Empire) on religious sectarianism, local politics, labour relations and other social structures.

All these approaches tend to reflect two things; Merseyside has not been passive to wider forces acting upon it, most starkly manifested in terms of civil riots (Gifford 1989) and Militant local politics (Parkinson 1989), and the area has been developed through some of the most extreme formation processes witnessed in any part of the United Kingdom. This is especially true of the sub-regional centre, Liverpool, which was reportedly at its peak in 1910:

"Victoria, only recently dead, had not long before been translated from mere monarch to Empress. In Liverpool especially, the promotion must have seemed right. Red-ensigned merchant ships carried half of the whole world's water-borne international trade and the most potently famous ships of the British mercantile power, the liners of Cunard and the White Star, were operated from grandiose head offices on the Liverpool water-front. Liverpool was the gateway to the British Empire." (Lane 1987, page 22).

During the course of the past eighty years however, the area has moved through such a rapid and dramatic decline, it now warrants a European Commission status (Objective 1) which recognises it as the 'poorest' place in Britain. Some commentators even believe the area no longer has any reason to exist, and, as its location brought it prosperity, it is now is the root of its problems:

"So why should Manchester appear to be succeeding where Liverpool continues to struggle? 'That's easy' one council official said. 'It's in the wrong place, that's all....If it did not already exist, no one would invent it now'." (Pithers 1988, The Independent, pages 7-8).

This chapter addresses some of these larger issues where they can be used to inform upon the ideas already developed in Chapters 1 and 2, but it in keeping with the line of research, it pays particular attention to what role the (producer) service industries have played in the area's development to-date (Daniels 1982, 1989, Hubbard and Nutter 1982).

In addition, this chapter will also question the concept of 'regeneration', which during the 1980's was excessively discussed in both the academic arena (Parkinson et al 1989) and within public policy development (Campbell 1990), without direct consideration of the structures (social and economic) which initially caused the 'problem' areas<sup>2</sup> in need of regeneration.

Finally the overall objective of this chapter is to reveal what regeneration means (or should mean) in terms of the present social and economic conditions on Merseyside, and to theoretically assess the possible positive, or negative, inputs into this from producer services.

The driving force behind urban regeneration and what it should be trying to achieve is a highly charged political subject. Obviously, it can operate at many different levels, new park benches or dockland development for example, but the perspective taken in this thesis shows it must be considered in conjunction with the reproduction of capitalism, which lies at the heart of the problems regeneration is trying to address<sup>3</sup>.

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<sup>2</sup> The idea of 'problem areas' refers to the locations (people and places) which have suffered as a result of uneven development.

<sup>3</sup> As previously stated in chapter 2, not all structures relate purely to the reproduction of capitalism, and some of the problems on Merseyside do stem, for example, from racial tensions

### 3.2/ The Historical Constituents of Present Day Merseyside.

The location of Merseyside (Figure 3.1 & 3.2), combined with the mercantile trade patterns of the seventeenth and eighteenth centuries and the physical problems of using the Dee Estuary as a port (Lawton 1982), provided the basis for the growth of Liverpool and its hinterland during the 1700's. But it was not until the nineteenth century that the area fully developed as a substantial urban system, and from that time, until the start of the First World War, its expansion was incredibly rapid (Lawton and Cunningham 1970).

At the turn of the nineteenth century dramatic changes were occurring in the shipping trade; the sailing ship gave way to the steam ship and ports rapidly expanded their capacity to meet a booming increase in trade. During this time the commodity throughput of the Port of Liverpool was at its peak. In the early 1900's Liverpool was handling approximately 36% of the export trade of Britain, and about 25% of its imports by volume (Stoney 1983).

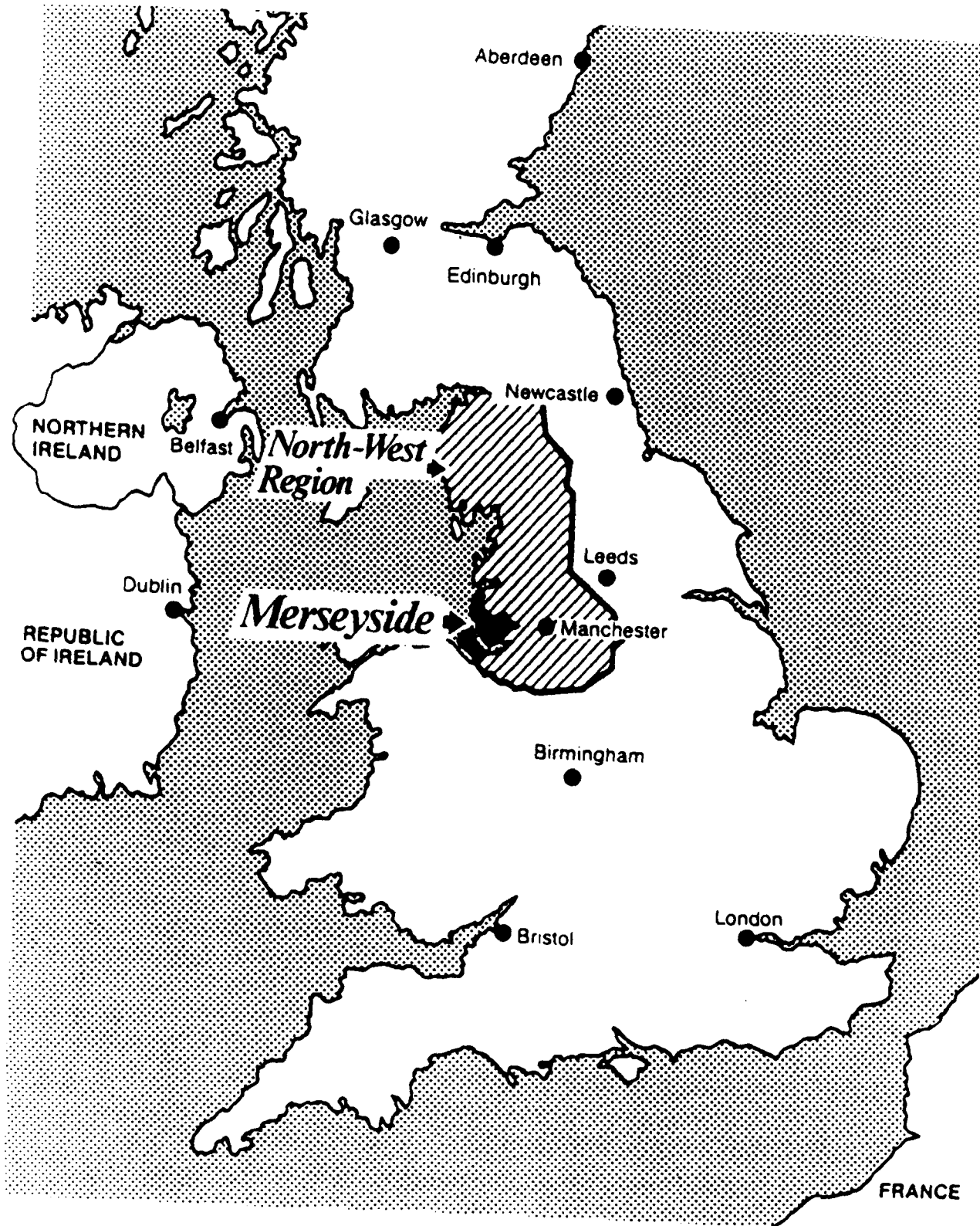
In terms of employment, of the 381 000 insured workers on Merseyside in 1930, 193 000 were either directly or indirectly connected to the docks (Board of Trade 1932). This includes the 75 000 workers who were employed in wholesale and retail distribution; four times as many as were employed in any other single industry in the area.

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(Gifford 1989), but the detail of these is outside the scope of this study.



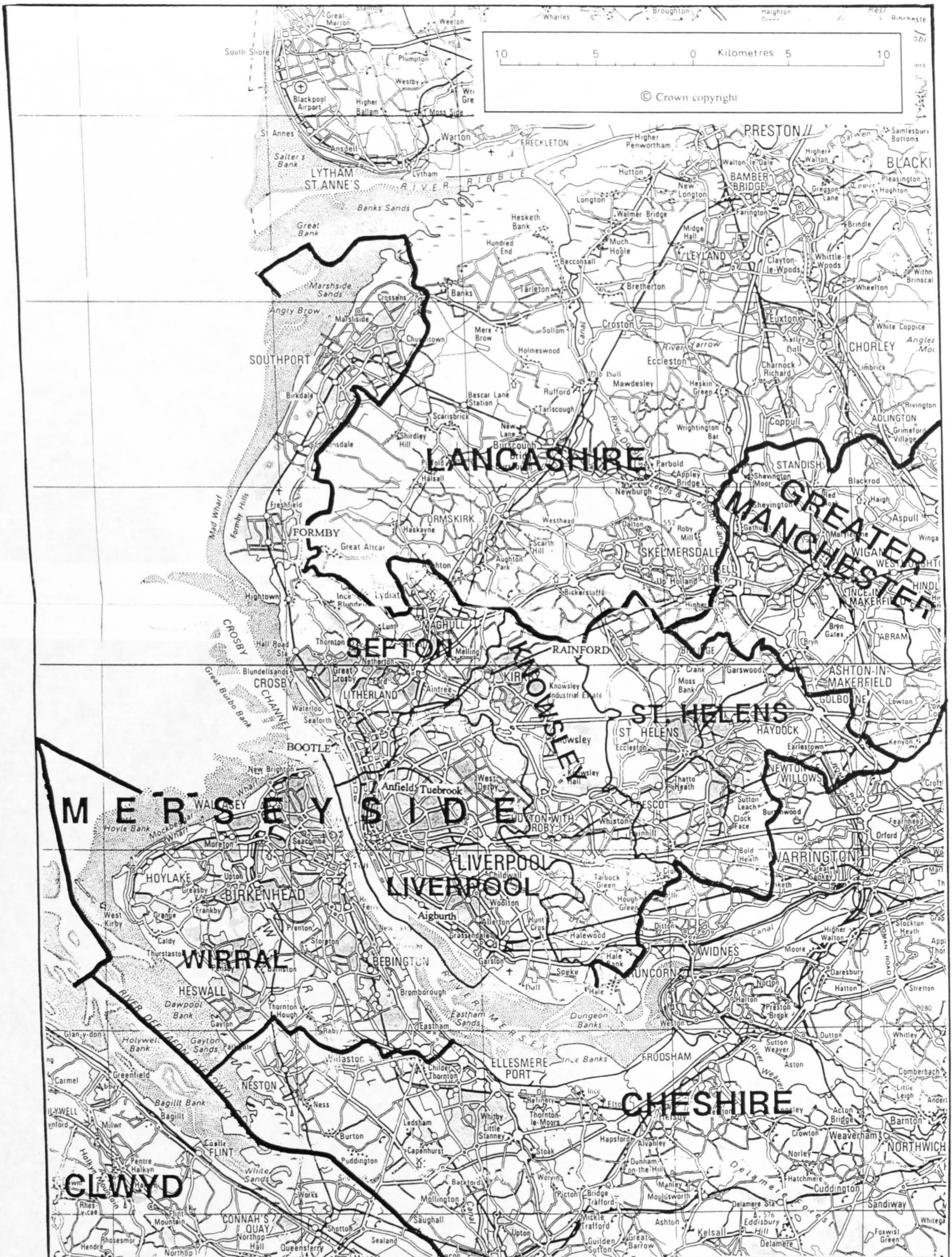
Merseyside: A National Perspective



Source: MIDO

Figure 3.2

Merseyside County and District Boundaries



In the early 1900's, Merseyside was a conurbation founded on service industries, even as early as the 1870's the employment structure of Liverpool showed 26.2% of males employed in the services as opposed to 15.6% employed in manufacturing (Anderson and Stoney 1983).

The manufacturing sector in the Merseyside area was directly connected to the port activities, as it predominantly processed operations of raw materials (sugar, cotton, oil seed), while the primary sector was extremely limited. The main exports from Liverpool were textiles, the majority of these coming from Manchester and its surrounding area. The main imports, however, varied depending on the economic climate for specific goods (cotton, timber, wheat, oil seed), and upon radical changes in social and political ethics towards the idea of importing people as slaves.

These employment and commodity trends show that the development of the area in relation to economic theories such as Fisher-Clarke bare little resemblance, and it is clear that there has been no subsequent economic progression from primary to secondary to tertiary; especially as primary industry (agriculture, mining and quarrying) have in the past proved virtually non existent (Board of Trade 1932). In addition to this, the growth of the port and its export cargo trade owed little to the industry of Merseyside, as it was mainly dependent upon the North West as a whole.

In the period from 1858 to 1914 the registered tonnage of the port increased from 4.4 million to 19.0 million, and the rapid development of the dock area reflected this increase

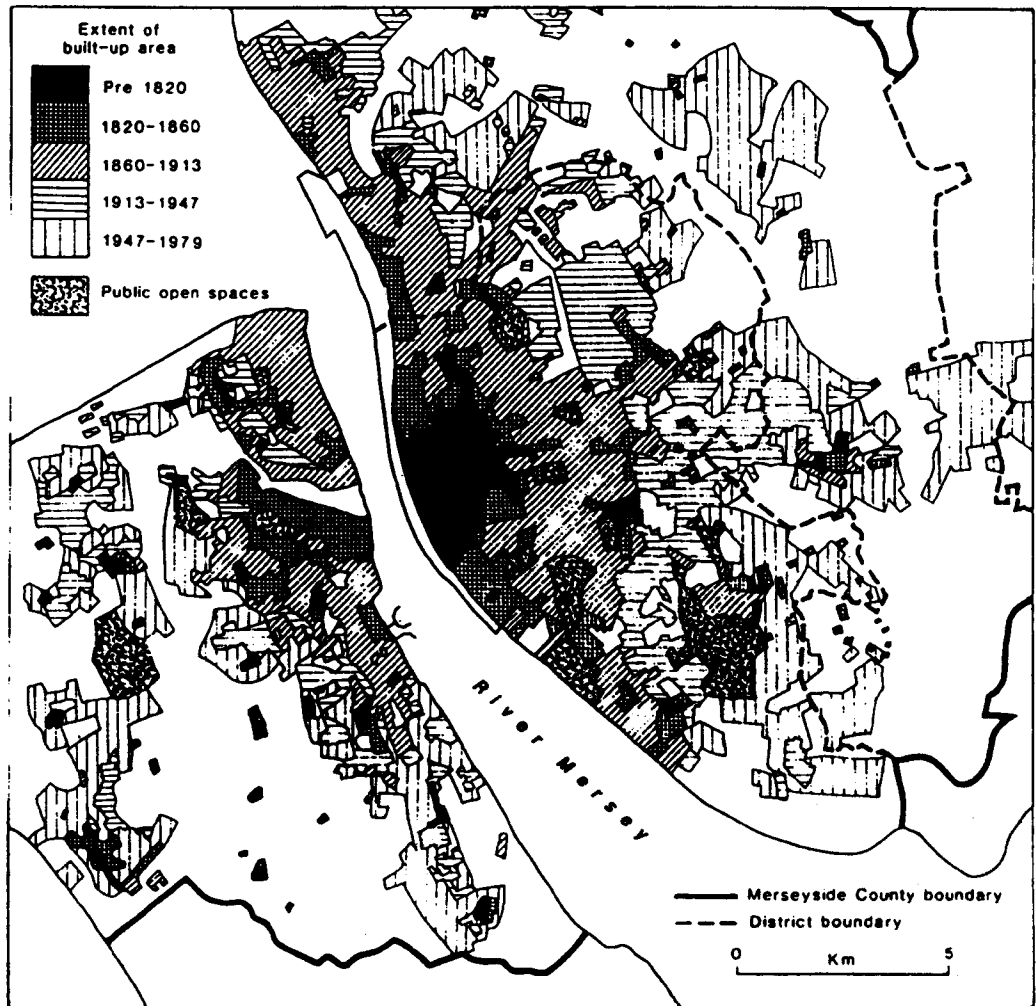
(Lawton 1982). The growth of the dock area has been well chronicled (Smith 1953, Mountfield 1965, Bailey 1973, Cunningham 1970, Chitty and Rees 1978, Stoney 1983).

It was at this time when Liverpool was a through road for global trade, for the United Kingdom and especially for the North West, with mainly America, Africa, India and the rest of Europe that it was at its most vulnerable. The lack of planning and the rapid growth of the port area between 1850 and 1930, played an ironic and dramatic role in sowing the seeds of the social and economic problems for later generations.

As the new quays of Liverpool and Birkenhead quickly developed, the urban environment took on an equally expansive picture (Figure 3.3), along with the density and distribution of the population (Figure 3.4). Between 1801 and 1911 the population of the area grew from well below 100 000 to 1.5 million, with the majority of these being immigrants from all parts of the British Isles. By the middle of the nineteenth century only half of the conurbation's population were Lancashire born, with the main immigrant constituent being made up of Irish, approximately 22% of the population (Jones 1931, Lawton 1982). The main influx of Irish occurred between 1846 and 1847, at the time of the potato famine, which brought some 580 000 to swell the Merseyside ranks. This intense flow of Irish immigrants continued throughout the rest of the nineteenth century, so that between 1851 and 1900 a further 34 300 entered Merseyside:

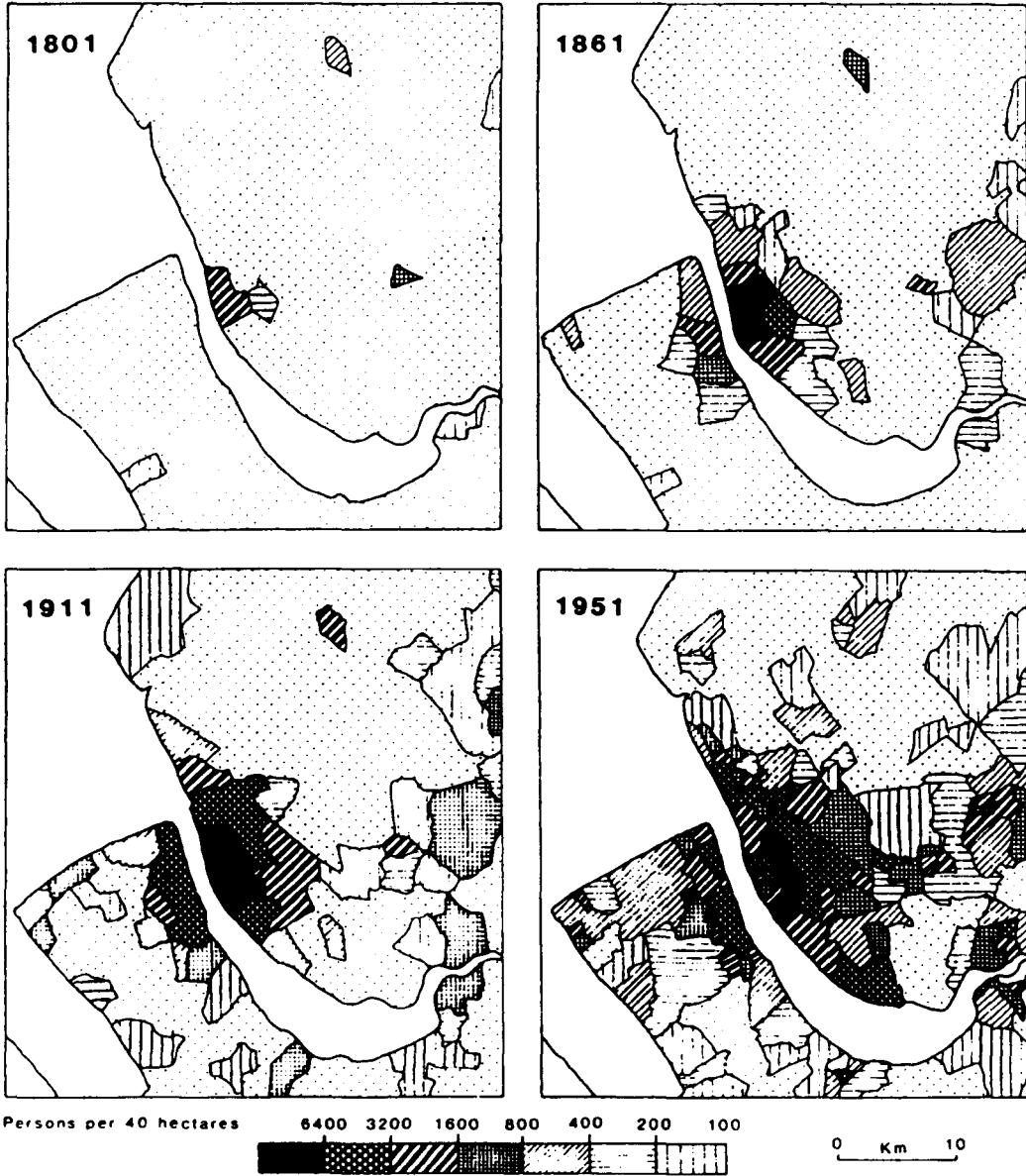
Figure 3.3

The Growth of Urban Areas in Merseyside



Source: Lawton 1982

**Population Growth and Density in Merseyside**  
**1801-1951**



Source: Lawton 1982

"The Irish immigrants into Liverpool came more because conditions at home were bad than because of anything specially favourable to them in Liverpool; the city was not so much an ultimate goal as a gateway to the outside world." (White 1951, page 4).

Unfortunately for Liverpool, those that did move on were the most enterprising, better trained and most successful, leaving behind those dependent upon the manual occupations within the area. Other injections of migrant groups included large numbers of Chinese and Afro Caribbean, and this influx carried on until the 1960's, with the countries of origin extending to parts of Canada, America and the Soviet Union (Pickett 1970).

The natural birth rate in the early 1900's was 8% (Pickett 1970), and as inward migration was still high, the population continued to grow at an alarming rate (Table 3.1). Families were large due to a high proportion of Roman Catholics, and because they were a part of the established tradition amongst unskilled manual workers (Pickett 1970). The area's infrastructure was poorly equipped to handle the growing numbers, who relied upon narrow unpaved streets, a canal system due, to a deficiency of quality roads, and a barely adequate rail system until the late nineteenth century. All these problems compounded the social deprivation that established itself in the overcrowded, disease ridden, tenement houses that were left behind in the centre of the area to decay whilst the wealthier moved out to establish the affluent suburbs.

Central conditions became so bad that in 1847, Liverpool was the first municipality to appoint a medical health officer

Table 3.1

Population Growth on Merseyside, 1801-1966

<u>Date</u>	<u>Population (thousands)</u>	<u>Percentage Increase</u>
1801	104	
1851	480	361.5
1901	1030	114.6
1951	1376	33.6
1961	1380	0.3
1966	1373	-0.5

Source: Pickett 1970.



this was then incorporated into a powerful Sanitary Amendment Act (1864) allowing the authorities the discretion to demolish houses and provide compensation, in extreme cases (White 1951, Marriner 1982).

Housing, apart from being squalid, was simply not available for the increasing population and, as a result, Liverpool Corporation pioneered municipal buildings, so that by 1907 around two thousand corporation dwellings were occupied (Gentleman 1970).

Even in what could be termed the port's heyday, serious problems existed, mainly as a result of uncontrolled expansion leading to housing and health problems (Castle and Gittus 1957, Bailey 1973). Also, the industrial structure of Merseyside was limited in its range, relying almost solely on the port and its related industries (wholesale distribution), and ultimately resulting in an unstable economic base.

Certain areas further out from the port, such as Runcorn<sup>4</sup> and St. Helens, managed to establish substantial manufacturing organisations, based mainly on the coal and chemical industries. Since the nineteenth century however, St. Helens has been a unique case as home to one of the world's foremost glass companies, Pilkingtons, established in the area due to the attractive physical resources allowing the production of high quality products.

In the rest of Merseyside during the nineteenth century,

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<sup>4</sup> Under the 1974 Local Government Act Runcorn was not included in the administrative boundaries of Merseyside, even though under many previous definitions (Greater Merseyside) it was viewed as an integral part of the area (Gentleman 1970).

there was little economic diversification, Southport developed as a recreational/seaside resort with rail links to Liverpool, and Wirral depended heavily on its port industry, including the Laird Shipyard (established 1824).

Virtually all types of development were guided by the port and its foreign trade, as this was the main creator of local investment, which in-turn lead to capital development; warehouses, offices and residential. It is certain that Merseyside's social and occupational structure, as well as its local economy, were shaped by its transport, commercial and port activities (Anderson 1983).

### 3.2.1/ Post War Social and Economic Trends on Merseyside

As the potted history of Merseyside's development (above) reveals, massive economic and social problems resulted from its uncontrolled, port-related, expansion. These can be traced through to the problems facing regeneration in the late twentieth century, either directly, in terms of poor infrastructure (Massey 1982), or indirectly, in terms of its enforced branch plant economy via regional policy (Lloyd 1970).

The dominance of the service industries (in terms of employment) continued throughout the mid 1900's and into the 1980's (Table 3.2). This was at a time when the economic position of Merseyside, in comparison to the rest of the country, was deteriorating fast.

The downward turn in the Merseyside economy, and the migrational problems which accompanied it, were the result of

Table 3.2

Employment in Merseyside, 1966-81

<u>Sector</u>	<u>1966</u>	<u>1971</u>	<u>1976</u>	<u>1981</u>
Manufacturing	285820	243356	208707	154400
Blue Collar Services	263720	225164	212827	196200
White Collar Services	128915	157631	172434	170950
Primary & Construction	58195	44075	36498	32450
		<u>% Change</u>		
		1966-71	1971-76	1976-81
Manufacturing		-14.9	-14.2	-26.0
Blue Collar Services		-14.6	-5.5	-7.8
White Collar Services		+22.3	+9.4	-0.1
Primary & Construction		-24.3	-17.2	-11.1

Source: Cornfoot 1982.

structural economic weakness in the area, a restructuring of the global economy, international competition and poorly managed regional policy (Dicken and Lloyd 1977, Struthers and Williamson 1979).

Unfortunately, Merseyside was unable to keep track of economic changes due to: heavy investment in its capital stock, shipping, distribution and material processing. As a result, Liverpool lost its trade at an average of 1% per annum between 1919 and 1955, and by the end of this period unemployment on Merseyside was running at twice the national average.

World trade during this time was slack, and for two reasons Liverpool was not in a position to offer low handling costs; firstly, rates per tonnage remained high due to constant dredging of the river, and secondly, the facilities offered at the port were originally designed to accommodate specialised liners and high value cargoes, not low value tankers which became the trend (Baines 1970).

Similar problems occurred with the passenger liners, and Liverpool lost operational sea routes due to competition from other British ports, especially Southampton, and from European ports, mainly in Germany, France and Italy (Mountfield 1965).

Due to the loss of trade there was a restructuring of employment and, consequently, white collar services became more prominent as their employment figures rose and transport and distribution fell. However, this did not boost the economy of the area, but merely added to the comparatively large commercial employment base, which in 1911 stood at 32 076 (7.8% of male employment). This was comprised of specialist and professional

services which consistently left the area, leaving behind the clerical and administration occupations (Lawton 1982).

There were some attempts to diversify the economic base of the area with intensified industrial decentralisation to the industrial estates at: Aintree, Kirby, Huyton, Speke, Bromborough, Ellesmere Port and Capenhurst (Figure 3.2). It was at these places, on the outer urban fringe and in the inner areas of Merseyside, where for some time employment growth took place during the post war period.

The centre's traditional industries; textiles, shipping and distribution were supported by the establishment of a 'Development Area'<sup>5</sup>, whilst the outer fringes relied upon developments in new industries and diversification into a limited range of products and services, including: rubber, plastics, cement, potato crisps, glass fibre, asbestos and communications (Cornfoot 1982).

Unemployment rates in the post war period did decrease, both on Merseyside as a whole, and in the Development Area (Lloyd 1970). In addition, migration from the area remained at 0.3% per annum leading to what was a short term revival in the economy. The patterns underlying this short term revival show that both government policy and economic development favoured manufacturing growth, with a distinct drop in the contribution to employment offered by the service sector (Hubbard and Nutter 1982). The main reason for this decline in service employment was due to increasing unit costs per employee, intensified

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<sup>5</sup> For a detailed description of the post war Development Area Policies on Merseyside, see Lloyd (Lloyd 1970).

capital investment, international competition, a growth in the commercial importance of the City of London and an increase in the use and application of technology (Daniels 1982, Gilman and Burn 1982).

During the immediate post war period the dock area (prior to 1959) did not witness dramatic losses in terms of employment or cargo handled (Cunningham 1970), and certain facilities offered by the port increased. This included the introduction of the Queen Elizabeth II tanker dock at Eastham in 1954 allowing a direct pipeline link to refineries at Ellesmere Port, and the expansion of silo storage capacity with the development of Huskinson Dock in 1957, able to accommodate 100 000 tons.

All these features kept severe unemployment at bay until the late 1950's and the early 1960's when, due to national and regional problems inherent in its structural dependency on the port, Merseyside's supposedly stabilising economy fell into depression.

In the belief that the post war economy was stable, and in an attempt to introduce counter inflationary policies during the late 1950's, central government descheduled the Merseyside Development Area. Due to rapidly increasing unemployment in 1959 however, the area was quickly rescheduled in 1962. From this time onwards, as a result of various social and economic problems, Merseyside has been host to a series of central government schemes, beginning with an extended Development Area boundary in 1966, which then became a Special Development Area in 1974.

Throughout the 1960's and 1970's Merseyside changed its

economic base, partly due to development plans and partly due to the pressures of national and international economic trends (Dicken and Lloyd 1977, Struthers and Williamson 1979). Major changes in the structure of the region meant that whilst the port moved into a period of severe decline, the rest of the economy was kept artificially buoyant with the introduction of manufacturing branch plants (Marriner 1982, Stoney and Anderson 1983):

"For the first time in Merseyside's economic history manufacturing became the driving force in economic growth and the old dependence on the port fundamentally weakened." (Lloyd 1970, page 385).

The port itself suffered from stiff overseas competition, labour problems and inadequate facilities in the new age of containerisation and 'roll on roll off' handling (Rochdale 1962, Devlin 1965). Even with the establishment of the Royal Seaforth Dock, officially opened in 1973 at a cost of £50 million, it has not halted the loss of registered dock labour, which rapidly increased in 1972 with the closure of the South Docks. The numbers employed by the Mersey Dock and Harbour Company has declined from 50 000 in 1945 to 1 611 in 1991 (MDHC 1992).

In contrast to the decline of the dock area, there was a strong optimism about the introduction of the car industry to the region. This occurred mainly because of the Board of Trade's development policies (1960 Local Employment Act), which encouraged the establishment of branch plants, bringing a total investment of £65 million, 90% of which came from the establishment of Ford's operations at Halewood, Vauxhall at

Ellesmere Port and Standard-Triumph at Speke. The effect of these industries on the area's economy has been documented elsewhere (Salt 1964, Lloyd 1970, Cornfoot 1962, Stoney and Bourn 1984), and such was the enthusiasm for this new investment; and the expected 30 000 jobs associated with it, that it was a contributory factor in the descheduling of the Development Area in the early 1960's.

Unfortunately, this restructuring of the regions economic base proved to be only a reshuffling of the area's problems, and the potential for employment creation was limited, with a total approximate expansion of only 10 500 manufacturing jobs.

The overall attempt to restructure the area's economy through replacing a service base with a manufacturing base proved to be ineffective in stimulating economic development, and it had a detrimental effect on other sectors of the Merseyside economy. At the time a national recession, along with tightening credit controls, undermined the financial stability of the motor car industry, and in relation to the rest of the economy the large capital intensive vehicle firms with high wage rates caused the loss of skilled workers, accelerated closure of small firms and promoted a high labour turnover. Also, even though there were growth areas of manufacturing industries around south Merseyside, they brought closures in the centre and north of the area which counteracted this effects (Lloyd 1970).

The demographics and social structure throughout the whole of Merseyside during the post war period were economically discouraging. Between 1939 and 1955, the population became predominantly extreme in its age range and a permanent labour



surplus was recorded (Pickett 1970, Baines 1970). Due to restrictive handling tallies on the docks, the declining labour force became even more elite and this discouraged young entrants and upward mobility (Smith 1942). Increases in service employment meant, on the whole, increases in clerical staff, usually women, employed in very poor conditions and at very low wage rates:

"Moreover, labour was not homogeneous and potential employers could no more see evidence on Merseyside that they could find key personnel, than they could be sure that their move to the area would be matched by a host of firms ancillary to their own business." (Baines 1970, page 164).

In addition to this, the general social conditions of Merseyside did not help to present the region as a prosperous or dynamic working environment. This was due to a combination of: high concentrations of unemployment, poor inner city wards, high mortality rates and a large number of low quality housing. In 1945, the medical officer for Liverpool classed 13 000 inner area houses as uninhabitable yet, around this central area of the conurbation, rents were still high in the private sector.

The private house boom of the 1930's and 1940's gave some economic stimulation to the area, especially for the glass industry at St. Helens, and also perpetuated the suburbanisation process within the conurbation. The private sector housing option was, however, closed to many who could not afford to move to the more select areas, where development was occurring, for example; Wallasey and Aigburth.

Of the lower social groups, those that could afford to were

accommodated on municipal housing estates at: Huyton, Halewood, Speke, Kirby, Fazakerley and Noris Green, so that by 1955 one eighth of the area's population were council tenants. Others, mainly casual workers attached to the docks, could not move away from the centre as, even though they could afford the low council rents, there was simply no work in the outer areas available. This led to a further degrading of the centre, to such an extent that it became an impossible task of slum clearance by poorly organised local authorities, with very little resources and very little experience in its allocation (Cornfoot 1982).

### 3.3/ Recent Development Trends in the Service

#### Base of Merseyside

The two previous sections of this chapter give a clear indication of the type of economic and social development that has been prevalent on Merseyside since the turn of the nineteenth century. After the demise of the port, and the over dependence on traditional (blue collar) distributional services for employment, there were virtually no indigenous economic growth patterns. The majority of the specialised banking and insurance operations<sup>6</sup>, which thrived on the mercantile trade, disappeared from the area after the turn of the century:

"Through natural growth, through horizontal and vertical integration, through mergers, amalgamations and takeovers, some formerly independent concerns simply became parts of massive organisations so that it becomes more and more difficult to talk about them in regional terms. At the same time, the switch of economic power to the south-east of England meant that even those giants originally conceived in Merseyside frequently switched their head offices to London." (Marriner 1982, page 111).

The solutions to these problems, of a narrow labour market and the rapidly decaying and over crowded central area of the conurbation, was a managed economy dependent upon the support of public funds and the introduction of manufacturing, and the creation of 'overspill' areas in the form of self sufficient

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<sup>6</sup> The scale of the banking operations in Merseyside during the nineteenth century was large enough to warrant the opening of a branch of the bank of England. In addition there was a mass of professional associations and specialist insurance organisations, all related to the shipping trade (see, Marriner, 1982 page 42 and 91).

outer estates (Meegan 1989).

Unfortunately, these policies have proven to be increasingly ineffective in bringing either social or economic stability, primarily due to the economic restructuring that occurred during the 1970's and 1980's on a global scale. The labour markets of the area have become increasingly marginalised within the spatial division of labour and it is difficult to perceive any national based economic development policy being able to cope with the scale of the problem (Meegan 1989).

During this time the service industries, including producer services, which were the root cause of the area's structural problems<sup>7</sup>, did not provide any alternative source of economic growth, either as part of the overall economy or independently.

The key study into the service industries on Merseyside, at a time when the world economy was being restructured through the growth of multinationals and the internationalisation of capital, labour and investment (Thrift 1986, 1986), was undertaken by Hubbard and Nutter (1982). This revealed that, as with the rest of the Merseyside economy, the service sector was hampered by unfavourable structural and performance factors. Some of these are directly related to the problems of development outlined above and showed that, even though there were minimal growth rates in some specialised services (white collar producer services), the over all marginalising structures for the Merseyside area were still prevalent.

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<sup>7</sup> In the early days of capitalism the dependence on the service industries in the area was a strength, but the dynamic operations of the capitalist system, driven by accumulation, resulted in the service dependent economy being marginalised.

During the 1970's the national growth rates of the service sector, and in particular producer services, were strong (Marquand 1979, Daniels 1985). However the patterns of development on Merseyside were characteristically different due to several key factors which relate to its historical development.

One of the main problems in the structural make-up of the area was still its over dependence on service industries, including producer services, which, nationally, were static or declining. These were predominantly port and related transport industries, which accounted for 13.7% of employment in the area, as opposed to 5.9% in Great Britain (Hubbard and Nutter 1982). However, the decline in employment in these industries on Merseyside was four times the national average during the 1970's and this had a dramatic effect on a wide range of office based services in the area, including: insurance, banking, finance and other business services (Table 3.3).

One of the underlying factors causing the distinctive employment decline in transport and communications (Table 3.3), was the change in the dominant trade patterns from the Commonwealth, North America and Third World countries to Europe. This was exacerbated by the continuing decline in the passenger liner trade, increasing capitailisation through technological developments, and the continuing decline of manufacturing in the area (Daniels 1982).

Other factors offered for the decline in office based

**Table 3.3****Service Industries in Merseyside, 1971-1975**

<u>Industry</u>	<u>Merseyside</u>		<u>Change, 1971-1975</u>	
	<u>Employment in 1975</u>			
	<u>No.</u>	<u>% distribution</u>	<u>No.</u>	<u>%</u>
Gas, electricity and water	5373	1.6	-833	-13.4
Transport and Communication	58,983	17.4	-14,448	-19.7
Distributive trades	67,556	20	-3149	-4.5
Insurance, banking finance, business services	25,459	7.5	-915	-3.5
Professional and Scientific	88,984	26.3	+11,292	+14.5
Miscellaneous	54,960	16.2	+8662	+18.7
Public Admin and Defence	37,097	11	+3007	+8.8
<u>Total Services</u>	<u>338,412</u>	<u>100</u>	<u>+3616</u>	<u>+1.1</u>

Source: Hubbard and Nutter 1982.

service activity<sup>8</sup> have been related to the general population<sup>9</sup> and economic demise of Merseyside during the 1970's, and once again, the general structural changes in the organisation of the national and international economy:

"Employment prospects in office-based services to a large degree depend upon the level of economic activity in the conurbation as a whole, and this in turn depends in part on the purchasing power of the local population and firms....A particular feature of the British economy between the mid 1960's and 1970's was the large number of takeovers of regionally based concerns. Frequently, this resulted in the transfer of their headquarters' functions to other centres, usually to locations in the South-east region." (Hubbard and Nutter 1982, page 228).

During the 1970's and 1980's the only economic growth sector, in terms of employment, were white collar services (Hubbard and Nutter 1982, Daniels 1982, Figure 3.5). But these cover a wide range of operations, from hotels to banking, and growth rates in all these services were consistently behind the average for the North West region and Great Britain (Stoney 1989, Figure 3.6). The reasons given for these restricted growth rates are primarily linked to the detrimental factors described above, but there are some anomalies which need to be noted.

The first relates to the question of whether or not the close proximity of the regions capital, Manchester, inhibits the growth of white collar, and in particular, producer services on Merseyside. Daniels (1982) clearly states (page 57) that this

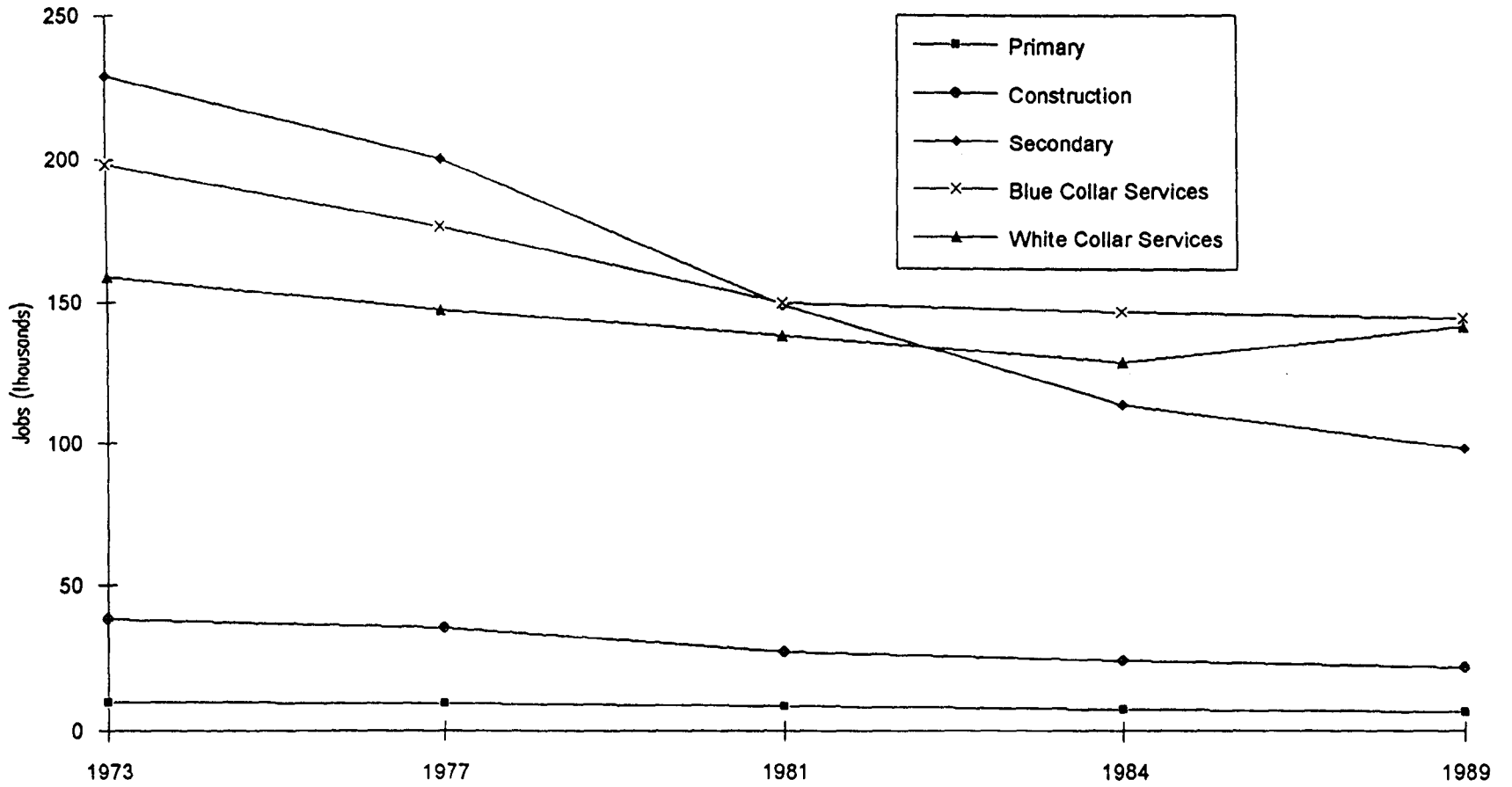
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<sup>8</sup> The term office employment was used by Hubbard and Nutter (1982) to cover employment in; Information and Communications, Financial Services and National Government.

<sup>9</sup> For a detailed breakdown of the population trends in Merseyside from 1951 to 1981, see Lawton 1982.

Figure 3.5

### Employment Trends in Merseyside by Sector: 1973-1989

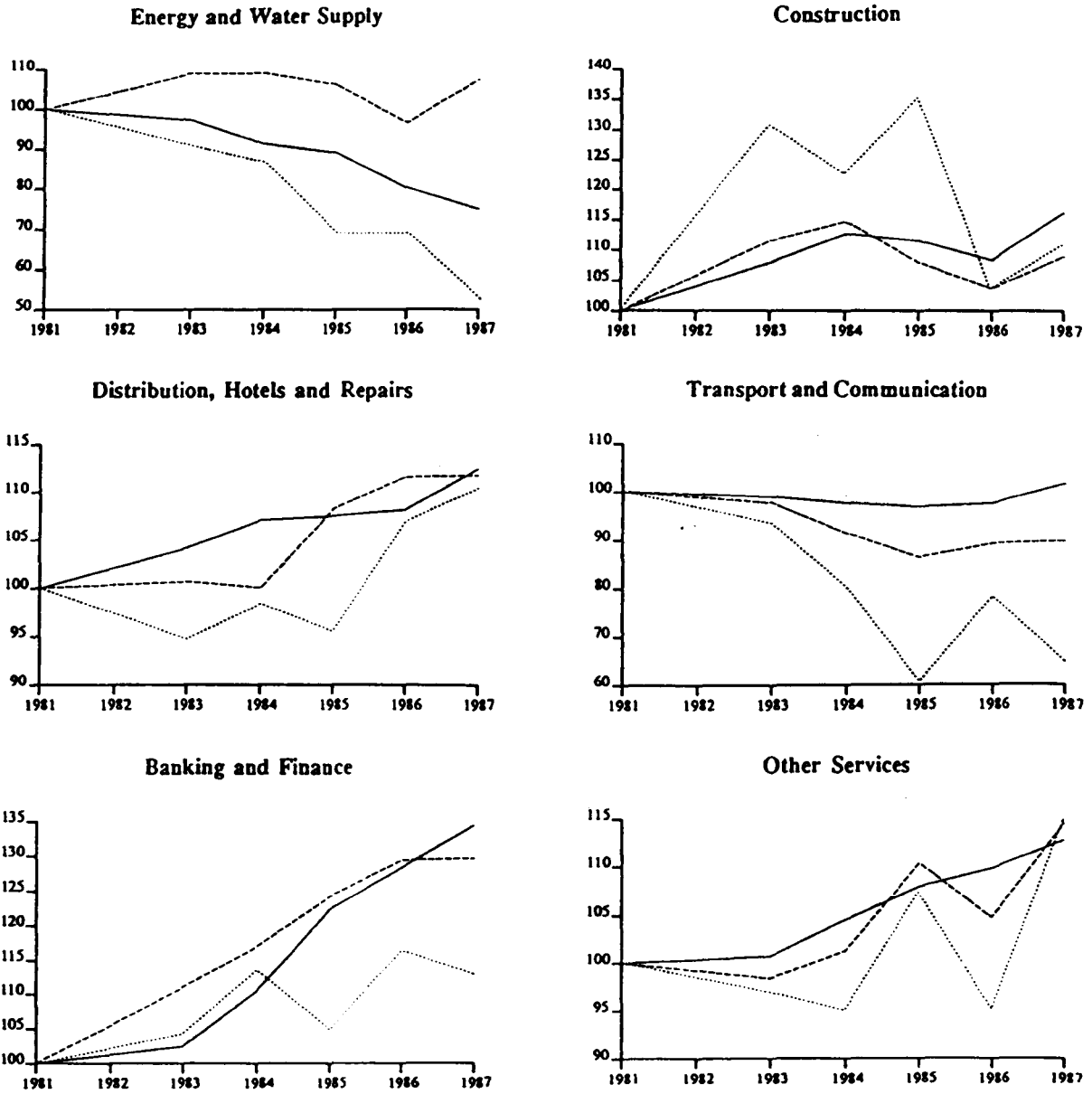


Source: Department of Employment



Figure 3.6

Employment in the Service Industries  
(1981=100, All Persons)



Key

- Great Britain
- - - North West
- ..... Merseyside

Source: Stoney 1989

does have a strong influence in restricting the development of Merseyside's office-based economy. But Hubbard and Nutter (1982) state (page 229) that Merseyside did not suffer a limited growth through competition with Manchester.

It is possible that the disagreement over this point relates to the slightly different time periods under examination<sup>10</sup> and even though they do overlap, the longer period examined by Daniels (1982), gives a better perspective from which to judge the regional position of the two conurbations.

The second anomaly, concerns the supply side of the producer services within the area. Daniels (1982, page 57) clearly states that the producer service sector on Merseyside is very dependent upon the manufacturing sector. However, later developments in the study of producer services (Daniels 1983, Beyers et al 1986, Pederson 1986) have attempted to show this as a myth and these services have a complex demand function which is not purely dependent upon manufacturing.

The explanation for this inconsistency is probably related to the way producer services are grouped together, and that within this highly diverse collection (see, Chapter 1) there are clear divisions between firms which are tied to local economies, and those which can export to other areas and sectors. This will be highly dependent upon not only the type of service in question, but also the type of area in which the firm is functioning. In the case of Merseyside, it is a highly dependent marginalised economy and as a result many of its operations will

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<sup>10</sup> Hubbard and Nutter (1982) concentrated on 1971-1975, whilst Daniels (1982) examined 1971-1980.

be restricted to localised markets including manufacturing<sup>11</sup>.

As indicated, the only consistent growth sector on Merseyside during the 1980's was the white collar services. However, this does not reflect the trends amongst private sector producer services which include both blue and white collar operations (Chapter 1). Therefore, in order to trace the more finite scale of producer service development within the area, the next section of this chapter concentrates solely upon the firm sectors shown in Table 3.4.

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<sup>11</sup> The blue collar producer services will be especially linked into the manufacturing sector, as these are directly goods related and as such, have little control over the functions of capital (Chapter 2).

Table 3.4

Firms Selected from the 1980 SIC<sup>1</sup> as Producer Services<sup>2</sup>

<u>Standard Industrial Classification</u>	<u>Firm Type</u>
4754	Printres
6110-6190	Wholesale distribution
6210	Scrap Merchants
6640	Canteens
7230	Haulage
7260-7700	Transport
8140	Banking
8150	Financial Institutions
8200	Insurance
8310 & 8320	Auxiliary Services
8340	Estate Agents
8350	Legal Services
8360	Accountants
8370	Professional and Technical Services
8380	Advertising
8394-8396	Business Services
8410-8430 & 8480, 8490	Hiring Equipment (office, etc.)
9230	Cleaing Services
9400	Research and Development

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<sup>1</sup> Source: Standard Classification; Revised 1980. Central Statistical Office, HMSO.

<sup>2</sup> Due to the inevitable problems of classification using official frameworks (Chapter 1), the firms selected include some mixed consumer/producer operations.

### 3.4/ Producer Service Sector Employment in Merseyside during the 1980's

Figures 3.7a to 3.7d show the sequence of events on Merseyside from 1981 to 1989 with regards producer service employment. This gives a clear indication of the change in producer service employment over the nine year period across the whole of the area, for specific firm types (Table 3.4).

The initial overall pattern that can be discerned from the figures (3.7a-3.7d) is that between 1981 and 1987 producer service employment was declining rapidly in the area, and between 1987 and 1989 there was a resurgence in employment throughout all the different producer service firms.

The decline in the early and mid 1980's can be seen as a continuation of the drop in service employment that has been ongoing in the area for decades, whilst the increase in the late 1980's can be seen as a delayed reaction to the upswing in the general economy which occurred in the mid to late 1980's.

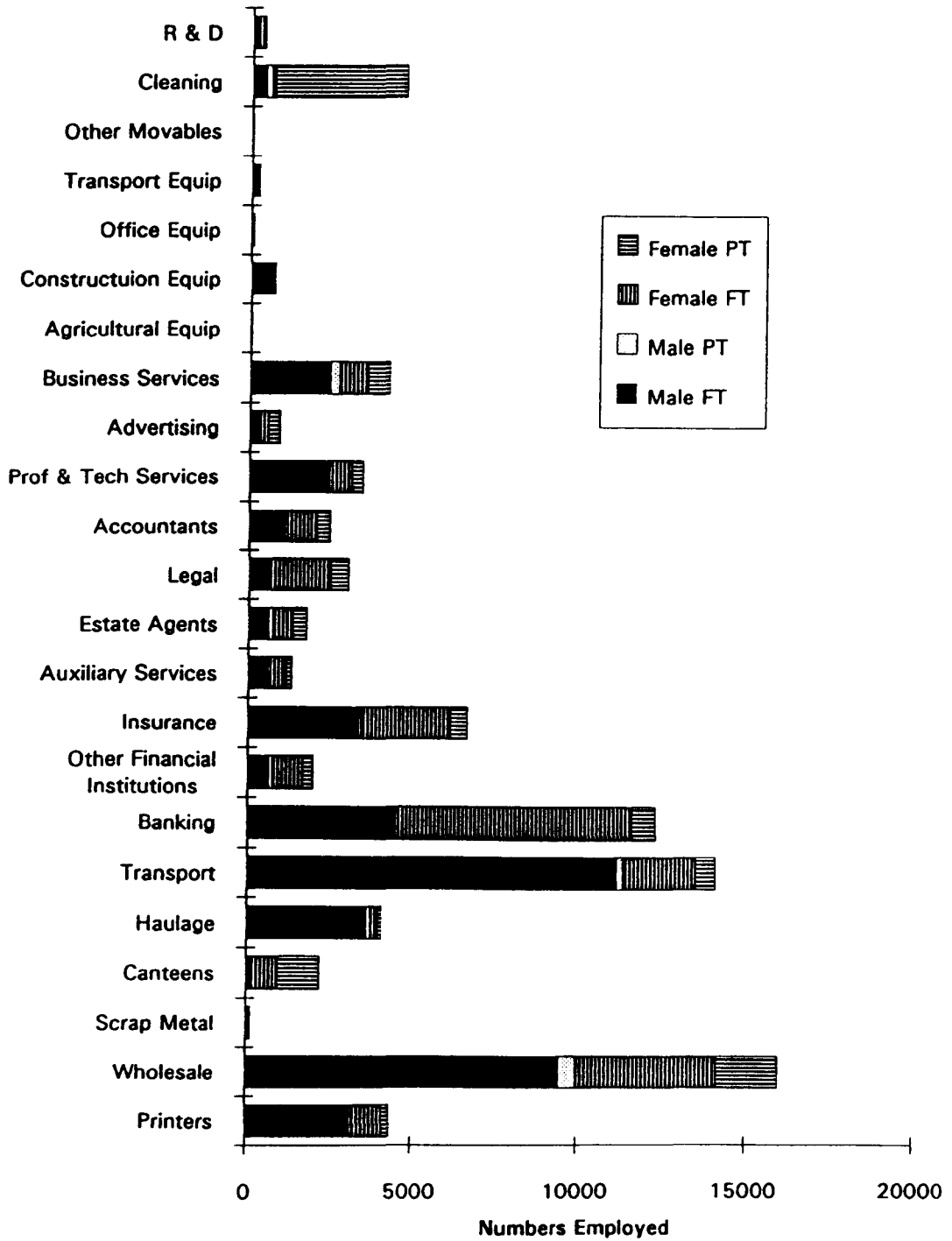
However, there are two very important characteristics concerning the rise of producer service employment between 1987 and 1989. Firstly, the growth in the services, which took employment back to approximately 1984 levels, became more concentrated in the white collar services: banking<sup>12</sup>, insurance, business services. Wholesale distribution and haulage maintained comparative growth rates, but transport exhibited a restricted increase considering it was the second largest employer in 1981.

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<sup>12</sup> From the figures it is impossible to ascertain if the banking sector, or other mixed consumer/producer services, expanded both commercial and retail operations.

Figure 3.7a

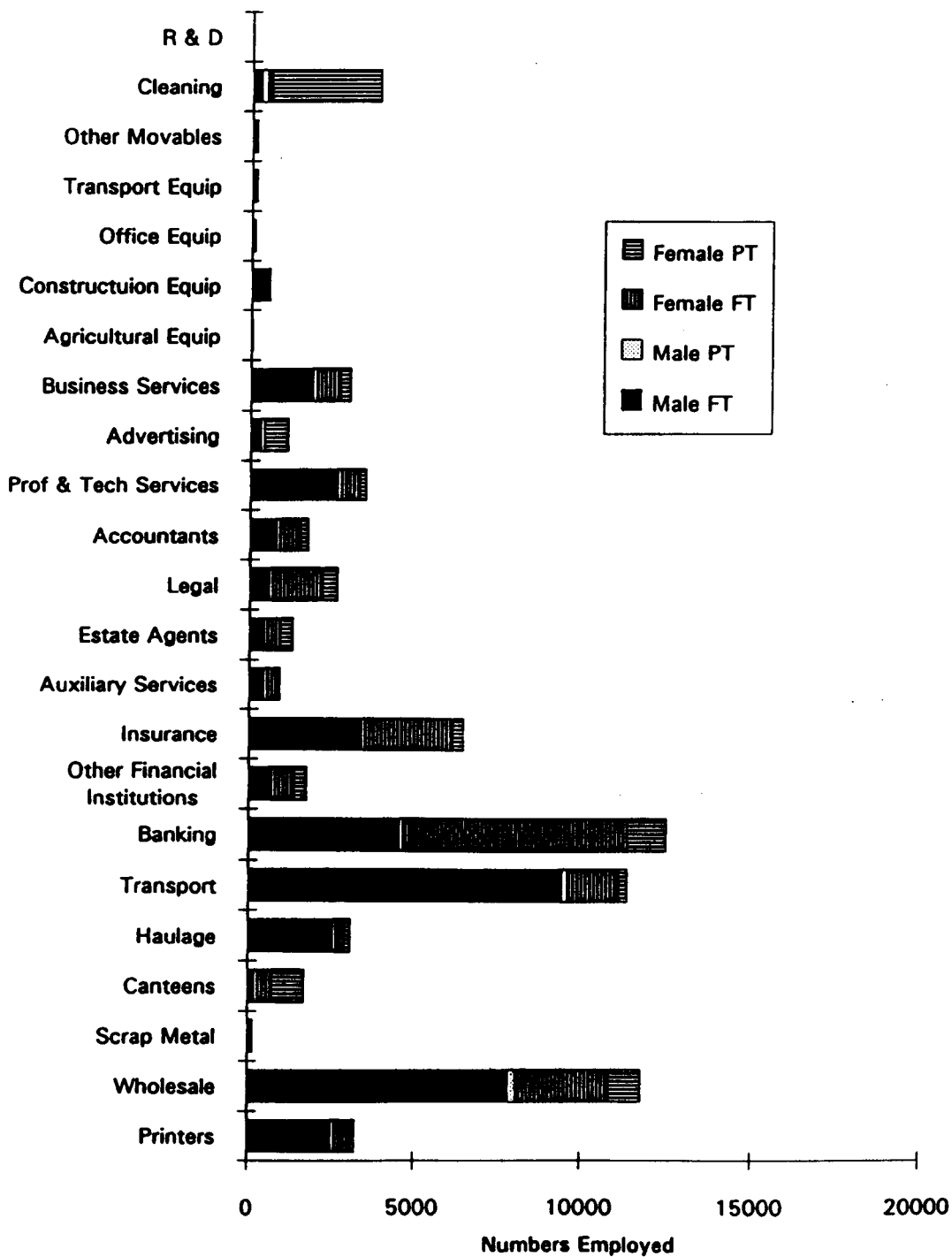
Numbers Employed in Producer Services on Merseyside: 1981.



Source: Nomis

Figure 3.7b

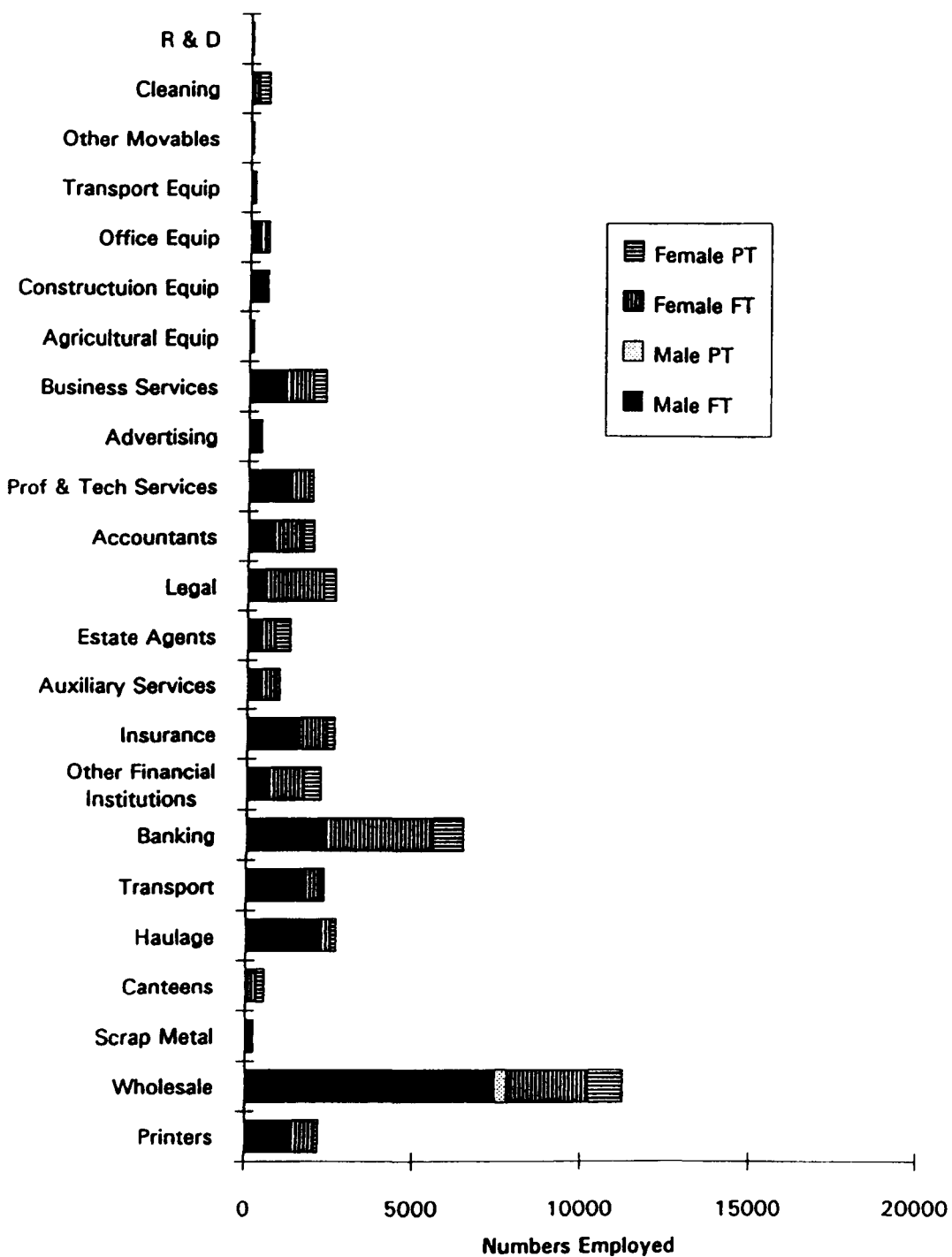
Numbers Employed in Producer Services on Merseyside: 1984.



Source: Nomis

Figure 3.7c

Numbers Employed in Producer Services on Merseyside: 1987.

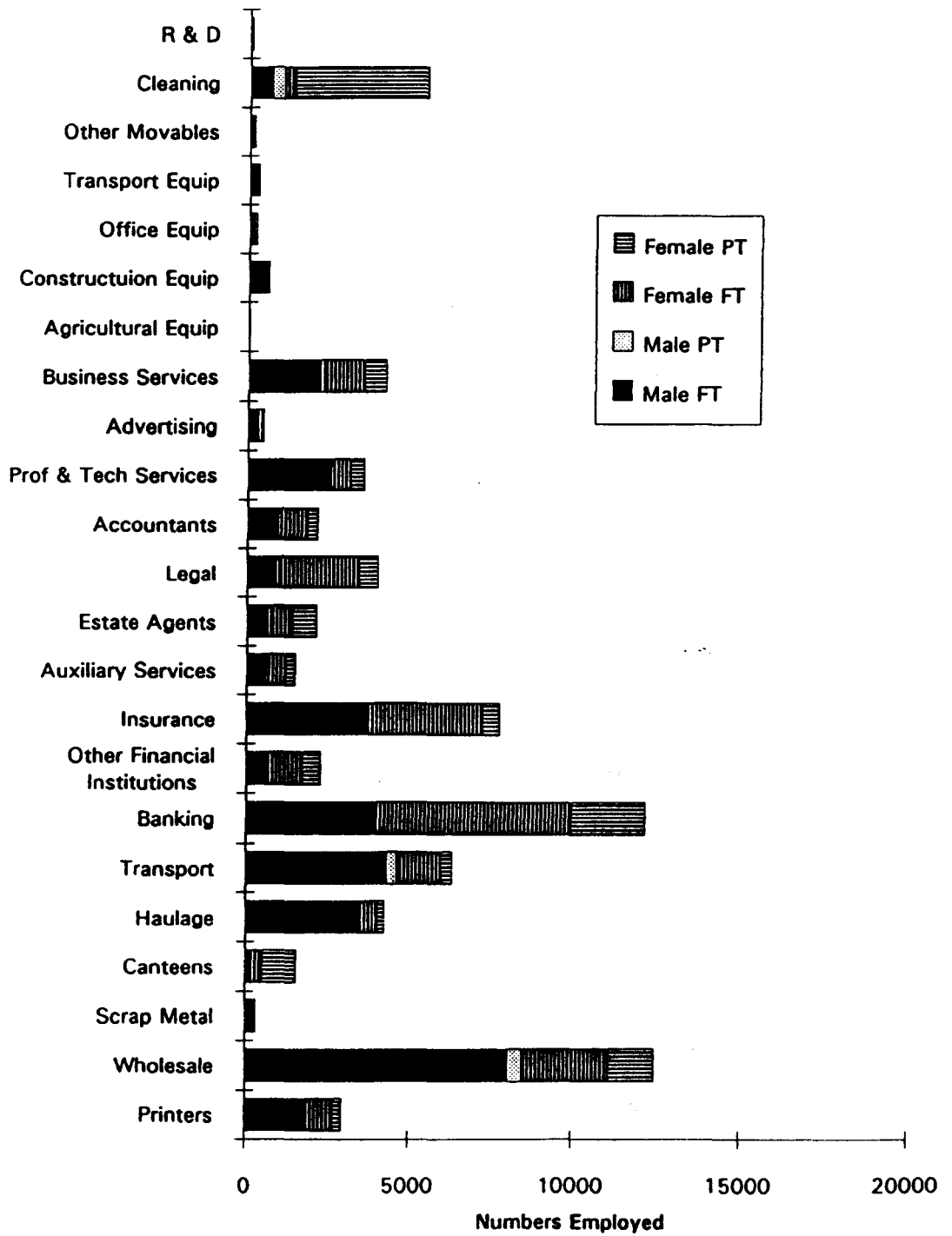


Source: Nomis



Figure 3.7d

Numbers Employed in Producer Services on Merseyside: 1989.



Source: Nomis

Secondly, the growth that occurred toward the end of the 1980's reveals a high dependency on female, and especially part time, staff.

Certain operations, such legal services and accountants, show a remarkably steady employment rate over the period, which tends to support the findings of Daniels (1986) that there are certain services which are consistently used due to state requirements.

As a specialised service, advertising did not fair well during the 1980's on Merseyside. Even though it started from a minimal base, the resurgence in other areas appears not to have effected this service. Between 1987 and 1989, the only change in this operation was a restructuring of its labour market to take on more part time female staff, with a reduction in full time positions.

Cleaning services in the area are clearly a key employer of part time female employment, but are also highly volatile in terms of employment capacity, as shown from 1984-1989 (Figures 3.7b-3.7d). The problem being that this sector not only offers poor quality employment conditions, but that it is highly insecure.

The majority of producer services maintained similar rankings in terms of employment capacity over the period, apart from transport services which showed a relatively consistent decline, and business services which increased their relative standing in 1989 to the sixth largest producer service employment sector in the area. However, this growth did include a noticeable percentage of part time labour and, overall, the

figures reveal that from 1981 to 1989 there was virtually no change.

The final point concerning the figures for the whole area, is the virtual lack of part time male employment in any of the services. The only notable presence of this labour market over the whole period is within wholesale, cleaning and transport services (blue collar services) and this is extremely minimal. In 1981 business services employed a small amount of part time male labour, but there are no signs of this continuing throughout the decade.

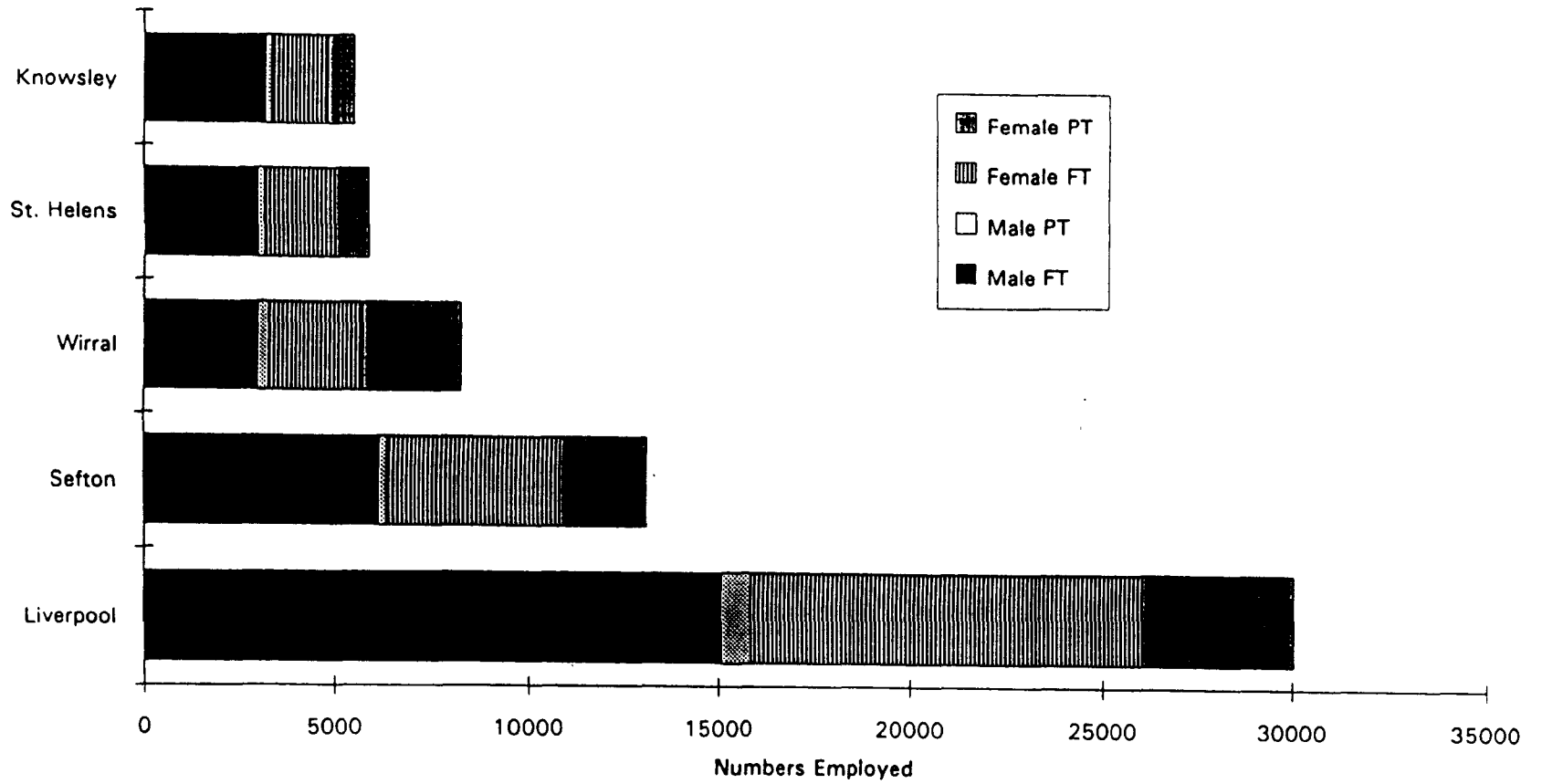
Figures 3.8 to 3.13b show a breakdown by local authority district of the producer service employment trends discussed above. Figure 3.8 gives an overall impression of the distribution of this type of employment throughout the whole of Merseyside on a district basis. The reason that Figure 3.8 only relies upon 1987 data for district employment distribution is because it is used to display the relative distribution between the areas. All the other years examined showed the same relative magnitudes and because the 1987 data was deemed the most up to-date and reliable<sup>13</sup>, it was perceived to be the best comparative district indicator.

As shown (Figure 3.8), the concentration of producer service employment is predominantly within the Liverpool area. This dominance is close to three times the total numbers employed in this sector, compared to any other district.

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<sup>13</sup> After comparative data analyses were performed by Merseyside Information Service on information derived from NOMIS and the Annual Census of Employment it was determined the 1989 figures were an over estimation.

Numbers Employed in Producer Services on Merseyside by District: 1987.



However, the relative difference in the distribution of this sector across Merseyside is not surprising given the economic development of the area<sup>14</sup> and the lack of public policy which may have aided its developed outside of Liverpool.

The break down of the types of employment within this sector (Figure 3.8) reveals a strong dependence upon female labour, both full time and part time. The proportions in each district show an approximate fifty percent division between male and female employees. This may lead to the conclusion that this sector provides equal opportunities irrespective of gender, but this data does not reveal the status of employment or its security, which can only be investigated through primary research.

The other four districts, apart from Liverpool, show relatively similar patterns of total employment within this sector, which includes the distribution of types of employment (male full time, female full time, etc.), but this does not reveal the distinctive patterns of employment across different firm types within each area. This type of information requires a more detailed analysis, as shown in Figures 3.9a to 3.13b<sup>15</sup>.

The relative difference in the scales between Figures 3.9a & b and Figures 3.10a to 3.13b, again confirms Liverpool's dominance in terms of producer service employment in comparison to the other districts. They also reveal that, not only between

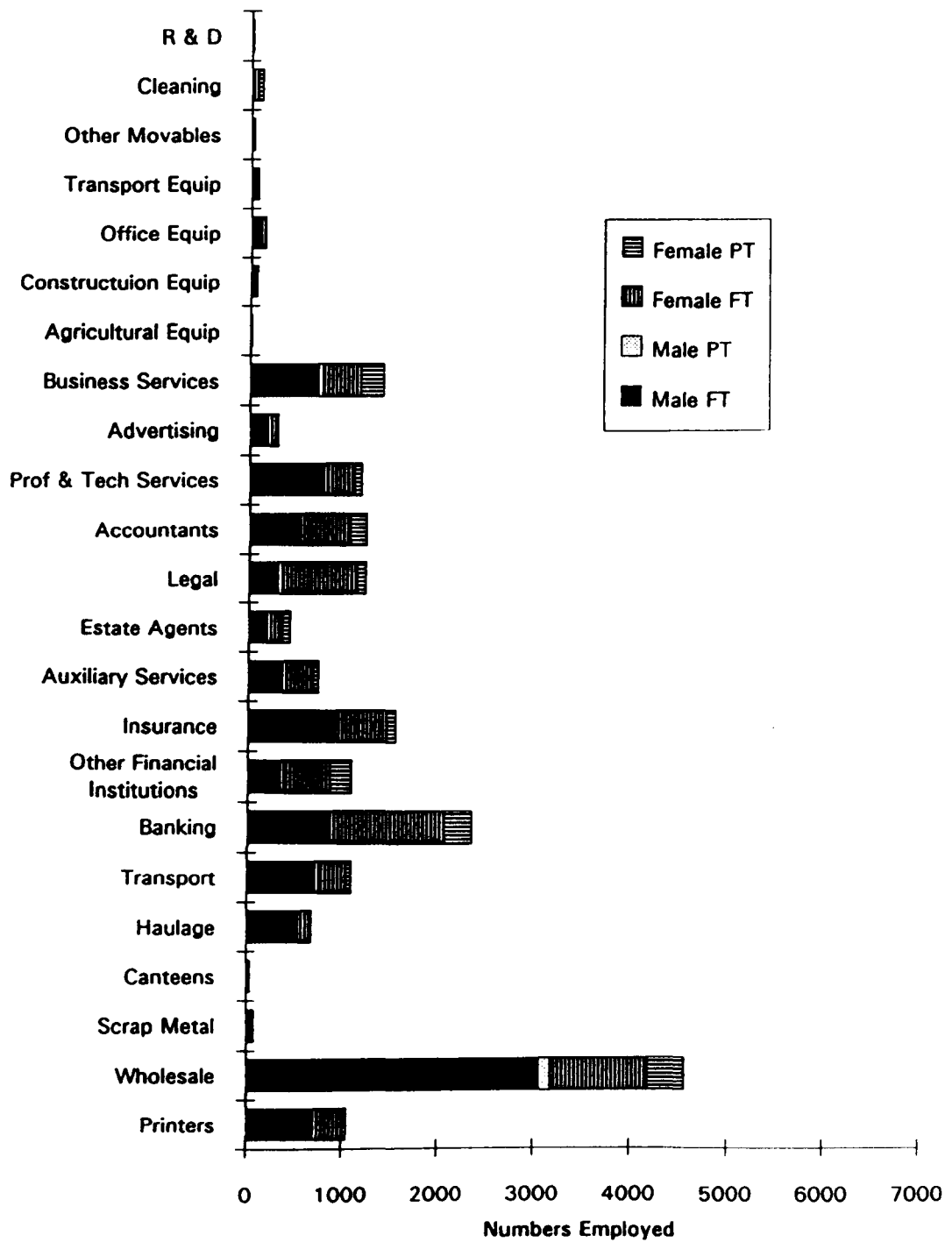
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<sup>14</sup> The historical development of the area is chronicled in the earlier sections of this chapter and shows the influence of the port on this sector.

<sup>15</sup> The Figures used show the time period 1987 - 1989, which were chosen not only to display the increase in producer service employment, but to show how dramatic this was (see footnote 13).

Figure 3.9a

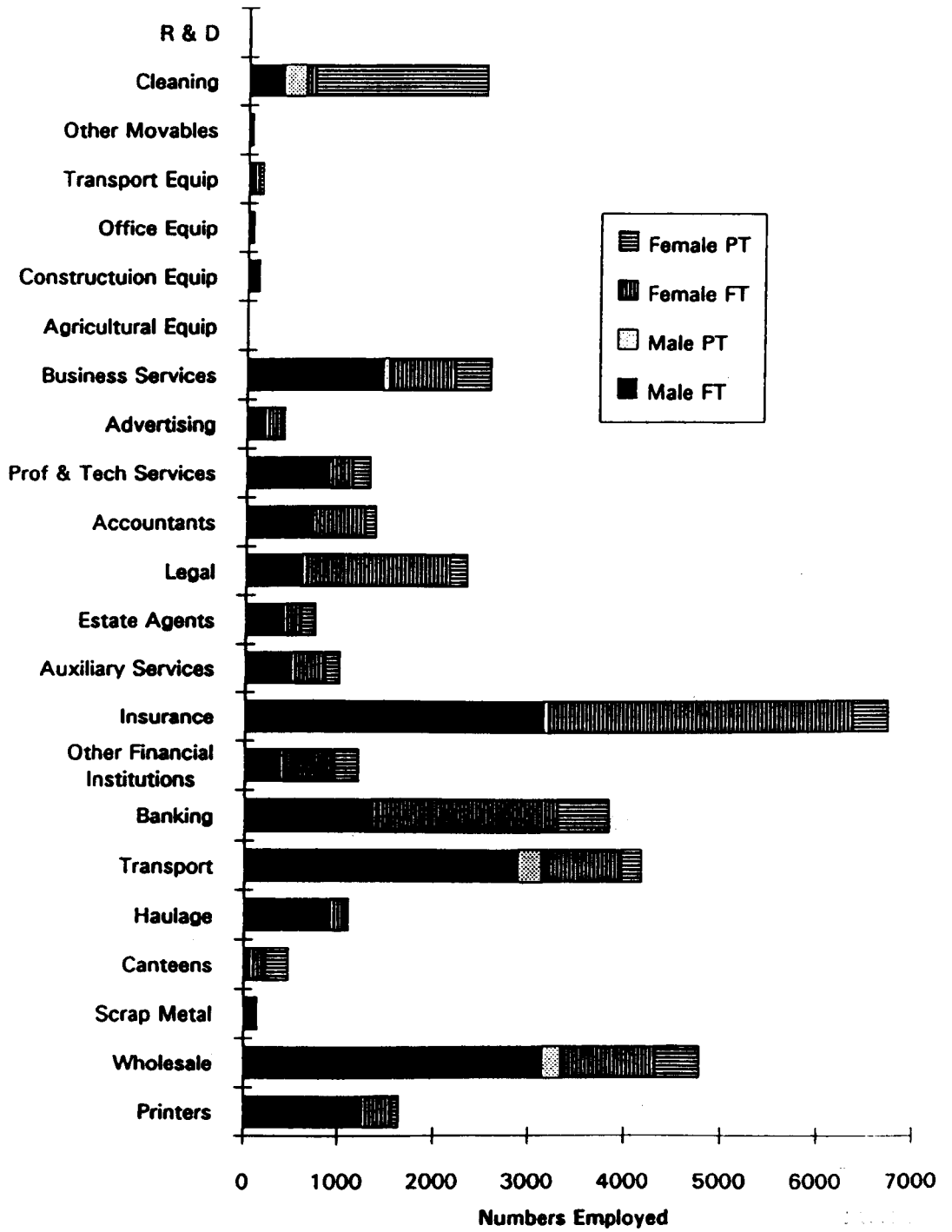
Numbers Employed in Producer Services in Liverpool: 1987.



Source: Nomis

Figure 3.9b

Numbers Employed in Producer Services in Liverpool: 1989.



Source: Nomis

1987 and 1989 was there a dramatic increase in this sectors' level of employment in Liverpool, but that there was also a distinct restructuring of its firm distribution. In 1987, Figure 3.9a clearly shows the dominance of the wholesale industry in Liverpool, but by 1989 this is clearly superseded by the insurance industry (Figure 3.9b). In fact, during this period, employment within the wholesale industries remained static whilst insurance and a whole range of other industries witnessed a dramatic rise in their employment levels.

In Liverpool, between 1987 and 1989, banking, transport, legal, business services and cleaning services all developed at a quicker rate than any other producer service sectors. Apart from transport however, most noticeable in these growths is the increasing dependence on female labour, especially in banking, insurance and legal services.

In Wirral, between 1987 and 1989 (Figures 3.10a and 3.10b), the most dramatic increase of all the sectors occurred in cleaning services. By 1989, cleaning services in Wirral had over eight times the number of employees of 1987, with well over 75% of this growth being consisting of part time female labour.

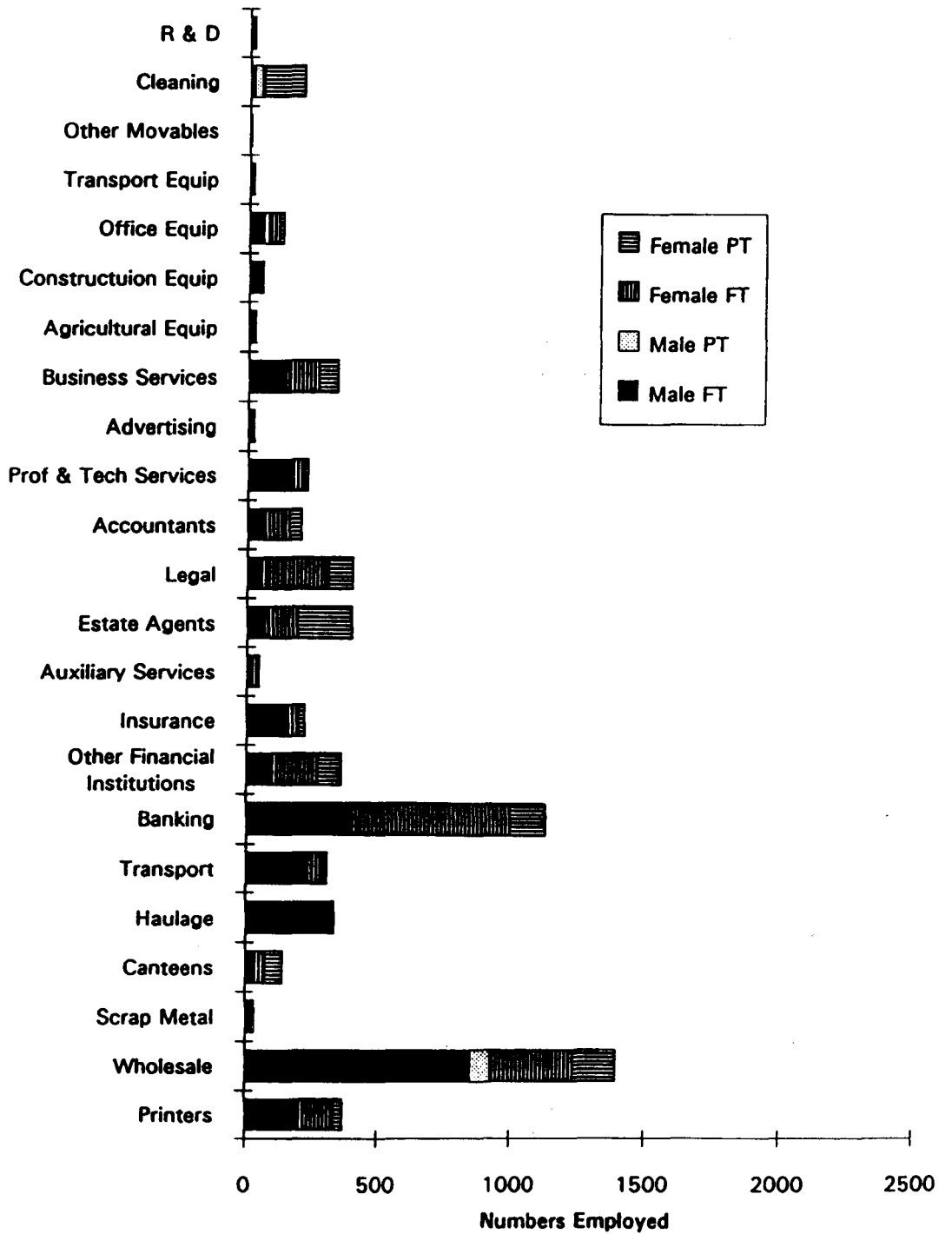
Apart from this dramatic change, the other service sectors in Wirral only recorded modest increases in employment levels. Excluding cleaning, in general the rankings of the sectors which employ the largest numbers did not change, and wholesale and banking remained reasonably high employment sectors in comparison to the other industries.

As in Liverpool, a large majority of the growth in employment in Wirral can be attributed to the increase in the



Figure 3.10a

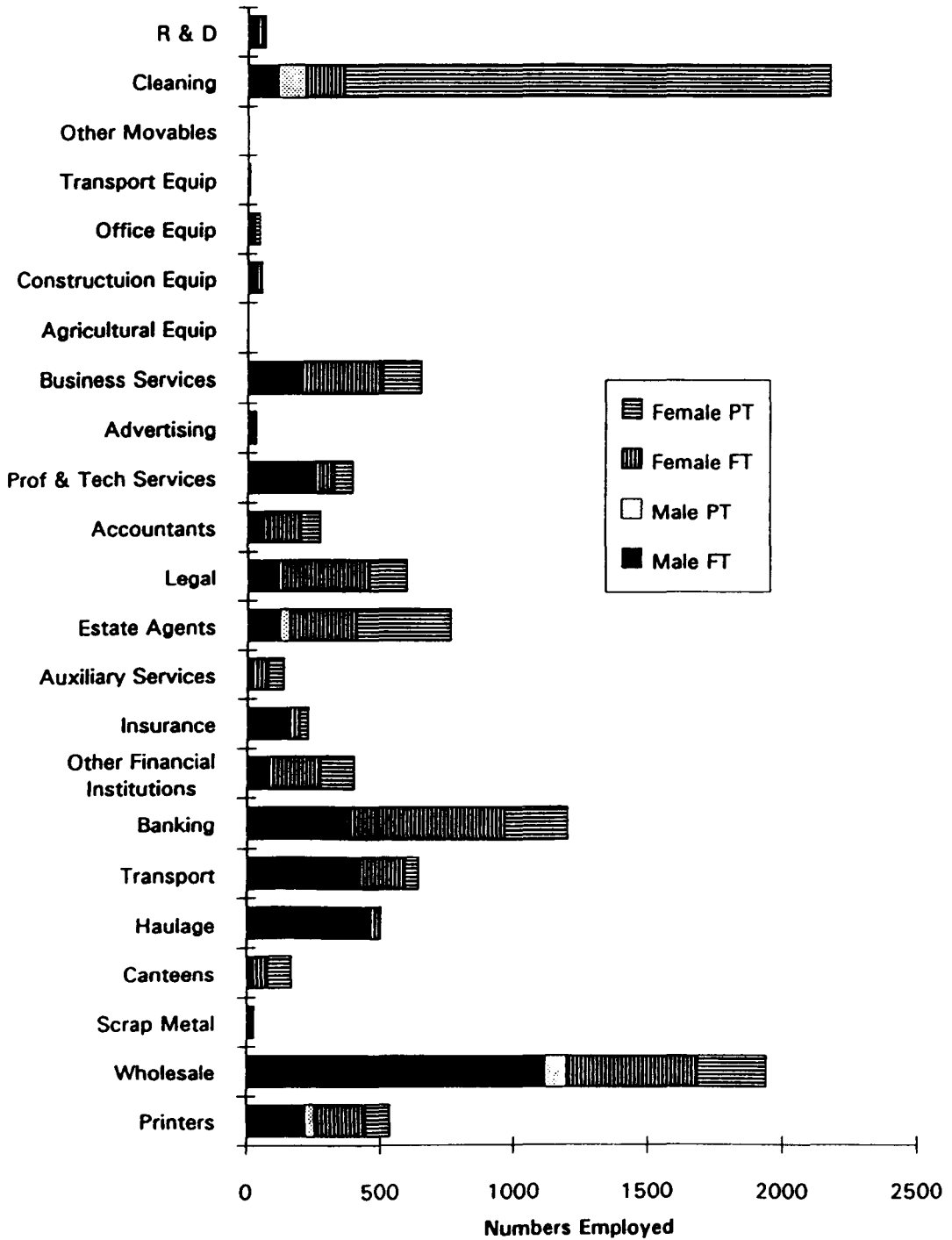
Numbers Employed in Producer Services in Wirral: 1987.



Source: Nomis

Figure 3.10b

Numbers Employed in Producer Services in Wirral: 1989.



Source: Nomis

female labour force. However, in Wirral it is more noticeable that there was a greater relative utilisation of part time female labour than in Liverpool. This applies to most sectors, but especially to the growth in the labour force of estate agents which was predominantly based upon an increase in part time female labour.

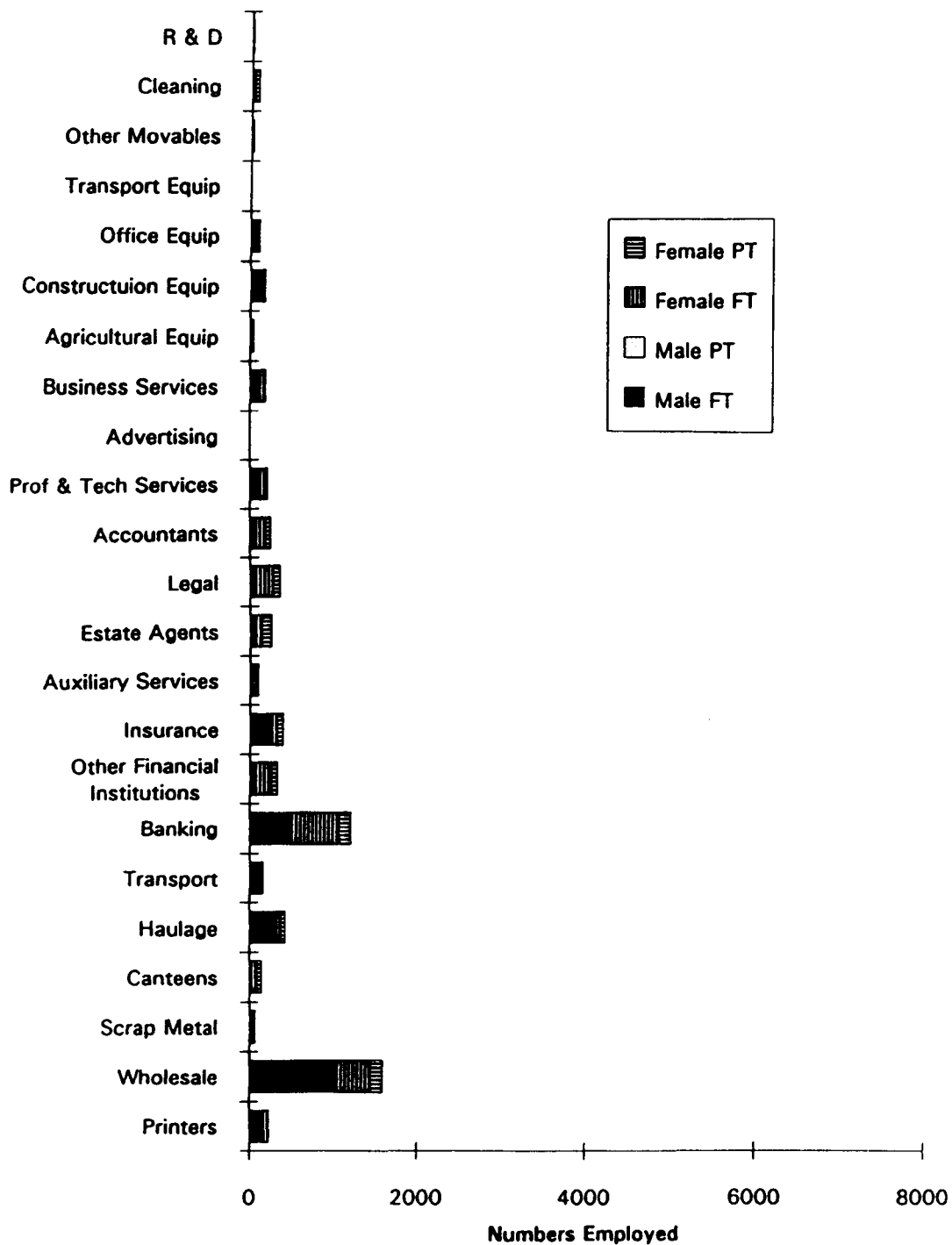
In Sefton, over the three year period (Figures 3.11a and 3.11b), the dominance of banking and wholesale distribution in the producer service labour force remained unaltered. However, of these two sectors, banking grew at a far more rapid rate, showing a dramatic increase in both full time and part time female employment.

The only other change in producer service sector employment in Sefton, apart from a modest growth rate in most areas, occurred in professional and technical services. The unusual development in this sector is not its fourfold increase in employment, but contrary to the growth in other sectors, its increase was based predominantly on male full time employment.

The change in producer service employment in Knowsley (Figures 3.12a & b) and St. Helens (Figures 3.13a & b) between 1987 and 1989, is distinctly different to the trends witnessed by the other three districts. In Knowsley the overall trend is a decline in employment in the majority of sectors, especially wholesale, haulage, banking and transport. The main growth sector in this area was canteens, which more than doubled its workforce during the period, yet restructured its labour force so that 90% was part time female labour.

In Knowsley, there was even a decline in some of the more

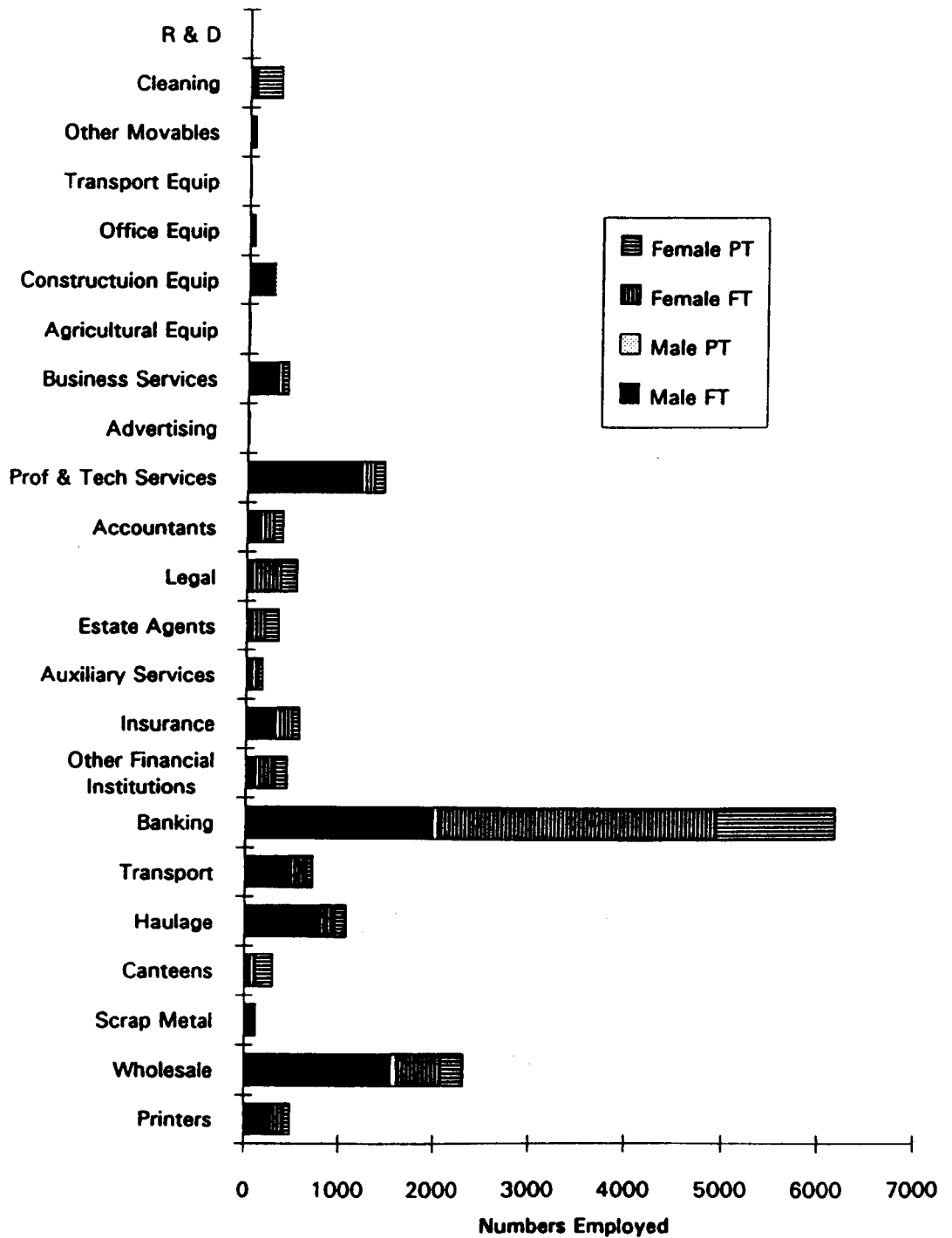
Numbers Employed in Producer Services in Sefton: 1987.



Source: Nomis

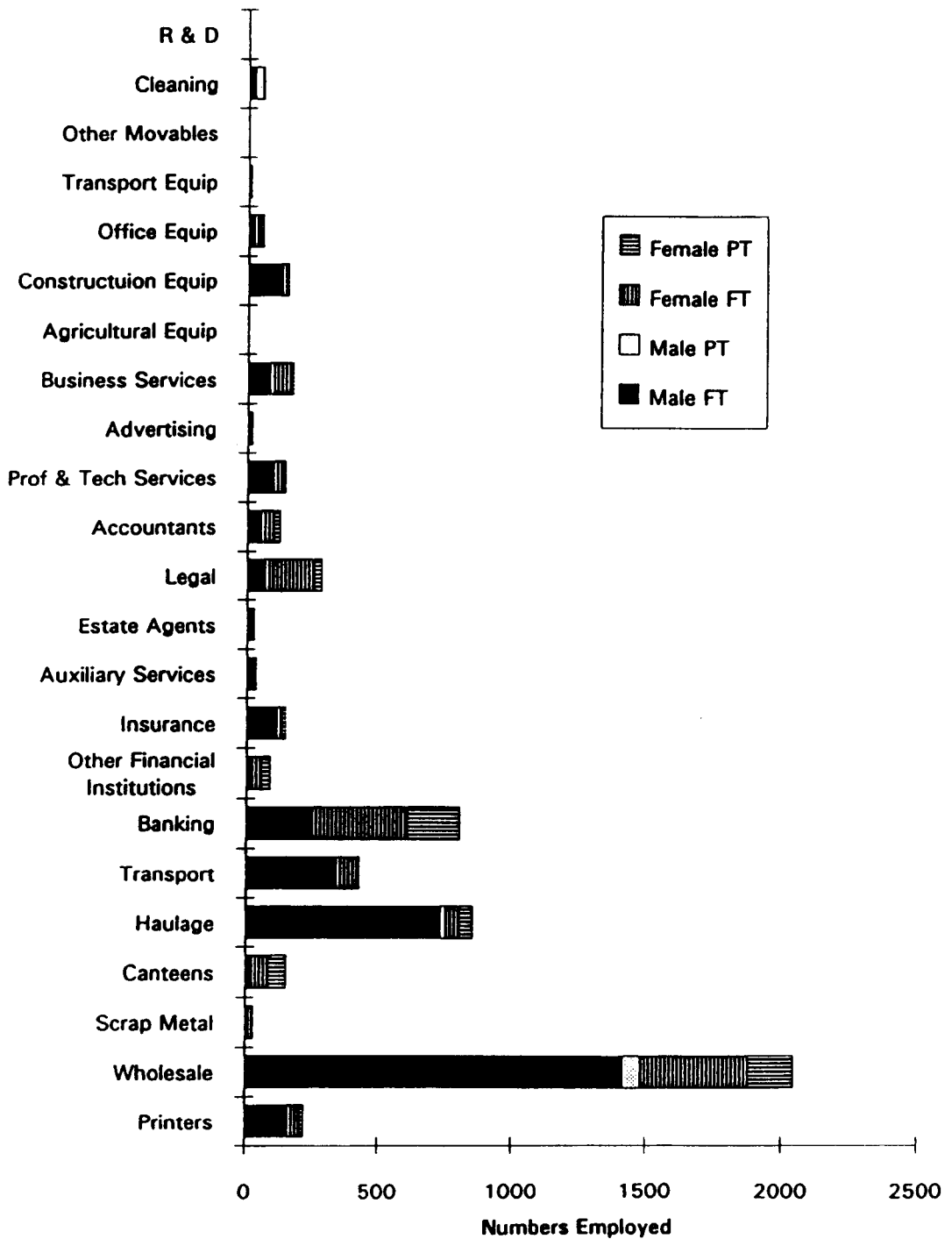
Figure 3.11b

Numbers Employed in Producer Services in Sefton: 1989.



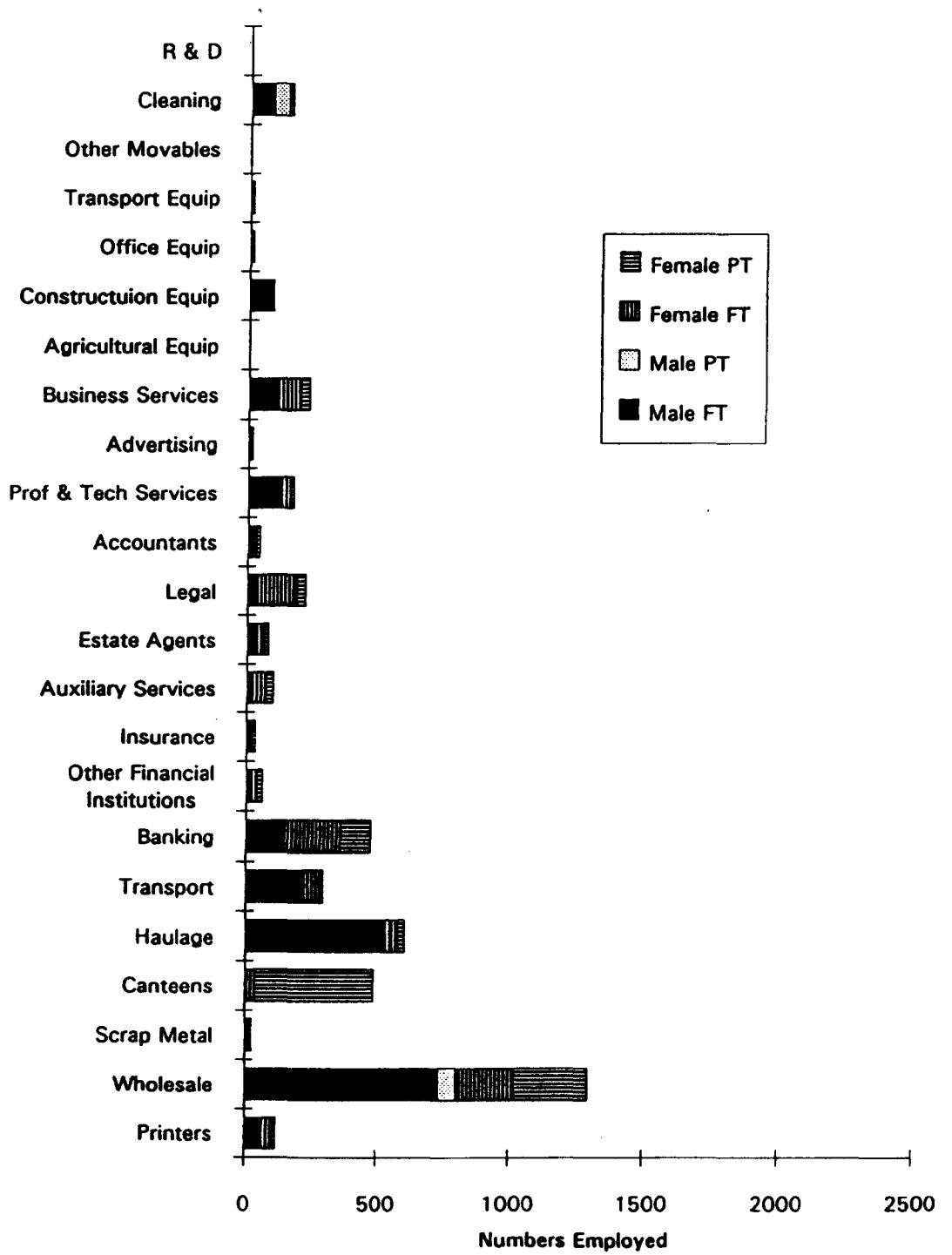
Source: Nomis

Numbers Employed in Producer Services in Knowsley: 1987.



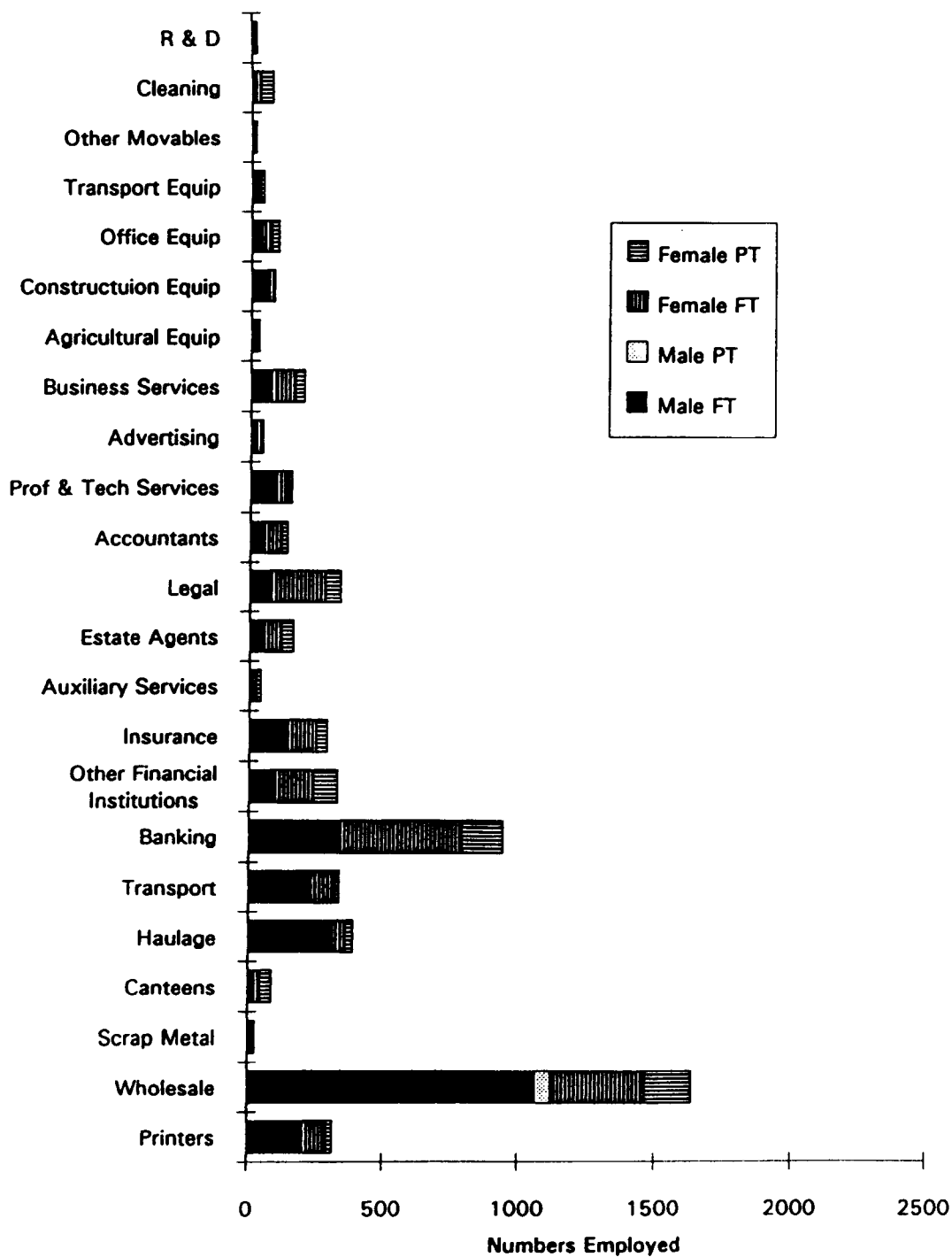
Source: Nomis

Numbers Employed in Producer Services in Knowsley: 1989.



Source: Nomis

Numbers Employed in Producer Services in St. Helens: 1987.

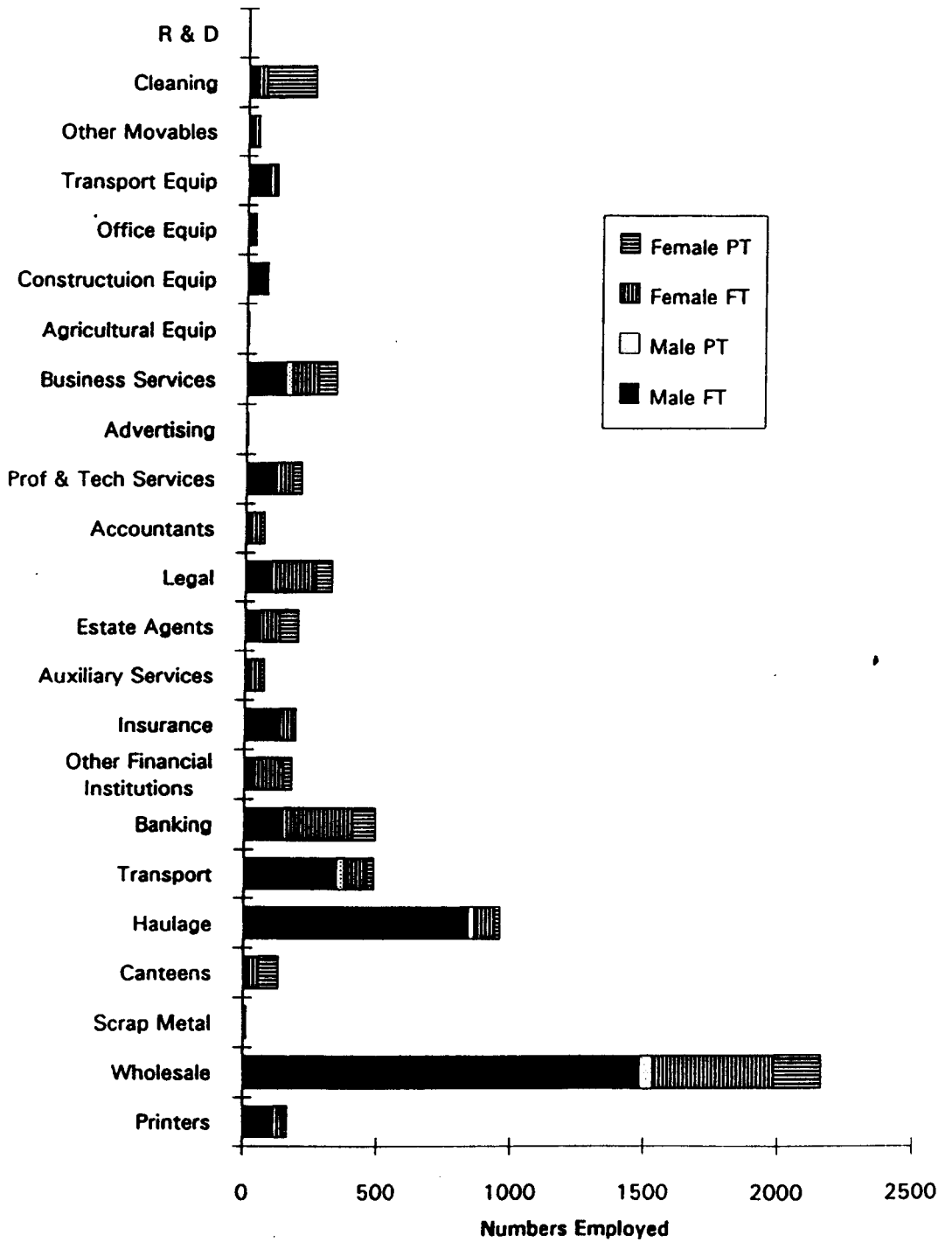


Source: Nomis



Figure 3.13b

Numbers Employed in Producer Services in St. Helens: 1989.



Source: Nomis

ubiquitous services (Daniels 1987), such as accountants and legal services, which tend to have a monopolised market area. There was a small growth in business services, professional and technical services, estate agents and auxiliary services. However, these increases were minimal and account for a rise of, approximately, only 300 jobs in total, whilst wholesale, banking and haulage lost approximately 1500 jobs.

In St. Helens (Figures 3.13a & b), the distribution of losses and gains is contrary to the general patterns of employment restructuring in the producer service sector. The three main growth sectors were haulage, transport and wholesale, whilst there was a distinctive drop in the numbers employed in the banking and insurance sectors.

The figures also reveal there were slight increases in business services and cleaning services, with the growth in cleaning once again relying on a rise in the numbers of part time female labour employed. But the rises in the more traditional blue collar services, such as transport, haulage and wholesale were based upon relative increments of all labour types, including both male and female full time occupations.

In all, St. Helens displays a relative increase in producer service employment, between 1987 and 1989, if a balance was taken across all sectors, but the most noticeable issue is that the majority of this occurred within the blue collar services.

From a general perspective the changes in producer service employment between 1987 and 1989, in each of the five districts, reveals a growth tendency in the central areas of the conurbation, especially Liverpool, whilst the outer districts

recorded minimal increases and even overall decreases (Knowsley). This trend is not simply one of concentration however, as there is a tendency for the white collar services to focus development in the centre of the conurbation, and blue collar operations to develop in the outer districts.

Admittedly, these are assumptions based on a very clumsy geographical scale, which would require ward level analysis to assess the exact changing distributions of the various sectors under investigation (Table 3.4). However, this is beyond the scope of this research and the purpose of this section is not to present a detailed analysis of producer service employment, but to give the reader an idea of how the development of the producer service sector has developed in relation to the economic history of Merseyside.

The whole range of Figures described above (Figures 3.7a - 3.13b) not only reveal the changes in producer service employment on Merseyside during the 1980's, they also display the sectors which are most important for the area in terms of providing (in some form) employment. They show the area is still dependent, to a great extent, upon blue collar services (transport, haulage and wholesale) and that the key employment areas for producer service operations are directly linked in with general banking and insurance services. Even though the latter did exhibit a rise in employment towards the end of the decade, more recent developments in the national economy have shown this to be a short lived boom for Merseyside<sup>16</sup>.

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<sup>16</sup> Current research being undertaken for the Department of the Environment has shown that the banking sector on Merseyside during the 1990's is undergoing an acute rationalisation process.

Without a detailed investigation into all the economic sectors described above, it would be impossible to directly relate the changes in employment rates to specific organisations. However, it is possible to recognise the activities of certain key institutions within the Merseyside area which would have significant effects on employment levels in these occupations. For example: the two largest financial institutions on Merseyside are the Royal Insurance<sup>17</sup> and the National Giro<sup>18</sup>, which are the only two headquarters of national financial services in the area. The operations of these firms will, in part, account for the dependence in Liverpool on employment in insurance and banking in Sefton.

Obviously, the operations of these two institutions do not account for the growth rates described in the Figures above, as this will be predominantly determined by the growth in the area offices of multi-site operations controlled from outside the area. Apart from these two institutions, which predominantly provide a retail service, there are no other large scale service operations, with their headquarters in the area, which account for producer service occupations.

Prior to 1987, the overall trend of producer service employment was contrary to national developments. During the 1970's, as the decline in the commercial centre of Merseyside continued, the area became highly dependent upon the public

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<sup>17</sup> The headquarters of the Royal Insurance are based in central Liverpool.

<sup>18</sup> The headquarters of the Giro Bank are based in Bootle, Sefton.

sector as a form of office employment (Daniels 1982)<sup>19</sup>. Whereas, nationally, between 1975 and 1981, the numbers of office based employment were being swelled by a growth in banking, finance and insurance by 22%, and a growth in professional and scientific services by 25 % (Daniels 1985, page 8).

The trends of the 1970's carried through into the 1980's, and whilst employment in producer services on a national basis continued to rise for the majority of the decade, it continued to decline on Merseyside. Figure 3.14 shows the levels of producer service employment in the conurbation throughout the decade and that the changes in the levels of employment, which might be encouraging, were a result of a restructuring of the producer service employment base.

Figure 3.14 clearly shows the declining employment figures for producer services on Merseyside between 1981 and 1989, for all employment types. However, from 1987 onwards the Figure reveals a dramatic turn around in this trend<sup>20</sup>. This growth level from 1987 to 1989 was based upon a noticeable increase in part time labour, especially female, whilst full time employment, especially male, remained static. In addition, this increase towards the end of the decade, does not return the employment figures for the area back to their 1981 level which, considering the downturn in the economy in the early 1990's, shows this increase to be relatively minimal and short lived.

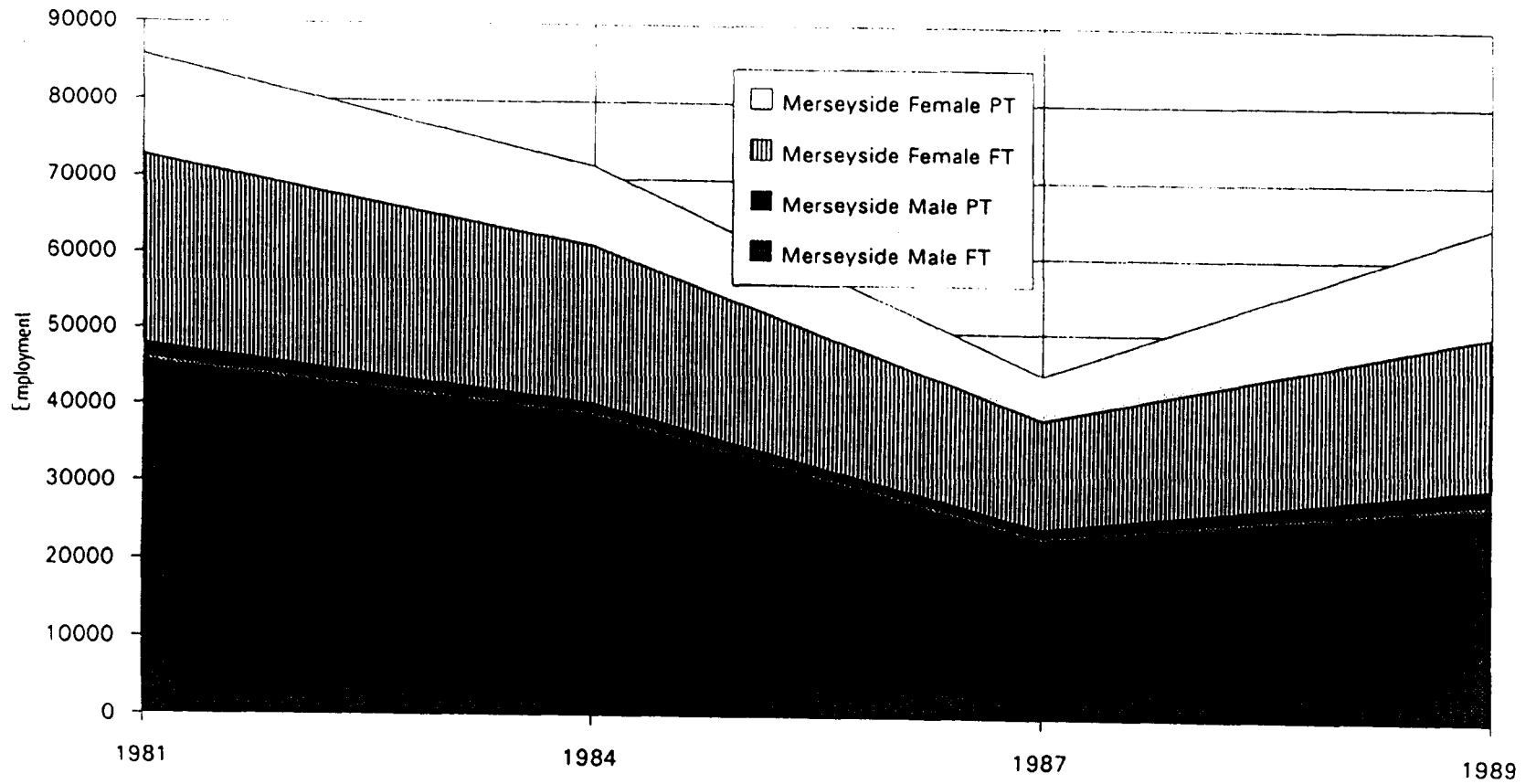
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<sup>19</sup> During the 1970's employment in insurance, banking and finance fell by 7%, whilst public sector employment grew at a rate of 3%.

<sup>20</sup> As the Figure only utilises four data series points it will obviously exaggerate the overall trends.

Figure 3.14

### Producer Service Employment Change on Merseyside: 1981-1989



Source: Nomis

The growth in producer service employment on Merseyside came at a relatively late stage in comparison to the rest of the country. Figure 3.15 shows the continued growth in this sector at the national level, which applied to all employment types throughout the 1980's. In contrast to Figure 3.14, the national growth (Figure 3.15) declined from 1987 to 1989, in this period male full time employment remained reasonably static, whilst female full time and part time continued to grow.

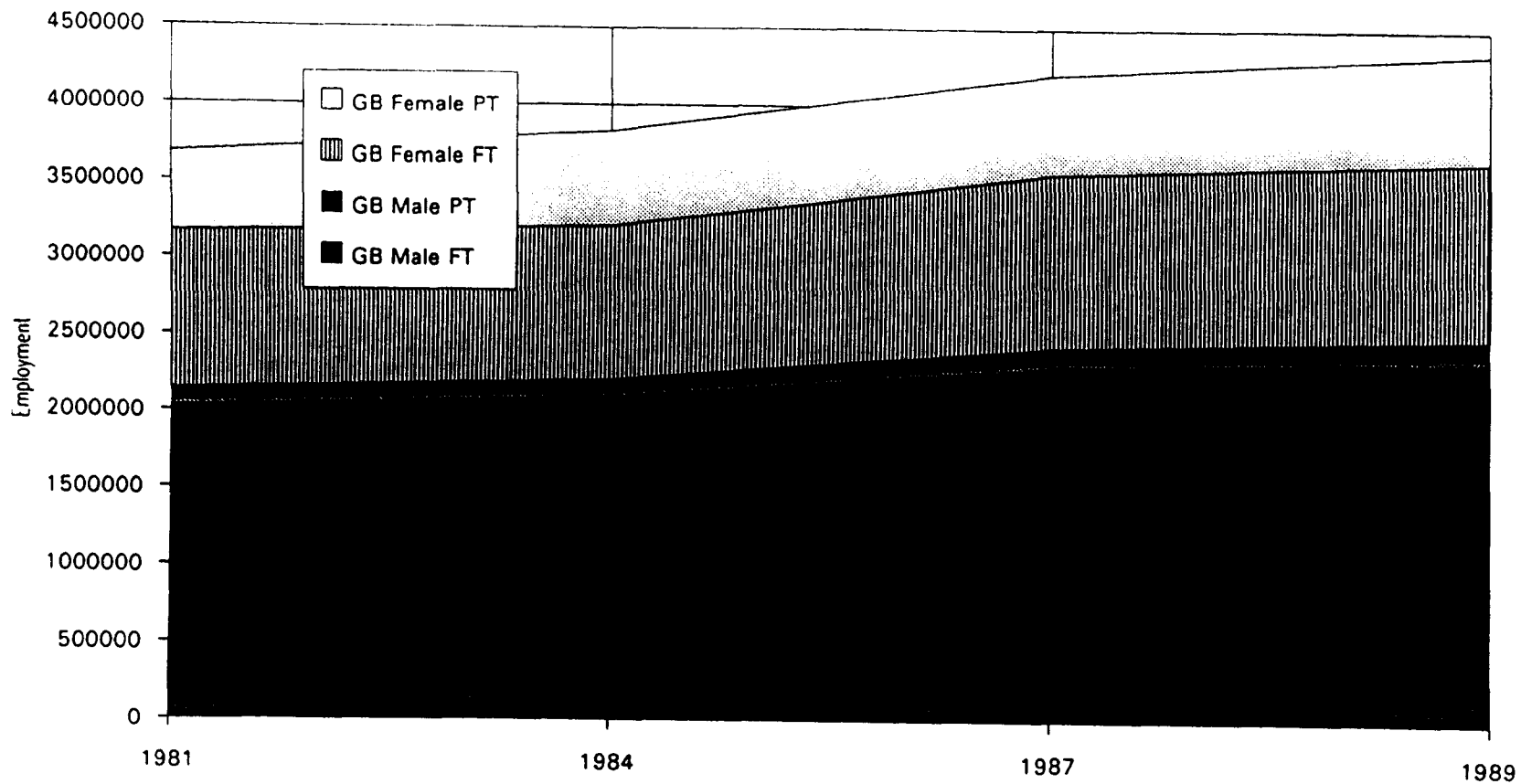
Figures 3.16 and 3.17 compare the indexed growth rates of the both female and male employment rates, on a national and conurbation wide basis. Figure 3.16 reveals the parallel growth of national full time and part time male employment until 1987, but after this time the rate of part time employment growth exceeds that of full time.

In Merseyside a similar pattern occurred, but the characteristics of its employment trends were radically different. From 1981 to 1987, both full time and part time male employment in producer services was in decline. However, between 1984 and 1987 the rate of decline in full time male employment accelerated far quicker than part time, so that by 1987 full time employment was at a lower rate than part time. From 1987, bot types of employment grew, but whereas the growth in full time occupations on Merseyside was relatively comparable to the national rate, part time growth was far greater.

Figure 3.17 reveals that the national growth rate of part time female employment, since 1981, has been consistently greater than full time employment and, unlike male employment, this trend was maintained throughout the 1980's.

Figure 3.15

### Producer Service Employment Change in Great Britain: 1981-1989



174

Source: Nomis



Figure 3.16

**Index of Male Producer Service Employment  
Change on Merseyside and GB: 1981-1989**

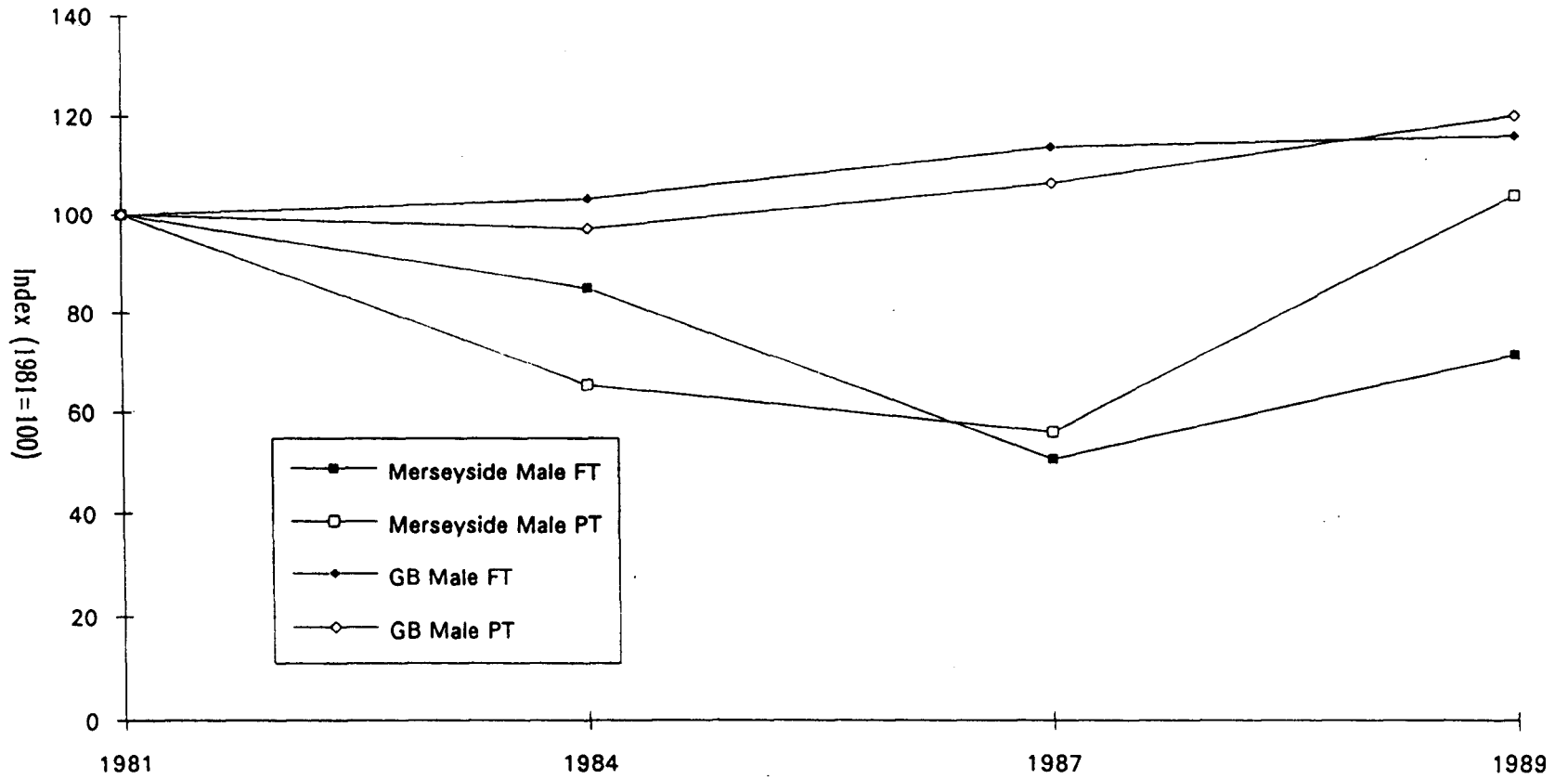
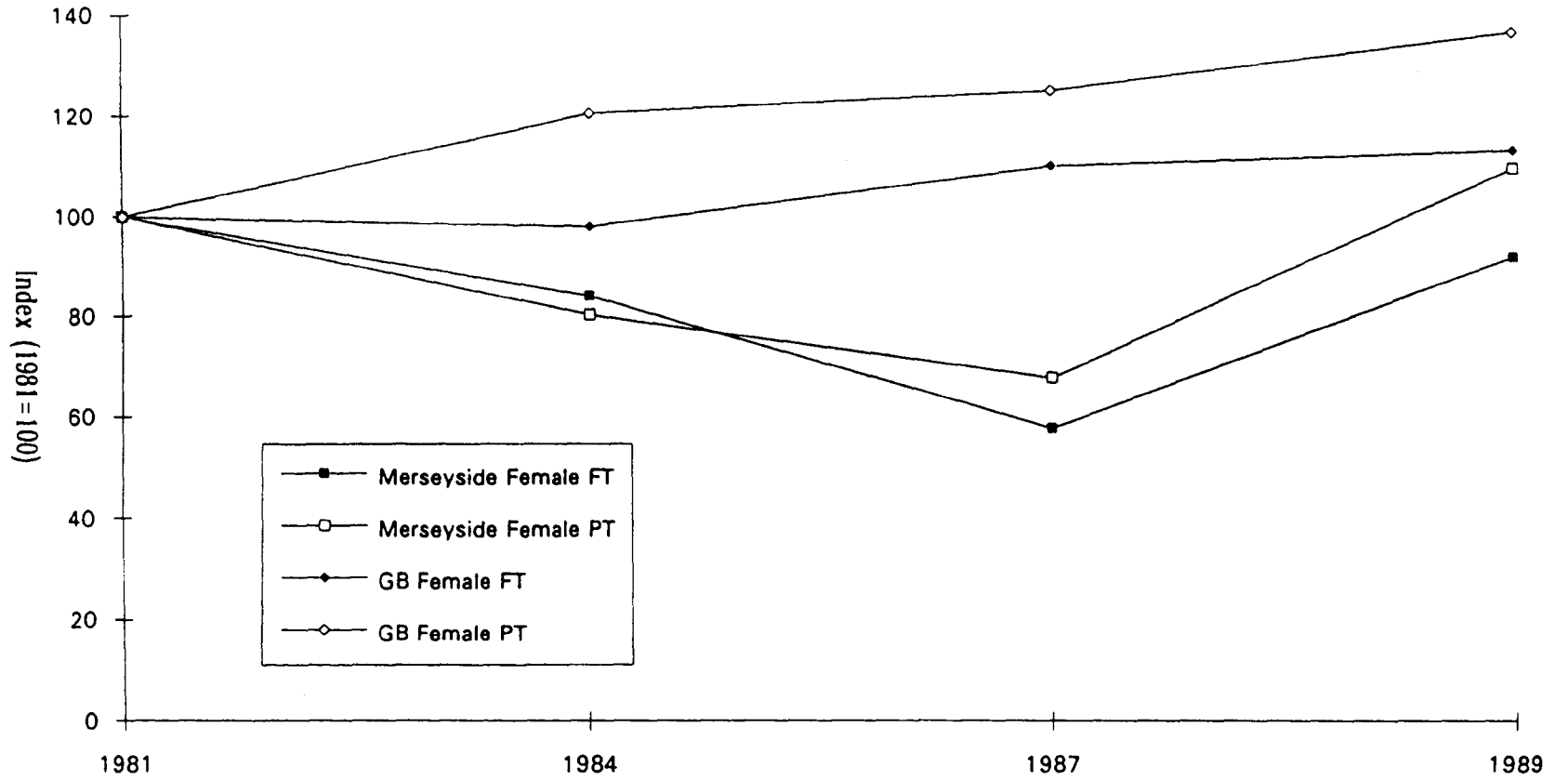


Figure 3.17

Index of Female Producer Service Employment  
Change on Merseyside and GB: 1981-1989



176

Source: Nomis

Female employment trends in the conurbation tended to duplicate the male employment patterns throughout the 1980's. Figure 3.17 shows that whilst both part time and full time female employment declined from 1981 to 1987, they both increased dramatically from 1987 to 1989.

In contrast to the pattern of male employment on Merseyside (Figure 3,16), the rate of part time female employment became dominant over full time much earlier in the decade, and both their growth rates after 1987 were far in excess of national trends.

To conclude this section there are some key points which need to be reiterated concerning the development of producer services on Merseyside during the 1980's. Firstly, the growth in the conurbation towards the end of the decade was predominantly based upon the growth of externally controlled area offices, resulting from the national growth rates. Secondly, during this time the area did not change its service economy structure, as blue collar services were still dominant as key employment sectors even though, apart from during 1987 to 1989, they were consistently in decline. Finally, the growth that did occur as a result of national and international trends, manifested itself in a distinctive structural shift in the Merseyside labour force. Part time (female) labour grew at a dramatic rate in both blue collar and white collar services, whilst full time employment became a declining resource.

### 3.5/ The Question of Urban Regeneration

The idea that the development of producer services in a metropolitan economy can support or even lead urban regeneration, is fundamental to this thesis. This is because this research is designed to test the regenerative claims concerning the role of producer services, made during the 1980's through the work of Pederson (1986), Van Diteren (1987), Daniels (1986) and especially Beyers et al (1986).

The rejuvenation qualities that producer services supposedly possess have already been outlined in Chapter 1, but the idea of what urban regeneration should or does involve, especially with relation to Merseyside, as yet has been left unexplored. The purpose of this final section is therefore to consider the question of urban regeneration on Merseyside, which will then allow the reader to assess the qualities of producer services operating in the area, shown through primary research (Chapters 5, 6 and 7), against the 'needs' of the area.

Essentially, the idea of a coherent urban regeneration plan for Merseyside first came about with the establishment of the County Council in 1974, which was then updated in the Merseyside Structure Plan (1980). However, this coherent approach to the area's problems was last attempted just before the abolition of the County Council in 1986, in a report acting as a precursor to a review of the structure plan<sup>21</sup>.

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<sup>21</sup> This report entitled 'Agenda for Merseyside' (Wood 1985), was one of the last documents to be issued by the County Council for a coordinated urban regeneration strategy, before Central Government took virtually full control.

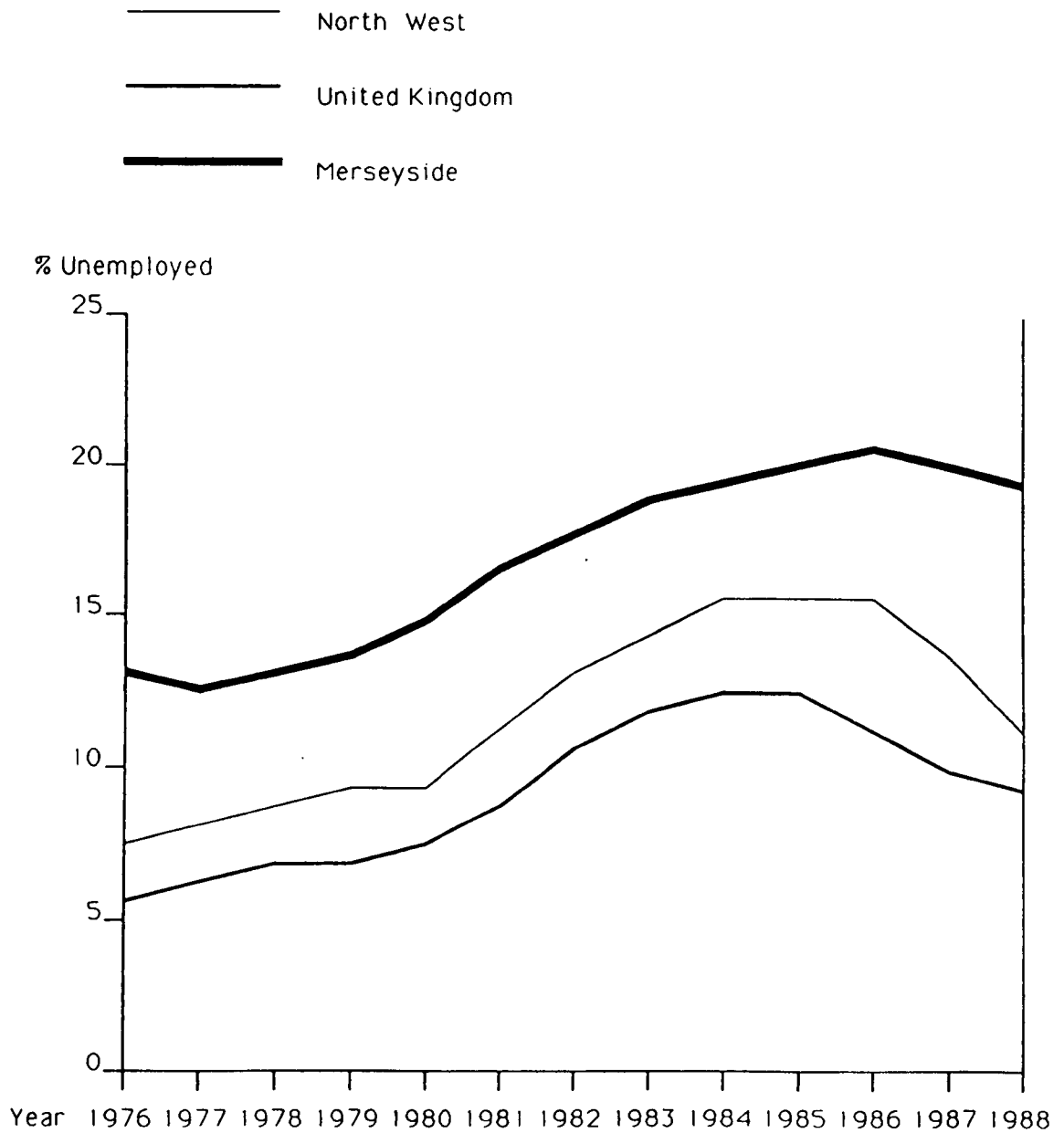
The ideas concerning the urban regeneration of the conurbation formed during the 1970's and 1980's developed around three themes: physical, social and economic. The first, physical regeneration, contained strategies to maintain and improve urban infrastructure and services, which included environmental improvements and policies to tackle problems with: derelict land, housing, industrial areas, public transport services and fixed assets, highway networks, and large areas used for public amenities. The second and third, social and economic regeneration, apart from being inextricably linked with each other trying to break a spiral of decline, were also interrelated with planned physical redevelopment, through attempts to improve the living and working conditions in the area.

The County Council developed several key objectives for urban regeneration, which mainly focused upon creating employment and reversing social polarisation (Wood 1985). As Figure 3.18 shows the conurbation has persistently had a chronic unemployment problem, which has become concentrated in the outer estates and inner areas (Meegan 1989), and stems from its weak economic base and marginalised position within the national economy.

Unfortunately, the objectives of the County Council were never realised as it was abolished in 1986 as part of the Conservative Government's plan to roll back the frontiers of the state and limit the operational powers of local authorities. As a result, urban regeneration policy became the sole remit of central government and Merseyside continued to be one of, if not

Figure 3.18

Percentage of Unemployed in Merseyside,  
the North West and the United Kingdom  
1976-1988



Source: Department of Employment

the, testing ground for regeneration policies.

Over the years, central government has experimented excessively on Merseyside and since the 1970's it has been host, or victim, to every Minister's whim including: Jim Callaghan's original Urban Programme, Tony Crossland's Educational Priority Areas, Roy Jenkins's Community Development Projects, the Home Office's Brunswick Neighbourhood Project, Peter Walker's Inner Area Studies, Peter Shore's Inner City Partnership, Geoffrey Howe's Enterprise Zones and Michael Heseltine's Urban Development Corporation and Task Force. This is not to mention the multitude of other ongoing government programmes<sup>22</sup> and the more recent competition for vital resources given out under City Challenge.

All of these policies have gradually changed the face of urban regeneration from the view advocated by Merseyside County Council, integrated social, economic and physical development, towards market-led economic and physical (flagship) development. This has meant that the social agenda has been removed from the regeneration scene in the genuine belief that economic development will filter through, or trickle down, and the social problems will be eradicated.

On a general basis however, the social problems of the area are vast; in 1984 half the households in the conurbation were in receipt of Housing Benefit, but in specific areas these problems were intensely magnified (Wood 1985, Meegan 1989). The hard face of urban deprivation: crime, poverty, sub-standard

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<sup>22</sup> The majority of programmes developed by the various government departments are catalogued elsewhere (see for example, Campbell 1990, and 'Action for Cities', HMSO).

housing, poor health and despair, are an obvious feature of many areas within Merseyside (Gifford 1989, Parkinson 1989, Ben-Tovim 1989), and the scale of these problems are comparable to some of the worst areas not just in Great Britain (Champion and Green 1988), but in Europe<sup>23</sup>.

Throughout the 1980's, the problems of the area did not radically alter, considering the downturn in unemployment rates (Figure 3.18) and the increased employment in the service industries (see above). The most recent study conducted into urban policy on Merseyside (Robson et al 1993<sup>24</sup>), has revealed that the problems of the inner areas and outer estates, which have consistently been targeted for regeneration, have in fact declined relative to the other areas of Merseyside. The social polarisation within the area has intensified and even though there have been relative improvements across local authority districts, they have not filtered into the most deprived areas.

The continued decline of the most deprived areas on Merseyside has also been noted by the European Commission which has recently (March 1993), assuming the approval of the member states, awarded Merseyside an Objective One status in terms of European funding. This effectively means that, based on a series of indicators (social and economic), Merseyside is equal to the poorest areas in Europe and will be given priority for funding

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<sup>23</sup> In the European Commission's Second Periodic Report - The Regions of Europe - (published in March 1984) Merseyside was ranked fifth worst of 131 European conurbations on an index of intensity of problems.

<sup>24</sup> This study was conducted as part of a general assessment of the Action for Cities programmes for the Department of the Environment and will be available as a HMSO publication during the summer of 1993.



through the European Regional Development Fund and European Social Fund.

At present the strengths of the area are, ironically, a result of its chaotic and destructive past; low-cost labour pool, easy accessibility and a heritage industry built upon the aftermath of its once dominant position within the world economy. However, the problems which still proliferate throughout the area are still directly tied to its position as a marginal economic area, resulting from its past development within the changing dynamic of capitalist development.

The present position of Merseyside is predominantly a result of structural changes in the global economy and the legacy of its past development, but it is not just an area which has been passive in the face of economic decline and social deprivation. The 1981 riots, even though they served to fuel the media with negative propaganda about the area, did initiate a series of urban regeneration schemes<sup>25</sup> which, irrespective of political beliefs, did alter the face of urban regeneration within the area, even if they did not address the problems of those in the most deprived areas (Liverpool City Council 1987).

In addition, the local authorities on Merseyside have also been proactive in terms of urban regeneration, some in direct confrontation with central government regarding new-build

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<sup>25</sup> The appointment of Michael Heseltine as Minister for Merseyside, initiated by the 1981 riots, led to the development of the Merseyside Development Corporation and the establishment of Wavertree Technology Park (Parkinson 1988, 1989).

housing policies<sup>26</sup> (Parkinson 1985), and others have bypassed central government to rely upon funding from the European Commission<sup>27</sup>.

Effectively, urban regeneration can take many forms, but the one key thread that apparently links the different approaches, is their attempts to minimise either the effects, or the actual process, of uneven development. This has been tried through direct social intervention (new housing), direct economic action (industrial action/ leveraging private investment), indirect economic action (improved infrastructure, communications) and direct physical redevelopment (Merseyside Development Corporation - docklands development - and City Challenge). All of these were/are attempts to feed into the regeneration process and are interrelated in trying to achieve its (eventual) goal; to alleviate the problems of uneven development.

The question that needs to be considered is; how does the role of producer services on Merseyside effect this regeneration process ? If the arguments put forward by post industrial theorists (Chapter 1) are upheld then the growth and development of these services on Merseyside, as occurred in the late 1980's (see above), will provide a direct input into the social and

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<sup>26</sup> The era of the militant Liverpool Local Authority is well known and even though it did produce new housing developments, it brought the city to the edge of bankruptcy, left a financial legacy to limit the capital housing expenditure for ten years after and provided the media with enough ammunition to destroy the image of an already depressed area.

<sup>27</sup> The regeneration strategy developed in St. Helens, known as the Ravenshead Renaissance, which is attempting to tackle physical, social and economic deprivation has been predominantly funded through ERDF and ESF (St. Helens Borough Council 1989).

economic regeneration of the area. This will be achieved by providing an economic stimulus into the area through, increased private investment, increasing the export base of the area and the development of innovative research, all of which will open up employment opportunities in both services and manufacturing, and through comparative economic advantage the area can become less dependent on external firms<sup>28</sup>. In addition, the introduction and growth of the service class and other social groups into the area, will also increase the demand for 'quality' residential areas and provide an increase of disposable income which will also feed into the economic and social fabric of the area<sup>29</sup>.

However, as discussed at length in Chapter 2, the hypothesis of this thesis is that involvement of producer services on Merseyside, serve to reinforce and perpetuate the structures and processes which initially produced the uneven development in the area. Through their operations and the social groups in which the people working in this sector are involved, the very social inequalities which urban regeneration is ultimately trying to limit, are being constantly reproduced.

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<sup>28</sup> The perceived regenerative effects of producer services on a metropolitan economy are fully explored in Chapter 1.

<sup>29</sup> The causal powers and the effect social classes can possible have are explored at the end of Chapter 2.

### 3.6/ Conclusion

As stated in the introduction, this chapter has been used to introduce the area of Merseyside and its historical development. This has been fully explored to reveal how its marginal economic position has come about and the problems associated with it.

The rapid growth and decline cycle that the area has gone through is directly related to the changing dynamic of capitalism, which throughout the past forty years has brought both intra and inter area social inequalities greater than in any other deindustrialised part of Europe<sup>30</sup>.

The problems stemming from its demise as a key world port, have been compounded by an inability to diversify and stimulate its economy to compensate for the weakness in its economic base. Therefore, it still suffers from poor skill levels in the labour force (especially those unemployed, Stoney 1992), a reluctance from the private sector to develop any large scale strategic operations in the area, a dominance of externally controlled establishments and a reliance upon public funding support (Robson et al 1993).

All these economic problems are interrelated with social deprivation, and since the abolition of the County Council (1986) the concepts of urban regeneration to tackle these problems have become market-led. Central government, which took over the role of regeneration agency for the area post 1986,

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<sup>30</sup> This value judgement is based upon the resultant Objective One status given to the area by the European Commission.

adopted an economic development policy in the hope that this would gather enough momentum to help alleviate all problems within the area, both economic and social.

Unfortunately, recent research (Robson et al 1993) has revealed that the economic-led regeneration strategy has left the most deprived areas further behind. The expected knock-on effects, or trickle-down processes, of regeneration have not yet happened. If anything, the regeneration strategies of central government have served to highlight the inequalities in the area, by developing facilities not directed at socially deprived areas (Dockland Development), whilst the poorest areas have continued to suffer.

In addition, during the latter part of the 1980's there was a definite growth in the producer (producer/consumer) employment base in the area. If this was taken at face value, there might be a certain amount of optimism that the area was beginning to diversify its economic base, especially into growth sectors (Daniels 1987), and that the problems of unemployment were in decline. However, as the general analysis of producer services in this chapter has shown, the growth of these services on Merseyside is not cause for such optimism.

The structural characteristics of the growth of producer services on Merseyside from 1987 onwards, underlines its position as a marginalised economy. The majority of the employment growth was in the part time labour markets which, set against national trends, shows the area is still being used as a flexible resource when the national economy moves into a boom period. In addition, the growth patterns revealed a minimal

structural change from the blue collar services which have dominated the area, very little growth of advanced producer service operations and an overall growth rate which was relatively insignificant compared to the rapid decline of these operations in the early 1980's.

Therefore, the initial signs concerning the regenerative benefits of producer services for a declining metropolitan economy, are contrary to the assumptions made by the majority of other researchers in this field (Chapter 1). However, this does not begin to question the hypotheses developed in Chapter 2, which proposes the concept that the involvement of producer services on Merseyside, as a marginalised economy, not only do not help regenerate the area, but reinforce the structures which are the root cause of the inequalities within the area. These are the result of the reproduction of capitalist relations through the constraining and enabling properties of social structures and the agency of the members of the various classes from which producer service personnel are drawn.

To explore these assumptions in detail various types of primary research need to be engaged, and the purpose of the next chapter is to explain the reasons behind, and the types of methodology adopted to conduct this primary research.

## Chapter 4

### Research Design and Methodology

#### 4.1/ Introduction

This chapter outlines the stages of the primary research design which is segregated into three, interrelated, levels. These are; a traditional neoclassical descriptive analysis of an extensive survey<sup>1</sup>, advanced data analysis of the internal operational factors of producer service firms, and an intensive interview survey of key personnel in this economic sector on Merseyside.

This chapter also demonstrates, that the quantitative approach adopted is not merely a background for qualitative analysis, but acts as a positive input for understanding the structural tensions within producer service firm operations, as explained in Chapter Two.

The process of understanding these tensions is made possible, through the type of analysis performed (Chapter 5, 6 and 7), which moves away from a simple quantitative calculation of variance, towards a heuristic style of analysis, combining quantitative and qualitative techniques. This is in accordance with a multi-faceted methodological approach, advocated from a realist perspective for understanding concrete events (Sayer

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<sup>1</sup> This section of the primary data analysis is comparable to previous research conducted into the development of producer services in other parts of the world (Beyers et al 1986).

1984, 1987), which relies upon an interface between data application and qualitative appreciation.

The use of extensive survey techniques is no longer characterised as part of essential geographical study and during the 1980's there was a movement away from this type of research, towards a more intensive mode of inquiry. This is primarily because of the influence of social theorists over the past two decades, which has led to a break down in the traditional quantitative approach, whilst adding to the already existing mode of geographical inquiry:

"...some time around the late 1970's and early 1980's the pace of change (in geography) increased, the interaction between geography and social theory intensified, and, not coincidentally, fragmentation appeared in what remained a relatively coherent perspective." (Peet and Thrift 1989, page 24).

Social theory encroached into a vast range of geographical analysis and the neoclassical paradigms faded into those of hermeneutics. Epistemology no longer found support in 'outmoded' data analysis and anthropological techniques came into favour, especially within the study of civil society (see Thrift 1989, page 154).

These developments were crucial for a greater understanding of social processes and opened up the door for geographical inquiry into the subjectification process<sup>2</sup>. For the realist it gives a clear method for distinguishing internal relations,

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<sup>2</sup> Subjectification is the means by which people are made into subjects, through all life influences and the action of the agent. Rather than considering them as objects within controlling structures.



necessary structures and eventually, concrete actions or events (Sayer 1984). But, put into the terms of this thesis, which is inherently realist in its approach, the methodological advances of the 1970's and 1980's allows a greater understanding of the interaction (interface) between agent and structure. This relies upon a more intensive type of analysis and in the words of Sayer (1984), because this approach involves:

"looking at actual relations entered into by identifiable agents, the interdependencies between activities and between characteristics can be revealed." (Sayer 1984, page 220).

The main criticism levelled at this type of research approach, is that the results are not 'representative' of whole populations. As long as this caveat is openly accepted, it poses no problem and given the nature of social phenomenon it would be surprising if any concrete individuals could be said to be 'representative' (Sayer 1984, page 226).

Accepting these conditions, the restrictions of intensive analysis are incorporated into this thesis and its limitations compensated for by utilising a multi-level approach; combining intensive with extensive approaches at three levels.

It must be noted that the phenomena under extensive investigation differ from that of intensive analysis, due to a change in the concept of the entities under inquiry. This can be explained as follows: an extensive format focuses upon taxonomic categories, which under certain conditions share similar characteristics. The generality of their existence and the universal patterns they exhibit are under investigation, which will help illuminate their direct causality. Therefore,

extensive techniques can not be used solely to directly infer an understanding of concrete individuals and yet in combination with intensive analysis, it provides more than a method which merely designates homogenous groups displaying certain linkage patterns. If the two techniques are used together the extensive study will not fall foul to unsubstantiated predictions or conclusions.

This is not an attempt to justify realism as a philosophy or theory, but merely to advocate its methodological approach as a well conceived multi-faceted social science tool. As shown, it is based upon the combination of extensive and intensive analysis, because:

"...if the population is not too diverse, it may be possible to define taxonomic classes in which individuals share similar causal powers and liabilities, hence enabling extensive and intensive research designs to become more complementary." (Sayer 1984, page 227).

Even though the initial conception of producer services may be chaotic (Chapter 1), the taxonomic groups which were developed in Chapter Two bond together specifically related firm types to form (distinct) categories which have common causality. This provides substantial justification for the use of an extensive methodology to possibly infer, at an abstracted level, causal relationships.

This is undertaken by examining the entities (producer service firms) as objects, including the people involved, and groups and distancing any knowledge gained from individuals under intensive investigation. Hence, there is a limit to the

extent causality can be inferred. Yet, the second level of analysis used factor analysis (see chapter 6) allows the internal relationships of the groups selected to be revealed, and provides not only a link with the qualitative analysis, but also a direct insight into the causal structures within the examined objects (firms).

Following through with a realist perspective, there is a need to personalise the knowledge being extrapolated from the entities and turn the object into subject. Also, considering that this must be placed within the context of an open system<sup>3</sup>, whereby it is possible to begin to realise the contingencies and full manner of relations that are feasible. Under this rubric, the investigation must turn towards an intensive approach, connecting subjects with disembodied information. It is only then, that the research can begin to realise the difference the conditions of the subject makes.

These conditions referred to are; class, gender, space, culture, politics and a whole range of interdependent processes which constrain and enable the actions of the subject (Chapter 2). These processes are vital to the knowledge base of the social scientist, because:

"'individuals' are now seen as contextual modulations in a vast web of communicative interaction that is structured by determinate social relations acting through localised (but not necessarily local) social institutions in all kinds of ways." (Thrift 1987, page 402).

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<sup>3</sup> The concept of an open system is contrary to the closed systems used in the natural sciences where all conditions can be controlled and replicated for experimentation (see Sayer 1984).

By utilising a realist methodology, adopting a multi purpose approach, the primary research allows an understanding of the complex issues involved between agent and structure, as it is possible to understand the resultant effects of these relationships; the concrete events.

Finally, it must be remembered that the processes and phenomena under investigation (producer service firms, the exploitive relations of production and class struggle) are constituted in a particular locality: Merseyside. Therefore, the reader is referred to the previous chapter which will allow an appreciation of the interrelationships of the processes under investigation and within the area (Merseyside).

Avoiding the possibility of becoming too abstract in introducing the methodology, the next sections will outline some of the general steps taken to apply the specified research approach. It will show how intensive and extensive techniques have been used to complement one another and how general and specific processes are examined within a locality. This will be displayed through a brief examination of the quantitative and qualitative techniques used, before the results are fully explored in the following chapters.

## 4.2/ Application of Methodology

Taking into account the theoretical background of the research (Chapter 2) and the need to develop a database, an extensive postal questionnaire survey (Appendix 5i) directed at producer service firms was undertaken, in order to ascertain their primary functional characteristics. The producer service firms were identified from professional directories, lists of firms from the Merseyside Information Service (MIS<sup>4</sup>), local district business directories, the Merseyside Development Corporation and the Yellow Pages for the area. This part of the research was also established as a follow up survey to work conducted by Daniels (1986), yet covers a boarder range of issues and examines a greater percentage of firms on Merseyside.

The data received from the questionnaire was initially subjected to some elementary statistical analysis, which involved comparing the respondent group with the population surveyed. The final analysis of the data utilises factor analysis to define possible causal relationships between class assets and various business characteristics (see Chapter 6). This examines spatial divisions of labour in relation to the economic performance of the firms and their functional characteristics.

To compliment the extensive survey, and in keeping with a realist methodology, a series of interviews were also conducted

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<sup>4</sup> The Merseyside Information Service is a statistical based operation supported through the local authorities of Merseyside and external contracts, to provide a data management service for economic development.

(Chapter 7). The interviews provide the basis for the intensive analysis of the research, and so as to reduce the researcher's influence over the discussions to a minimum, they were not based on a structured investigation<sup>5</sup>. The result of this, as Mann (1985, page 119) points out, is to gain the richness of an uncontrolled interview as apposed to a formal, impersonal interrogation.

The interviews were semi-structured to guide the topics of the informal discussions, but they were not regimented affairs with set or predetermined regimes, so enabling a rapport to develop between the interviewer and the interviewee.

For both survey approaches there are advantages and disadvantages, and there already exists a great body of work covering the pro's and con's of qualitative and quantitative research (French and Racine 1971, Orenstein and Phillips 1978, Merton, Coleman and Rossi 1979, Dooley 1984, Sayer 1984 and Silverman 1985). The main thrust of these texts is; when preparing survey work for both quantitative and qualitative analysis, thorough planning is the key element for success. The reason being, it is only at this stage where the researcher has full control over the survey and once questionnaires are sent out, or interviews under-way, then contingency factors, beyond the scope of planning, are at work.

It was difficult to state a priori whether there was a need to set up a sample framework, or if it would be possible to survey the total population of producer service firms on

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<sup>5</sup> The unstructured approach to the interviews applies to the variability of the questions around set themes.

Merseyside. After collating a 'definitive' list of producer service firms within the area, it was deemed possible, due to the size of the data set, to survey the universal population. As a result there was no need to establish elaborate proportional or stratified sampling techniques. The technique adopted gives a relatively proportional response rate and is the most effective way of creating a representative return sample (Mann 1985). As the usual statistical tests for representative samples rely upon abstract algebraic assumptions, such as the central limit theorem for the standard error of the mean, they provide a limited use and it is far more enlightening to literally compare and contrast the survey population and sample response group (see below).

Those who participated in the series of interviews did so obviously of their own choice and their participation was requested via separate correspondence to the questionnaire. This technique was employed so as to increase the co-operation of those approached reducing the opportunity of rejection normally permitted with a simple invitation appended to the questionnaire. The uncertainty of response rates meant it was impossible to predict the percentage of those taking part in the questionnaire survey who would participate in the interview stage. It was only when all responses were collected from the questionnaire, that a representative proportion of firms were selected to be approached for an interview candidate.

A recognised way of presenting interview information is to mould the discussions into causal networks or models (Miles and Huberman 1984). However, they over simplify what are in fact

very complex causal mechanisms and display them in a confused diagrammatic form which still needs an accompanying text for the reader to comprehend their meaning. Therefore, having gained the permission of the respondents the interviews are presented in dialogue form with selected quotations. This means the 'richness' of the interviews, originally stimulated by the informal approach, is not lost (Chapter 7).

The decision as to whether a tape recorder or notes should be used to record the interviews was left open and it was only after several trial interviews that the recording was deemed preferable. The use of tape recordings does allow for a far freer exchange in conversation, because the researcher does not have to concentrate upon writing down quotations and the discussion can be conveniently dissected at a later date.

Unfortunately, there are draw backs with every technique and use of tape recordings is no exception (Dooley 1984, Silverman 1985). Two of the main problems concerns effecting the interviewee; under certain conditions the respondent can feel intimidated by the presence of the tape recorder, to the extent where they become nervous and cannot articulate their thoughts, and secondly, the interviewee, knowing a hard copy is being taken, may restrict their discussion to non controversial statements and thereby invalidate the semi-structured interview process. The third major problem concerns the time resources of the researcher; once an interview is completed, it takes approximately twice the length of time to transcribe the recording (Dooley 1984) and substantially lengthens the data gathering process. These problems were considered and it was



decided, based upon prior research experience, that for this research the use of tape recordings offered more benefits than drawbacks.

The intensive qualitative approach, as explained, is used to compliment the extensive quantitative research and to interrogate specific issues; details of decision making within the firms, exactly how they operate, the type of people who are employers and employees, life experiences of founders/MD's and not just how they operate in, but how they perceive Merseyside.

These interconnecting surveys illuminate the interface between the structural influences of the firms position within the Merseyside economy and the actions of the agents which reproduce the conditions of exploitive relationships. This is done by examining the interrelationships of the determining factors of firm operation (Chapter 6) and the use of class assets within the wider reproduction of social inequalities in the area (Chapter 7). It is then possible to perceive how these processes will effect the regeneration of the area, considering the role they have already played in establishing the area as a marginalised economy (Chapter 3).

Before the details of the factor analysis and the interview survey are discussed, the development and application of the postal questionnaire is outlined, which also provides an indication of its success.

### 4.3/ First Level Analysis

#### Questionnaire Analysis

The design of the questionnaire (Appendix 5i) was primarily guided by the proposed research questions developed in Chapter One, and by a compromise between the information required and the range the respondent would possibly have to hand<sup>6</sup>. To avoid inconveniencing the respondent as much as possible, and thereby increase the response rate, some of the questions (variables) only rely upon partial mental recollection. These questions do not directly ask for specific facts which would require accessing archived information, but depend on signifiers which provide a general indication of trends or patterns.

An example of this format, taken from the questionnaire (Appendix 5i), is the section requiring information on the changing employment structure of the firms, 1981 to 1989 (question 3.2). It would be impossible for the founder/MD, presuming they were at the establishment for this length of time, to recall the exact numbers employed and in what positions over a period of eight years. However, it was considered possible that they could recall changes in trends of employment structure and indicate these with simple representative signs.

Another example of this type of general investigation is shown in question 4.1 of the questionnaire (Appendix 5i), which requires information about business trends of the establishment. Once again, the information is requested over a protracted

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<sup>6</sup> Once information is required which is not instantly available to the respondent, i.e. requires prolonged search, then the chances of their cooperation are dramatically reduced.

period, which would not be committed to memory. In addition, this type of information touches upon a sensitive area and it is doubtful, even if the information was to hand, that the founder/MD would reveal specific facts about the establishment's financial situation. Consequently, the respondent is only asked to indicate the general business pattern of the establishment by distinguishing between an increase, a decrease or a static trend in business revenue between 1981 and 1989.

Once the logistics of the questionnaire had been addressed, in terms of accessing information whilst maintaining a reasonable response rate, the method of analysing the responses needed to be considered. As it was an extensive, quantitative exercise, the obvious choice was to utilise a standard statistical package which could handle a relatively large data base. Of the packages available, SAS, Lotus 1-2-3, Excel and the Statistical Package for the Social Sciences (SPSSX) was deemed to be the most comprehensive and compatible.

In constructing the questionnaire, it was of paramount importance that the structure of the possible responses could be coded and analysed by the package. Due to the software's ability to accept alphanumeric characters, it was possible to incorporate variables directly relating to illustrative characteristics, which are not numerical. Therefore, the answers to questions relating to area of residence, type of subcontracting firm or the type of educational institution the firm has contact with, were directly input without coding.

The package (SPSSX) was also chosen because of its specially designed framework for handling questionnaire

responses, especially multiple response groups. These occur where responses can be grouped together under one heading. Examples of these can be seen in the questionnaire (Appendix 5i), questions 2.4 to 2.6. Here, responses ranking preferential factors and non-influential factors of locational decisions can be assimilated under umbrella groups. The multiple response capability also allows flexibility with possible combination answers, where the respondent may refer to one or more given choices. Questions 4.4 and 4.5 are examples of this format, where one or more boxes can be ticked if applicable (Appendix 5i).

The ability of the statistical package (SPSSX) to cope with all the variables and their various formats was confirmed, and access to the system was made available through a mainframe facility. The next stage of the questionnaire design involved assessing exactly what information needed to be ascertained. This was based on replicating certain information established in previous research (Beyers et al 1986, Daniels 1987), and the type of information that would be required to test the working hypothesis concerning the classification of firms developed in Chapter Two. As a result, both economic and social indicators were required, which moved beyond the limits of previous survey work on producer services (Daniels 1982, 1987).

The variables chosen for the questionnaire were therefore a mixture of questions original to this survey, specifically on the details of the founder<sup>7</sup>, and variables which were

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<sup>7</sup> As stated in Chapter One, the use of the word founder refers to the person with the greatest responsibility in the surveyed establishment.

incorporated to compliment and test the parameters of earlier surveys (Daniels 1982, 1987, Beyers et al 1985, 1986, Cuadrado 1986). As a result certain economic characteristics of the firms were selected for investigation: firm status, locational decisions, employment dimensions, business and export trends, contact with educational institutions and uses IT. The questions were constructed to examine these issues in considerable detail and all of these sections are shown in the questionnaire (Appendix 5i).

Apart from the economic factors outlined, it was also necessary, for investigation of the working hypothesis, to gain information on specific social details of the founder. These details are outlined in section 5 of the questionnaire (Appendix 5i), which covers issues of the founder's credentials, the founder's place of education, whether or not the founder lives on Merseyside and the specific place of the founder's residence. In all cases, as stated in the questionnaire, 'founder' can refer to a senior member of staff, if the actual founder is not available for whatever reason. Therefore, the questions were directed at people within the firms who held the position with greatest responsibility at that particular site.

These indicators of social interaction were sought to provide more of an in-depth analysis into the functioning of the firms and to assess the control over the functions of capital that these firms were able to exert, considering the collective labour of the establishment and the class assets available to the founder. The assessment of these relationships also provides an insight into the dominant factors of firm operation and

secondly, the social status needed to obtain a 'reasonable' quality of employment within this economic sector.

The findings are used as a basis to check the working hypothesis and also to validate the possibility of these firms providing some form of socio-economic regeneration for the indigenous population. It considers whether or not it is possible specific agents are able to control the functions of capital, due to the collective labour of the firm and the founder's inherent social practices (Chapter 2). It also examines whether the firm has any ability to operate irrespective of the structural constraints within which it is placed<sup>8</sup>, and ability of the firm to provide direct employment for a whole range of social groups.

In addition to this form of inquiry, the basic economic characteristics of the firms are assessed. These dictate whether or not this particular economic sector provides the types of regenerative multiplier links that are supposedly indicative of producer services (Chapter 1). In other words, testing their ability to initiate a whole range of development factors: provide a basic export function for the area, generate research networks and the possibility of these firms not only harbouring auxiliary links with the local economy, but providing the stimulus for a comparatively competitive economic environment of mutual benefit to locality and business.

The scope and detail of these economic characteristics are examined in Chapter Five, and whilst this provides an analysis

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<sup>8</sup> The structural constraints upon the operations of the firms are directly related to the area operating as a marginalised economic locality (Chapter 3).

of these factors on Merseyside, it also relates the findings to previous research for comparison. The descriptive analysis of the economic characteristics (Chapter 5) relies upon basic data analysis, analysing the frequency distributions of the variables. This provides the first level of analysis for the research and has been designed in a similar way to basic neoclassical analysis discussed in Chapter One.

The structure of the questionnaire was established as described above, and the next sections will outline some of the particulars of applying this type of extensive/quantitative analysis.

#### 4.3.1/ Questionnaire Application

Consultation was sought for the initial draft of the questionnaire from several parties. These people included not only Peter Daniels (supervisor), but also Richard Evans, from the Centre for Urban Studies at Liverpool University, and Geoffrey Willis, of the Merseyside Information Services. All concerned concluded the initial proposal covered too much ground and would dissuade people from taking part, resulting in a poor response rate.

From their comments, several of the original questions were altered and segregated issues were collapsed into more generalised, condensed, sections. An agreement was reached over its length and content, and a pilot survey was initiated. Twenty copies of the questionnaire were sent to randomly selected

producer service firms, drawn from the already collated data base.

The initial response was poor, with only seven returns, but after a backup telephone exercise this was boosted to fifteen. The majority of the questions appeared comprehensible, but some confusion did arise over section 4.3 (Appendix 5i), which did not make it clear that the respondent should indicate the regional destination of their exports. This problem was rectified by a further clarification of the instructions for the question, which proved successful in the second pilot survey involving ten randomly selected firms, of which seven replied successfully without a backup telephone exercise.

The format of the questionnaire was finalised in consultation with the parties previously mentioned, and it was proposed that the response rate would be increased if the exercise was endorsed by a Merseyside institution. Initially, the Merseyside Information Service was suggested as a possibility, but this involved obtaining the agreement of all the local authorities in the area, which proved to be impossible<sup>9</sup>. Therefore, to ease the dilemma of finding a promotional sponsor, Alan Chape was approached in his capacity as Liverpool City Council's Economic Development Officer and as a member of the Merseyside Integrated Development Operation commission (MIDO). It was hoped he could obtain the support of MIDO and give the questionnaire enhanced credibility throughout the area.

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<sup>9</sup> It was not necessarily the lack of cooperation from the local authorities, rather the excessive time periods taken for any indication of cooperation which excluded their involvement.



Contact was made with Mr Chape one month prior to the proposed date for posting the questionnaire exercise. MIDO were asked for no support other than the use of their name and in return they were offered open access to the aggregated results, ensuring anonymity of the respondents. However, after several months of trying to solicit the help of Mr Chape, which involved over thirty phone calls, two unsuccessful arranged appointments and one brief ten minute meeting, there was still a certain reluctance on his behalf to make any commitment. As a result, he became unattainable and there was a total breakdown in communication. Nothing transpired from the exercise, apart from a waste of research resources and a two month set back in the application of the questionnaire.

Ultimately, the idea of having the exercise endorsed by a Merseyside institution was abandoned. At this time however, communication with the Centre for Urban Studies (Liverpool University) resulted in the proposal of a joint venture, which accounts for the format of the questionnaire header. Unfortunately, due to a change in the administration of the Geography Department, the joint venture was terminated, but not before the questionnaires were printed, as a result the original format remained.

As stated it was decided to survey the total population of producer service firms on Merseyside, obtained from the sources indicated above<sup>10</sup>. This number totalled 2 245 and, to cover any

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<sup>10</sup> This number of addresses collected proved to be the most comprehensive list of services within the area, but it is not possible to guarantee this included every single producer service establishment.

unforeseen difficulties, 2 300 questionnaires were printed by a local firm (Sir Robert Jones Workshop). The addresses for the firms were then typed into a mainframe mailing system which has the facility for producing self adhesive labels.

Prior to the posting of the questionnaires, an accompanying cover letter (Appendix 5ii) was drafted with the help of Richard Evans (Centre for Urban Studies, Liverpool University) and Peter Daniels. Its primary aim was to generate interest in research and curiosity in the perspective respondent, thereby increasing the response rate.

#### 4.3.2/ Response Rate

Due to the scale of the survey, it was impossible, whatever the response rate, to increase the number of responses by a backup telephone exercise. Therefore, the return rate simply relied upon the good will of those approached.

The response pattern, as with most surveys (Mann 1985), showed an initial enthusiasm on behalf of the firms. Within the first month over three hundred completed questionnaires were returned. The rate then began to dwindle to approximately twenty per week, which then fell to a hardly discernable trickle. A decision had to be made as to the cut off point, where the research could continue to proceed irrespective of further minimal returns. This deadline was set at three months, with a low probability that any would be returned after this period.

Table 4.1 shows the final response rate, compared to the number and type of firms surveyed. In this case the response

Table 4.1

## Response rates of surveyed firm types

Firm Type	Sur <sup>1</sup>	Res <sup>2</sup>	Firm Type	Sur	Res
Accountants	195	50	Employment Agencies	16	5
Accountant Services	24	10	Engineering Consult.	44	13
Advertising	45	18	Estate Agents	50	11
Admin. Services	8	2	Export Agencies	11	4
Air Transport	21	0	Facsimile Hire	5	2
Air Compressor Hire	20	6	Financial Services	23	8
Air Conditioning Ser.	15	2	Forklift Truck Hire	8	0
Airlines (Business)	4	0	Freight Transport	35	6
Architects	92	39	Fruit Import	13	0
Associated Federations	11	0	Heating Services	26	3
Banks (Commercial)	74	17	Equipment Hire Ser.	29	9
Boiler Services	11	0	Import Agents	12	3
Bottled Gas Services	9	0	Industrial Clothing	14	4
Brewers (Distribution)	17	0	Insurance (Commercial)	71	20
Brick Merchants	12	2	Landscape Architects	7	4
Builders Merchants	58	6	Laundries	6	0
Building Societies	86	14	Legal Services	110	29
Buildings (Prefab)	10	3	Leasing Agents	4	0
Burglar Alarms-Business	20	2	Management Consultants	37	19
Business Consultants	12	2	Marine Surveyors	5	2
Car Breakers-Commercial	8	0	Market Consultants	12	6
Cargo Consultants	9	4	Office Equipment	44	18
Car Lease-Commercial	10	0	Packers-Commercial	10	0
Cashtill Hire	4	0	Painters-Commercial	11	0
Catering Equipment	14	4	Photographers-Commercial	25	7
Caterers	18	6	Printers	28	8
Chemists-Wholesale	8	4	Publishers	24	4
Cleaning Services	24	6	Quantity Surveyors	52	14
Close Circuit TV	5	0	Radio-Commercial	14	0
Commercial Vehicle	21	6	Removals-Commercial	35	2
Commodity Brokers	6	4	Road Haulage	92	16
Computer Consultants	84	34	Secretarial Services	23	2
Conference Facilities	3	0	Security Services	33	10
Container Services	26	6	Shipping Services	66	6
Container Hire	3	0	Sign Artists	24	2
Contract Hire Services	13	3	Surveyors	47	5
Couriers	26	6	Training Consultants	28	2
Crane Hire	3	0	Waste Disposal	18	0
Credit Consultants	16	4	Wholesale Operations	38	8
Design Consultants	29	12			
Drainage Services	6	0			
Drawing-Commercial	8	2			

1: Number of firms surveyed.

2: Number of firms responded.

rate is defined as the total number of useable questionnaires. As indicated, a total of 524 firms, from a variety of sectors, correctly completed and returned their forms. Of all the questionnaires returned, 152 were unanswered, for two reasons: firstly, incorrect addresses, which were mainly taken from 1988 local business directories, and secondly, a number of businesses had closed within the year. Additionally, a further 56 questionnaires were returned incorrectly answered and were deemed unuseable. The majority of the problems appeared to be a lack of attention or enthusiasm to complete the full questionnaire. Because of the nature of the exercise, where each firm forms a case within a data base, these incomplete responses had to be discarded.

The response rates for the different firms (Table 4.1) tends to reveal; the larger the subgroup of the population surveyed, the larger the response rate. This is clearly shown by the correlation ratio of those questioned with those who responded, and their regressional relationship (Figure 4.1). Ignoring the uncompleted questionnaires and the non returns, the overall response rate was 25.7 %. Therefore, 75 % of producer service firms on Merseyside are not included within the survey, but considering the proportional representativeness of the sample group (Figure 4.1), inferences that are made will be generalised to the universal population.

The segregation of the response firms into classificatory groups (Table 4.2) demonstrates the greater propensity of white collar firms to return the questionnaire. There are a number of possible explanations for this:

Figure 4.1

The number of surveyed firms plotted  
against the number of respondent firms  
(Firms categorised by main service)

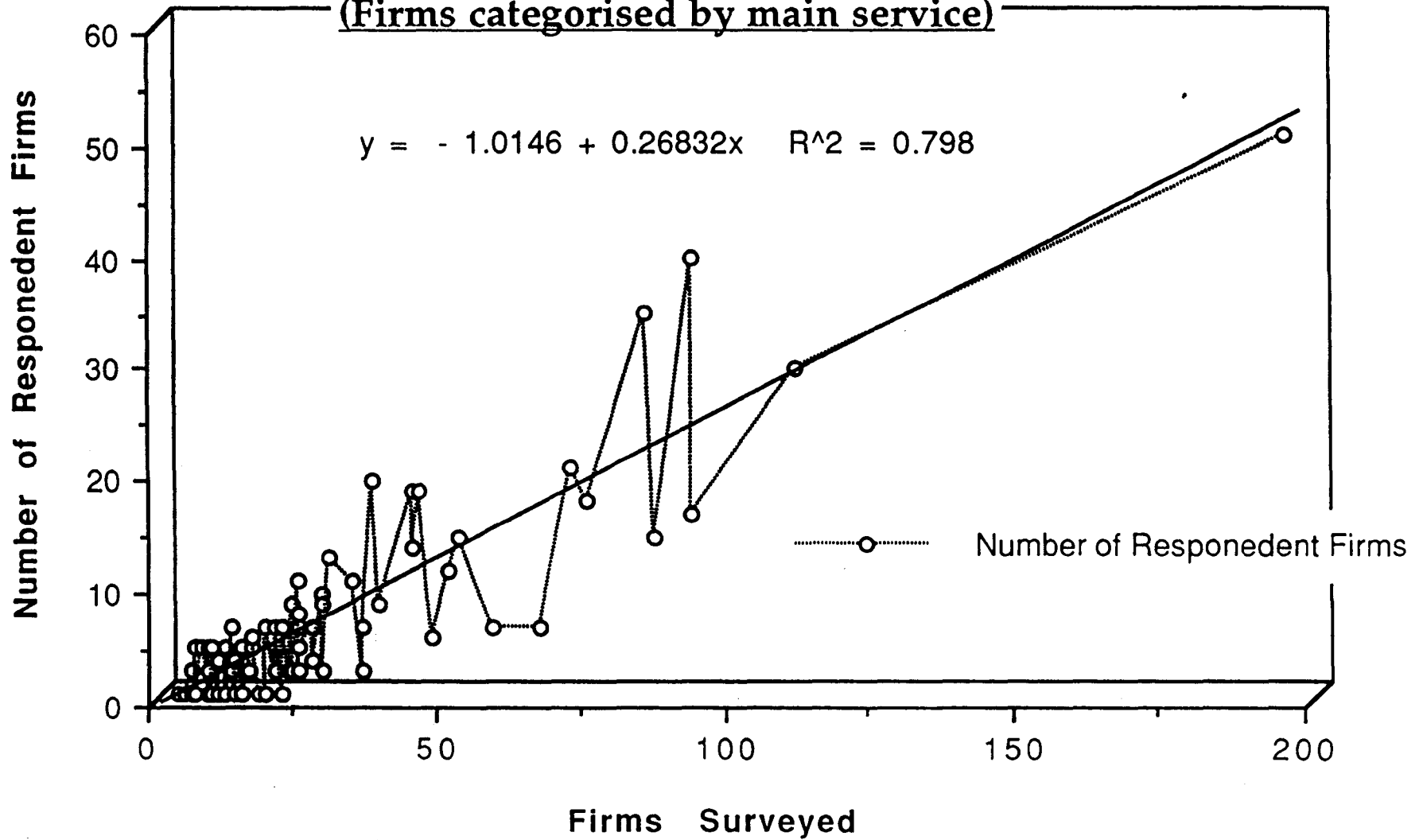


Table 4.2

Functional Segregation of Responent Firms

<u>Type of Firm</u>	<u>Number of Responents</u>
Multi site establishments	215
White collar multi site establishments	140
Blue collar multi site establishments	75
Single site establishments	309
White collar single site establishments	217
Blue collar single site establishments	92
White collar establishments	357
Blue collar establishments	167
All firms	524

Table 4.3

Main indicators used for the assessment of  
producer services on Merseyside

- 1/ Size (Employment)
- 2/ Export Markets
- 3/ Locational Factors
- 4/ Training Facilities
- 5/ Business Trends
- 6/ Use of Information Technology
- 7/ Contact with Educational Institutions
- 8/ Status of Firms
- 9/ Inter-industry Linkage
- 10/ Characteristics of Founders

1/ These firms (white collar) felt the research to be worthwhile and fulfilled some form of self interest from the experience, believing they were helping the business community in general and possibly themselves.

2/ The firms who responded tend to appreciate the role and importance of research, and are more familiar with its methods and implications.

3/ They were able to fully comprehend the exercise and the format of the questionnaire without it occupying too much of their time and were therefore not burdened by the task.

For non respondents, primarily blue collar operations, the opposite of these statements will have resulted in their reluctance to take part. It is important to note the divisions this has brought about within the response group; the segregation between blue and white collar operations, which is clearly shown in Table 4.2.

According to the majority of authors commenting on extensive survey techniques (Mann 1985, Dooley 1984, Hammond and McCullagh 1980), the return rate of 25 % is an acceptable norm. It may have been possible to boost the response rates of the deficient groups (Table 4.2), to give equal weighting to all subgroups, but considering the diminishing returns for labour intensive phone surveys and the comparison with other surveys focusing on white collar operations (Beyers et al 1986, Cuadrado 1986, Pederson 1986, Daniels 1987), the initial response structure was accepted.

After collating the response questionnaires, the next stage of the analysis involved entering the data for the 524 firms

onto a mainframe facility. For each firm there were a possible 274 variables that needed to be included in the data matrix, however due to the nature of the questionnaire not all applied to any one firm.

Due to the range of the questions it was not possible to segregate the firms into specific sectors and report on all the characteristics for all groups. As a result, the sections of the questionnaire are be analysed for the whole group, to construct a picture of the overall functional characteristics of the sample. This parallels the survey work of Beyers et al (1986), by examining the major factors in the development of producer services in a metropolitan economy.

Table 4.3 shows the main indicators used to assess the development of this sector. These are very generalised headings, but, as can be seen from the questionnaire, (Appendix 5i) they are explored in considerable detail in the study and the full results of the questionnaire survey are discussed in Chapter Five.



#### **4.4/ Second Level Analysis**

##### **Factor Analysis**

The use of factor analysis provides the second level of analysis for the primary research and the following sections elaborate on its applicability and application.

This second level quantitative dimension of the research utilises factor analysis as a causal analytic approach. It is a leading component of multivariate analysis and, via its application, the working hypothesis of the thesis is examined. The aim is to assess the underlying causes of producer service firm operations on Merseyside, taken from survey data collected via a postal questionnaire. The technique to be applied relies upon factor analysis in both its exploratory and confirmatory role (Fruchter 1954, Kim and Muller 1978).

Factor analysis starts with a set of observations obtained from a given population by means of prior measures outlined in the research design. It is a method of analysing a set of entities from their inter-correlations, to determine whether the variations represented can be accounted for adequately by a number a basic categories smaller than that with which the investigation was started. In other words, the original variables are transferred via computational analysis into reference variables. In general, these hypothetical variables are generated from a coefficient matrix and interrelationships between subsets of variables are used to form the basis of the reduced explanatory variables (factors).

Factor analysis is perceived to have two main uses covering the extremes of research. Initially, the researcher may have no idea as to the underlying causal dimensions of the data, factor analysis may thus be used as an expedient way of ascertaining the minimum of hypothetical factors that can account for the observed covariation, and as a result prove to be a means of data reduction. This approach is seen to be purely explanatory and one which is utilised by the, supposedly, objective social scientist (Harman 1976, Mulaik 1972).

The second use of factor analysis is not confined to a purely explanatory role, as it can also be used as a tool for hypothesis testing (Rummel 1970). Used in this way it provides confirmation (or non confirmation) of anticipated, or hypothesised, results of primary research. This is done by placing certain variables into clearer categories, through assigning the observed characteristics to one dimension or another. Therefore, translating the theory laden interpretations of the causal systems, under investigation, into a quantitative framework. This is more realistically in tune with analysis as a heuristic device, as social science research is not objective and the predetermined categories under which the hypothesis is to be tested are a reflection of a researcher's knowledge base and its application.

In reality these two extremes of analysis cover a broad spectrum, from ignorance to total certainty, of which neither occur. A researcher who has gathered data will always have an insight into the information collected and will have certain predetermined assumptions generated from a theoretical

understanding of the subject area. However, this is contrasted by the continual uncertainty that underlies the fundamentals of all research. The distinctions that Duncan (1966) , Land (1969) and Goddard and Kirby (1976) make in categorising factor analysis into specific operations of data reduction, explanation, confirmation, ranking etc, is far too rigid in its application. Ultimately, it is far more beneficial to perceive its use as a combination of approaches, simultaneously explanatory and confirmatory.

Detailed mathematical comprehension of factor analysis is not needed, as it is not the part of the social scientist to become the statistician. As a corollary to this, there is a definite distinction between data analysis and statistical analysis; data analysis is not a means to an end. Data analysis provides indications of trends or variance, not conclusions. Statistical analysis searches for rigid associations from a predetermined set of rules, which becomes a barrier to data analysis if the data is perceived to be inadequate. This approach is unacceptable within the social sciences as data error is unavoidable due to the nature of the subject.

An understanding of data analysis does not entirely rely upon statistical mathematics and is an important tool in the baggage of the social scientist. Its contribution must be realised as being relative and cumulative to any working hypothesis, and as one of the most infamous statisticians observed:

"Data analysis operates like a detective searching for clues rather than like a book keeper seeking to prove out a balance". (Turkey 1962, page 16).

In addition, the search for causal relationships must constantly be placed within the context of the overall research. This provides a continuous check upon the assumptions that can be drawn from the analysis and maintains the focus of the research on its key objectives.

One of the key elements of data analyses is not just justification of the chosen methods, but a clear outline of all the steps taken and the options used. This does not simply involve a representation of the 'best' results, as data can have many permutations all reflecting different biases. Each stage of the research design must be documented so that all dimensions can be replicated if necessary. This approach is adopted for this analysis of producer service firms, so that it is as much the part of the reader to judge its significance as it is the researcher.

A full technical description of the research design for this level of the analysis is given in the appendices (Appendix 6i). This extensive narrative encompasses a whole plethora of research questions and, apart from outlining the choices for factor analysis, it explains to the reader the exact format used for the computations. It highlights the various pathways through which the stages of factor analysis passed; indicating possible alternatives and the reasons for selecting those chosen.

For the reader who is familiar with the subtle nuances of factor analysis, reference to this appendix may not be needed.

However, it is advised, as, in certain ways all analyses are unique and to fully understand the application of the techniques in this situation, a wider appreciation is needed than is revealed within the body of the main text.

In order to conduct the factor analysis in a way which would act as a test for the working hypothesis developed in Chapter Two, the respondents to the postal questionnaire needed to be segregated along the classification lines proposed. The following section describes this process and the way in which the results of the factor analysis are presented in Chapter Six.

#### 4.4.1/ Firm Segregation for Factor Analysis

Previous to performing the factor analysis, the respondent firms were disaggregated by operation into blue and white collar sectors, specified by the S.I.C. relating to each individual firm. This segregation process also included the separation of single and multi site establishments which resulted in the firm categories shown below:

- i/ All firms responding to the postal questionnaire
- ii/ All blue collar firms
- iii/ All white collar firms
- iv/ All multi site establishments
- v/ All single site establishments
- vi/ All single site white collar establishments
- vii/ All single site blue collar establishments
- viii/ All multi site white collar establishments
- ix/ All multi site blue collar establishments

The next stage of factor analysis is to select the variables which are to be used in the calculations and to identify their measurement scales. This process is explained in the technical appendix (Appendix 6i) and the full list of variables used is given in Chapter Six (Table 6.1).

Once these initial processes were completed, principal component and principal axis factoring were performed on all the groups indicated (above) and from the SPSSX programme each technique produced: initial statistics, a scree plot, a factor matrix, final statistics, a pattern matrix, a structure matrix, a factor correlation matrix and an orthogonally rotated factor matrix (see Chapter 6 Tables 6.2-6.12, and Appendix 6i for an explanation).

The total range of results is only given for the analysis conducted on the whole group of firms responding to the questionnaire and is shown in the text of Chapter Six (Tables 6.2-6.12, Figure 6.1) to allow the reader ease of reference with regards interpretation of the calculations. However, as is shown from the interpretation of these initial results, the use of the full range of statistics produced by the SPSSX package is not necessary, and only the relevant analyses for the subsidiary firm groups are shown in the appendices (Appendix 6ii-6viii).

The interpretation of the results relates to the firms included in each group, but will not question the structure of these groups, as this is performed elsewhere (see above, response rate analysis). The groups selected for analysis are not of equal size and have varying compositions, this is

reflected in the number of variables used which differs between groups.

The main difference between the number of variables incorporated into the factor analysis hinges upon the variables which indicate whether or not the firm is a single site establishment, or if the firm is a multi site establishment, and what the status of the office is within a corporate structure. The application of these variables becomes superfluous when the only firms involved in the analysis are either single or multi site establishments. Hence the 'status' variable is only applied to multi site establishments and the 'single' variable is only applied when there is a mixture of both single and multi site establishments. The other variables used for the factor analysis remain the same throughout the calculations and, as stated, are fully displayed in Chapter 6 (Table 6.1).

#### 4.5/ Third Level Analysis

##### Qualitative Analysis

The third and final level of analysis is based upon the use of qualitative research and the results are described in Chapter Seven. The underlying theoretical reasons for its use have already been discussed (see above), and this brief introductory section will simply reiterate a few basic points and outline the approach.

Essentially, the intensive qualitative study is used to compliment the extensive research, to provide more of a concrete understanding of the processes discussed in more extensive abstract terms (chapter 6), and to understand how, or if, actions (social practise) of agents can reproduce structures which guide the development of Merseyside (Chapter 2).

The qualitative analysis relies upon a series of interviews, which are used to provide a window into the general trends and phenomena of producer services, covering a number of issues ranging from specific social class formation to business characteristics. It is essential that this range of topics is analysed, so that statements can be made on the interrelations between the people in control of producer service firms, and their ability to actually control the functions of capital.

There is a bias in the analysis which derives from the inclusion of only white collar establishments within the sampling framework<sup>11</sup>, and the number of interviews was primarily

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<sup>11</sup> The reason for the inclusion of only white collar operations is based upon the totally negative response from blue collar operations.



guided by resource limitations. But, the significance of the interviews rests upon checks of repetition and external validation<sup>12</sup>, and they also follow Douglas' (1985) stages of interview technique, from negative searches to 'friendly disclosures', which became part of the recycling and testing process of the imparted information.

Essentially, the information from the interviews serves a twofold purpose: firstly, it allows an understanding of the interface between the agent and the various enabling and constraining features of the structures they reproduce, and secondly, it is possible to determine the social class under observation and to assess its causal powers. An example of the first point is the role of the professional within a bureaucracy:

"At the most abstract level it is seen as the concrete embodiment of a conflict between two opposing social imperatives: the impersonal, routinising world of conformity to bureaucracy on the one hand; and the creative dynamic role of 'knowledge' which depends upon professional 'autonomy' on the other." (Savage et al 1992, page 47).

In the second case, determination of the social class under observation will be derived from an understanding of the social entities (property assets, cultural assets), which effect the actual processes of class formation (Bourdieu 1987). The career profiles of the people will be outlined alongside their occupational status, so as to counteract the functionary

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<sup>12</sup> Once information becomes directly comparable from case to case (repetition), and it can be qualified through personal knowledge and other external sources, it attains a reasonable level of significance.

argument of occupational classification (see Abercrombie and Urry 1983, chapter 6). From this understanding of the causal processes involved in class formation, the causal powers of the social class under investigation can be assessed.

These powers operate at various levels, from the restructuring of capitalist societies, which interlocks with the changes in contemporary capitalism and enhances the powers of the 'service class' to influence production processes (Abercrombie and Urry 1983, chapter 8. Lash and Urry 1987, chapter 6), to the ability of a social class, via spatial mobility or cultural assets, to directly influence or change their surrounding environment:

"The geography of the service class is important because the members of the service class tend to be particularly active in shaping the places in which they live in their image. Everywhere in Britain, as the service class expands, it is shaping places to suit its lifestyle." (Thrift in Thrift and Williams (eds) 1987, page 232).

The interviews are intended to reveal more of these causal powers and class consciousness at this level, in terms of influencing and monopolising residential environments. This is directly related to their powers for influencing the location and environment of business, which is also connected with the greater spatial extent of the service class's labour markets in comparison to other classes (managerial class). This is also related to their privileged position and causal powers, which interact with the locale to form different process of development in different places.

The discussions with the members of the producer service sector were undertaken to assess the validity of these previous assumptions (see Thrift and Williams 1987, chapter 7), but placed within the Merseyside context. They are also used to highlight processes which are unique to Merseyside, due to its spatial and historical context. For example, the possibility that the causal powers of the service class within the area are not strong enough to attract industry and must therefore rely upon their ability to travel extensively within the labour markets.

In addition, the interviews were also used to clarify some of the points raised in the quantitative analysis concerning business characteristics, such as, export markets and the firms' inter-industry linkage patterns. So they also act as a backup mechanism for some of the more generalised points relating to the operations of the firms (Chapters 5 and 6).

Unfortunately, due to the bias in the response population of the postal questionnaire and further negative responses from the blue collar establishments, only white collar establishments were approached for interviews. Obviously, these can only be used in support of one half of the overall hypothesis, relating to the white collar establishments (Chapter 2, classification matrix), but they are a substantial clarification of this theoretical position and, together with the extensive empirical approaches used (Chapters 5 and 6), it is equal support for the juxtaposed assumptions relating to blue collar establishments.

#### 4.5.1/ Interview Population

Considering the response to the postal survey (Chapter 4), it was inevitable that the next stage of the empirical study would bias the sample population even more. The lack of blue collar operations within the data base meant there was a definite rejection of this exercise from this economic sector. It was therefore decided that rather than approach, what were already determined as, uninterested parties, it would prove more fruitful to assess those groups of firms which took a clear interest in the initial survey.

As previously noted (Chapter 4 and 5), the response group reflects to an accurate degree the population of producer service firms within the area, apart from the absence of certain blue collar operations. Therefore, the criteria for the selection of firms for the qualitative exercise were not only based upon market characteristics and size, but also on the probability that the groups selected would be far more responsive to a research request.

Applying this criteria, all those firms who had an initial response rate greater than the mean for the postal questionnaire were eligible for selection. However, included within this group were some unique cases which did not compare with the rest of the selected firms. The majority were professional and predominantly non manual operations, whilst the remainder could be classed as primarily manual (blue collar) establishments. Examples of the later are haulage firms and security operations which, even though they gave a low response rate to the postal

questionnaire, were included in the possible selection group for the qualitative analysis, due to their sheer numbers within the local area.

It was decided that due to the small representation of the firms mentioned above, their inclusion in the final qualitative analysis would prove an extremely weak exercise. Therefore, these groups were removed from the possible selection categories, which narrowed the operational characteristics of the firms to either professional and/or predominantly non manual. The list of firms which were approached for an interview is shown in Table 4.4.

It was decided that within these groups a certain amount of stratification was needed and that this would be based upon size. Of the firms that responded to the postal questionnaire, within these groups (Table 4.4), individual establishments were randomly selected, one below 25 employees (Annual Census of Employment classification of small firms) and one above. So that from each group shown in Table 4.4, two representatives were chosen, one small establishment and one medium to large.

These firms were then approached to take part in the third level analysis and the initial response was favourable, except from the architects, design consultants and legal services. As a result additional firms had to be selected and in some cases the process of selection and contacting the firms had to be repeated three times. Under these conditions, arranging an interview with the firms in the 'difficult' categories took two to three months. The problem apparently being that the person required for interview (managing director, senior manager,

Table 4.4

**Firm Categories Selected for Qualitative Analysis**

- 1/ Accountants
- 2/ Accountants and Financial Services
- 3/ Advertising
- 4/ Architects
- 5/ Banking
- 6/ Building Societies
- 7/ Computer Consultants
- 8/ Design/Marketing Consultants
- 9/ Engineering Consultants
- 10/ Estate Agents and Property Management
- 11/ Financial Consultants
- 12/ Insurance Services
- 13/ Legal Services
- 14/ Management Consultants
- 15/ Commercial Photographers
- 16/ Quantity Surveying

senior partner or founder) could not commit an extensive amount of time to an exercise for which they could see no personal benefit.

Eventually, a total of thirty two interviews were arranged throughout Merseyside, but due to the predominance of producer services within Liverpool and the random selection of the firms, the majority of interviews were conducted within the city centre. The pattern of the interviews tended to replicate the pattern of the spatial concentrations of the wider population of firms (see Chapter 5).

#### 4.5.2/ Interview Strategy

As previously explained, semi-structured interviews were deemed to be the best approach for maintaining the richness of conversation, without moving into the area of participant observation. Using this technique the interviewee was coerced into discussing a set range of themes, which varied in order from interview to interview. The set range of topics discussed remained the central focus of the interview and even though at times the conversation became irrelevant to this, as the interviewee was allowed a certain amount of latitude, it was brought back to the predetermined themes (Table 4.5).

A tape recorder was used to record the conversations, but in all cases the interview lasted longer than a standard one and half hour tape. Therefore, a technique was developed whereby for the first half of the interview, whilst the person perceived they were being taped, the conversation was kept at a very

Table 4.5

Interview Themes

- 1/ Personal Background
  - i) Where born, childhood memories. parental background.
  - ii) Educational background, personal aspirations.
  - iii) Career decisions, influences.
  - iv) Specific stages of career development.
  - v) Personal details, family, social habits, residential criteria.
  
- 2/ Business
  - i) How they perceive their business development.
  - ii) Their role within the business.
  - iii) The locational decisions of business.
  - iv) Range and type of business conducted, role in local economy.
  - v) Client base, geographical, history.
  - vi) Contact with other institutions and business, either inside or outside area, reasons, history, geography.
  
- 3/ Information Technology
  - i) Why/why not use IT.
  - ii) Types of IT used and history of IT in firm.
  - iii) General effect on firm, productivity, rationalisation, specialisation, centralisation, diversification.
  - iv) Effect on staff, numbers, quality, structure, labour process, hours.
  - v) Effect on business and markets.
  - vi) Future use and effect.
  
- 4/ Personnel/Staff
  - i) Types and ratios over time.
  - ii) Where recruited from, area, business.
  - iii) Recruitment policy.
  - iv) Type of people recruited, qualifications, knowledge, routine operators.
  - v) Residential and travel to work areas.
  - vi) Problems and benefits of local labour markets.
  
- 5/ Urban Regeneration
  - i) Contact with funding/government agencies.
  - ii) Effect of legislation or schemes on business.
  - iii) Significance of European Market for area and business.
  - iv) Future involvement or perceived trends for urban regeneration policies and private investment.
  
- 6/ Merseyside
  - i) Perceptions of the Merseyside economy, past present and future, SWOT.
  - ii) Imageability of area.
  - iii) Social characteristics/divisions, domestic and commercial.
  - iv) Effect of present urban policies, domestic and commercial.
  - v) Relationship of Merseyside with other areas, perceptions and fact.



impersonal level. Then once the recorder had stopped the person switched to a greater degree of freedom, previous statements were reassessed and more personal issues were easily broached.

In certain circumstances the tape recorder did not prove an obstacle to freedom of speech and it appeared that the person being interviewed was playing to a much wider audience. In all occasions the interviews were transcribed directly after they had taken place, both from tape and from memory. Only one person out of the thirty two interviews conducted objected to the use of the tape recorder.

The predetermined topics covered in the interviews (Table 4.5) were, as stated, themes for discussion rather than set questions. Coverage of each of the topics was attempted in each interview, with varying levels of success. The majority of the discussions at least touched upon all of the issues, but due to differing personal interests and the sometimes contentious nature of the material, each interview followed a variable path.

#### 4.5.3/ Presentation of Interview Material

Once the tapes and notes from the interviews were fully compiled, it became necessary to translate this information into a readable format. It was decided the most comprehensible form would be to use the themes of the interviews (Table 4.5) as the focal point of the presentation and segregate these by the size factor indicated in the overall hypothesis (multi site and single site).

Under this scheme each theme outlined in Table 4.5 is discussed and each related to both the working hypothesis (Chapter 2) and the quantitative analysis (Chapters 5 and 6). The people taking part in the exercise requested anonymity, but did not object to the disclosure of their or the firm's function.

In the cases where the interviews tended to duplicate each other, there was no reason to present the similar versions. So a synopsis of the general consensus is presented, supported by selected comments from the interviewees representing the common elements. Cases which tend to be outside this cohort are outlined in more detail and specific reference is made to the more unique elements of their profile.

#### 4.6/ Conclusion

The initial section of this chapter outlines the reasons behind employing such diverse and multi-faceted methodological approach as described above. The three levels of analysis are designed to compliment and support each other and in compliance with a realist approach, which essentially is a 'level-headed appraisal of what is possible' (Peet and Thrift 1989, page 17).

The first level of analysis introduced is a basic descriptive analysis of general associations, which links together taxonomic groups and examines the general trends of producer service operations on Merseyside during the 1980's. This aggregate level of study relies upon frequency occurrences, simple time series data and distributional analysis. It is easily accessible for the reader who is not familiar with complex forms of data analysis and provides a general background assessment of the ability of these firm types to operate on Merseyside.

In addition, the first level analysis acts as a comparative study to previous research conducted into producer services (especially Daniels 1987 and Beyers et al 1986). These other studies were purely directed at examining the economic performance of producer services and their operational characteristics, and this first stage analysis covers similar ground.

The introduction of this first level analysis in this chapter also indicates the types and range of services that were studied something which is revealed through a brief description

of the survey population used for the quantitative study, which also demonstrates that, even though its representativeness varies across firm types (e.g. accountants, cleaners), its profile corresponds sufficiently with the universal population to permit a confident level of generalisation.

The results of this basic descriptive analysis are presented in Chapter Five and as the range and quantity of the data reveal, it is a substantially extensive analysis.

The second level of analysis introduced in this chapter, outlines a more advanced form of data analysis. This is based upon factor analysis and it is used to reveal the internal relationships between the functional characteristics of producer service firms, as described in Chapter Five.

As this second level of analysis is more complex than basic descriptive analysis, a considerable effort has been made to clearly describe the reasons and processes involved in its use<sup>13</sup>. The purpose of its application is to determine whether the founder, through the use of social status in comparison to economic determinates, can exercise control over the operation of the firm. These concepts are explained elsewhere (Chapter 2) and it is the role of this level of analysis to test some of the general abstractions of the working hypothesis, centred around the classification matrix presented in Chapter Two.

The results of the factor analysis are fully detailed in Chapter Six, but unfortunately, unlike the first level analysis which can be compared to other studies, there have been no other

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<sup>13</sup> An introduction to the techniques used is given in this chapter along with a full technical appendix attached to Chapter 6.

attempts to explore the interrelation of service firm characteristics along these lines.

The last section of this chapter (above) introduces and explains the reasoning behind the qualitative research of this study. This is the third and final level of analysis and is designed to examine the agents involved within the producer service sector on Merseyside. As stated, the survey sample is not representative of all producer service personnel in the area, but it does concentrate upon the sub-group taken from the classification matrix (Chapter 2), which supposedly have the ability to control the functions of capital (white collar services) and therefore have a greater ability to influence the regeneration of Merseyside.

This qualitative analysis provides the final link between the three stages of the primary research and, by examining concrete events, allows a direct insight into how the agents of the producer service sector reproduce the structures which have been involved in producing the inequalities within the area (Chapter 2 and 3).

The results of this qualitative research are displayed in Chapter Seven as a form of class analysis and, as described above, they are presented as dialogue with accompanying narrative.

## Chapter 5

### Descriptive Quantitative Analysis of the Producer Service Sector on Merseyside

#### 5.1/ Introduction

This chapter presents the results from the first stage analysis as described in Chapter Four. The results from the postal questionnaire (Appendix 5i) are analysed in a series of stages, which reveal the functional characteristics of producer services on Merseyside.

As well as presenting the empirical evidence generated by the survey questionnaire, this chapter also acts as a comparative analysis for other, similar, research projects. At each stage, the results are not only analysed as to their implications for Merseyside, but also in comparison to other similar studies (Beyers et al 1985, 1986, Pederson 1986, Cuadrado 1986, Daniels 1987).

The empirical analysis deals with a skewed response group, as indicated in the previous chapter. But, as Chapter Four (Figure 4.1) indicates, these proportions are an accurate representation of the universal population, and therefore the analysis gives a true representation of the wider firm community. Under these circumstances the assumptions made about their operational characteristics can be accepted as a reasonable guide to the characteristics of the majority of producer services on Merseyside.

This chapter analyses selected firms and human capital as objects (Chapter 4), highlighting the operational characteristics of their structures, juxtaposed with more general economic and social structures in the area<sup>1</sup>.

Spatial and temporal changes are also taken into account, with reference to: the locational distribution of the firms, their linkage patterns and changes in their internal employment structures.

This whole range of determinants, affects the different junctures at which there is an interface between this group of firms and the surrounding area.

The 'interface' between the firms and Merseyside refers to different types of contact, ranging from the causal powers of the 'service class' to the impact of economic leakage (by the utilisation of services from outside the area). By understanding not only the effects of these contacts, but also the structural influences upon them, it is possible to state what type of role producer services play in the regeneration of Merseyside.

This chapter moves some way towards explaining the quantitative effects of producer services operating within Merseyside and poses alternative interpretations on their involvement within a metropolitan area. Whilst other more recent work in the U.S. (Hansen 1990, Goe 1990) has tended to support previous assumptions on this sectors ability to aid economic regeneration (Chapter 1):

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<sup>1</sup> The more general structures relate to the area's marginal economic position, housing patterns and education.

"It has been maintained here that goods production and services have become increasingly integrated within a flexible, information-orientated system of production organisation...(and)...the empirical results obtained strongly suggest that producer services - carried out both within manufacturing firms and by independent enterprises - do play an important role in expanding the division of labour, productivity and per capita income." (Hansen 1990, page 475).

This type of work (Hansen 1990) does not question either the underlying structures which support development of this kind, or the negative aspects of an integrated, flexible, highly productive system with an expanding division of labour.

This chapter begins to breakdown some of these ideas relating to the 'cost' of a highly flexible production system, and reveals some critical issues which can be examined even at a generalised quantitative level.



## 5.2 Operational Characteristics

The following eleven sections present a breakdown of the operational characteristics of respondent firms to the postal questionnaire described in Chapter Four.

### 5.2.1/ Spatial Distribution of Respondent Firms

Chapter Four shows the types of distribution patterns, by district, for all producer service firms on Merseyside. It clearly demonstrates Liverpool's supremacy in offering these services within the Merseyside area, and the hierarchical position each district holds with regards to their potential for providing producer services. As the survey respondents proportionally reflect this distributional weighting, the majority of surveyed firms are from Liverpool. Figure 5.1 summarises the post code information from the questionnaire, and shows the percentage of respondents by Local Authority District.

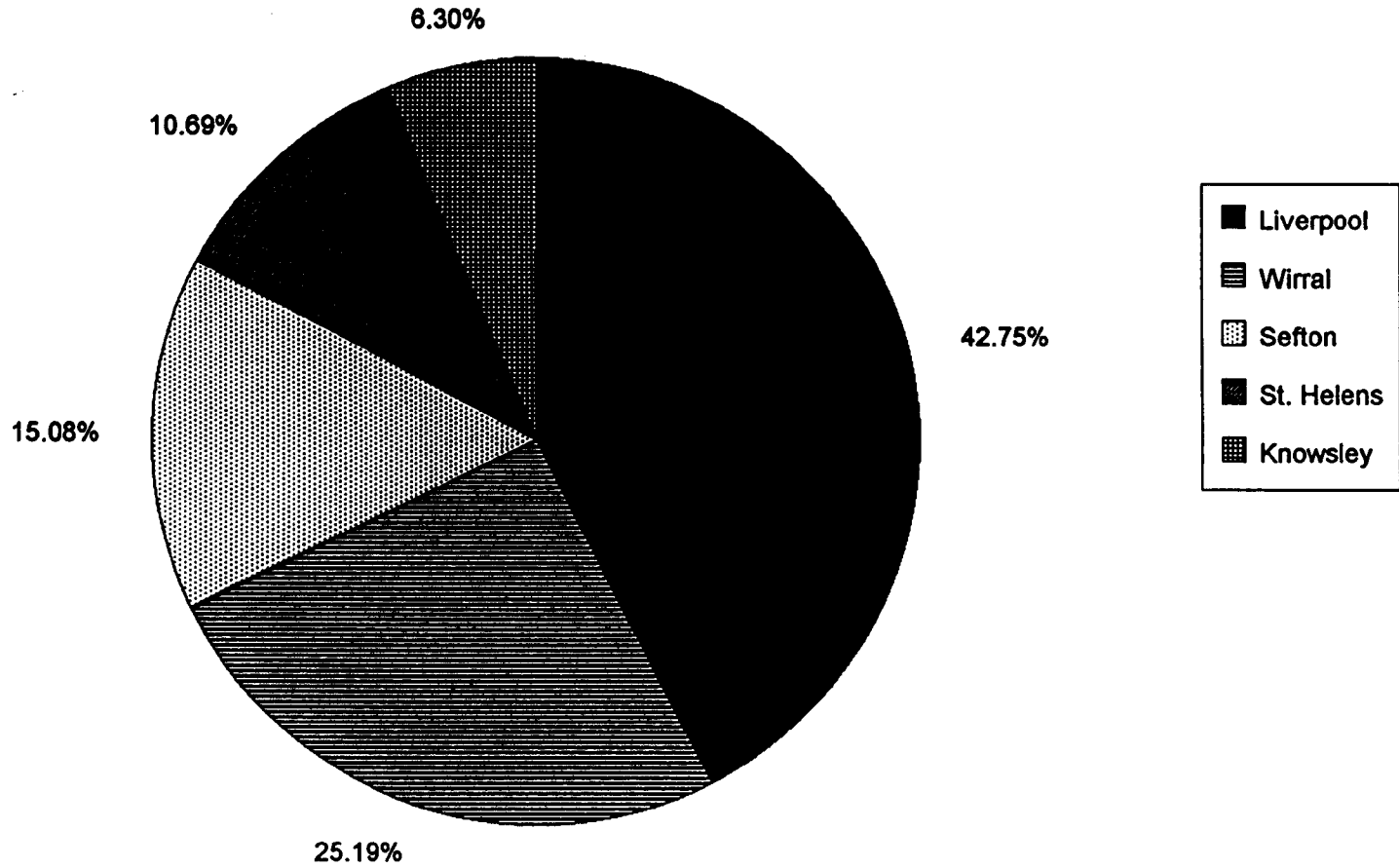
A disproportionately large section of the firms surveyed are located in the first three postal districts in central Liverpool (L1, L2, L3, see Figure 5.2<sup>2</sup>). This concentration of producer services within Merseyside reflects the centripetal pattern in which they manifest themselves around urban areas (Martinelli 1987). The central focus of their location lies within the traditional central business district of the area,

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<sup>2</sup> Figure 5.2 presents a post code map of Merseyside as a reference for the following discussion on producer service location, but the reader is also referred to Figure 3.2 which clearly shows the specific areas of Merseyside.

Figure 5.1

**Percentage of Respondent Firms  
by Local Authority District**





and the surrounding dock and industrial districts (L1, L2, L3 - Figure 5.2).

The remaining distributional patterns reflect the hierarchical urban structure of the Merseyside area. Birkenhead (L41-L45), Southport (PR8, PR9) and St. Helens (WA9, WA10), all feature as nodal points for respondent locations; Wirral's business area does not appear as prominent, being distributed over five postal code areas, yet accounting for over 16% of the respondent group.

From the Local Authority district distribution of firms (Chapter 4), it is noticeable that there is no specific concentration of respondents from the Knowsley area. This is unusual considering there were 366 producer service firms in the area in 1987 (A.C.E. 1987) and the district has several key centres: Kirkby, Prescott, Huyton and Halewood (L31-L35).

The possible reasons for the dispersed response pattern in Knowsley are: firstly, the low response rate from the area because of the low response rate from blue collar service firms, which account for 62% of the area's producer service firms, and secondly, there is no prominent central commercial business area in the district, with the majority of firms being located in Knowsley Industrial Park, Huyton Industrial Estate and Halewood (Brackley 1988).

The overall spatial distribution of the response group reflects the spatial characteristics of producer service firms examined in other studies, with regard to their urban focus (Martinelli 1987, Daniels 1987).

### 5.2.2/ Structural Characteristics of Response Group

Chapter Four (Table 4.1) shows the proportion of firm types that have been captured within the response group. The largest sub-groups being: accounting, advertising, architects, banking, building societies, computer consultants, estate agents, haulage, insurance, legal, management consultancy, office equipment, quantity surveyors and security. These are the primary response sub-groups because they initially dominated the universal survey population (Table 4.1, Chapter 4).

Of the respondent firms, 40% were established after 1980 and only 30% were established prior to 1970. This tends to reflect the characteristics described in Chapter Three (section 3.4), that the majority of producer service firms were in decline throughout the 1970's and that there was a definite growth in the late 1980's.

Another division in the respondent group, is between single and multi site establishments (Chapter 4, Table 4.2), of which has important implications with regard their status within the corporate structures of organisations (see Chapter 1). Table 5.1 shows a status break down of the response firms, indicating that the majority of the multi site establishments (60%) are branch operations. The 1.9% of respondents classed as equal status operations indicated that their firm had several establishments, yet all had equal ranking within the firm structure.

The status break down of the firms is especially relevant to issues of; firm linkage and possible multiplier effects

Table 5.1

Status of Responent Firms

<u>Status</u>	<u>Number</u>
Independent Single Office	309
Branch Operations	129
Head Quarters	54
Regional Offices	28
Equal Status Multiple Offices	4

Table 5.2

Location of Firm Structures

a/ Location of Head Quarters for Branch Operations on Merseyside

<u>Location</u>	<u>Number of Firms</u>
South East	60
North West	30
North East	12
South West	9
West Midlands	8
East Midlands	5
Scotland	5
<b>Total</b>	<b>129</b>

b/ Location of Head Quarters for Regional Offices on Merseyside

<u>Location</u>	<u>Number of Firms</u>
South East	11
North West	7
Merseyside	6
South West	2
West Midlands	2
<b>Total</b>	<b>28</b>

c/ Location of Branch Operations with Head Quarters on Merseyside

<u>Location</u>	<u>Number of Frims</u>
North West	14
Merseyside	11
Wales	9
South East	8
Over Seas	4
South West	3
North East	3
East Midlands	2
<b>Total</b>	<b>54</b>

within the area, as previous analysis have shown these to be limited in branch operations (Marshall et al 1987).

Table 5.2 shows the locational characteristics of the firm structures and the dominant influence of companies based in the South East. Of the 129 branch operations surveyed, nearly 50% had their head quarters (HQ's) in the South East, with the North West being the next dominant region for HQ location. Nearly 40% of the regional offices surveyed had their HQ's based in the South East, and the North West was again the second most prominent region for regional HQ's.

In comparison, the inter-regional penetration of firm structures from those based on Merseyside is not as extensive. Table 5.2 shows the distribution of branch operations with HQ's based on Merseyside. Their spatial distribution is far more constrained than their southern counterparts, the majority being based in the North West, Merseyside and Wales, with only 13% of companies having operations in the South East.

This is very important in terms of the autonomy and local industry linkage that branch plants have, affecting their ability to encourage economic regeneration from their internal and external markets. Branch plant operations in general and on Merseyside are more likely to conduct their business in isolation from the surrounding economy (Marshall 1983, Daniels 1984, see also further evidence from this chapter and chapter 7).

With a restricted geographical dispersal of firm operations, indigenous firms cannot penetrate the national economy to the same extent as southern based operations.

Additionally, branch establishments tend to internalise operations, especially advanced service skills, restricting regional multiplier links to menial functions and thereby depressing regional economic development.

### 5.2.3/ The Locational Anatomy of Respondent Firms

Table 5.3 shows the number of firms that relocated since 1981 and the years in which these movements occurred. As indicated, over 60% of the firms surveyed had not relocated, whilst the majority that did, moved in the late 1980's. This tends to coincide with an upturn in the area's economy, after the depression earlier in the decade, resulting in firms seeking larger and improved premises. Appendix 5iii confirms these assertions by highlighting the direct reasons for relocation. Only 11% relocated due to rationalisation, whilst 44.5% did not relocate the entire establishment, indicating the move was an extension of the existing business.

The trend of merger and acquisition that arose in the 1980's is not reflected in the relocation pattern of the surveyed firms, as only 7.5% of the recorded relocations were a result of these factors (Appendix 5iii). Tentative conclusions could be made as to the lack of interest or investment in the Merseyside area (INWARD 1989, Daniels 1987).

The 48.5% of firms that relocated chose the open answer option on the questionnaire (Appendix 5i), and gave the reason as a need for larger premises, or a wish to move from lease accommodation into the purchase market.



Table 5.3

Relocation Dates and Firm Frequencies, 1981-1989

<u>Dates</u>	<u>Number of Firms</u>
1981	3
1982	21
1983	17
1984	18
1985	26
1986	27
1987	31
1988	40
1989	17
<b>Total</b>	<b>200</b>

Other locational decisions were given a priority category in the questionnaire (section 2.4-2.6, Appendix 5i). This was directed at, not only those who had relocated, but also those who had remained in the same location for nine years. The analysis examined locational decisions on both choice of premises and area, as previous studies have shown these to be contrasting issues (Daniels 1982).

Section 2.4 of the questionnaire examined the overriding influence on relocation, whilst section 2.5 segregated these firm movements into four categories: the most and least influential factors for relocation, divided between area and premises. Section 2.6, whilst utilising the same categories, examined the reasons why the firms remained at the same location between 1981 and 1989.

The frequency responses for the locational variables are shown in Appendix 5iv, the missing values indicate the 324 firms that did not relocate between 1981 and 1989. Of the three most influential factors for firm relocation, the first indicates that 68% of firms simply moved because of 'inadequate space for expansion', whilst the rest were divided between: 'increasing overheads', 'client access problems', 'poor quality of environment', a 'lack of business opportunity' and 'termination of leaseholds'.

The second major influence on relocation is not as clearly defined as the first, with the main split being between 'client access problems' (25%) and 'poor quality of environment' (23%). The third most influential factor for most firms relocation is

indicated as 'inadequate parking facilities' (19.5%), with the remainder being evenly dispersed over a wide range of factors.

The least influential factors in the firms' relocation decision are: 'employment recruitment problems' (20%), 'wage differentials' (19.5%) and 'employee journey to work time' (24.5%). There is no overriding factor which the founders consider inconsequential and of those selected, only the lack of importance given to recruitment problems appears unusual. This is distinctive in contrast to the report of the MIDO (1988), which stresses the deficiencies of highly qualified staff within the area. But it is more likely the firms incurred no problem recruiting the more menial, part-time staff, of which there is an abundant supply, especially amongst the unemployed in the area (Stoney 1989).

The factors highlighted as strong or inconsequential influences on relocation are not unusual considering the characteristics of the area: its travel to work areas (Lawton 1982), structural shifts in the economy (Daniels 1982) and its decaying urban environment (Handley 1982). All of these point towards, firm movement due to poor environments or a lack of ability to expand, with little or no effect from, urban congestion or a shortage of cheap menial labour. The producer service sector confirms these as significant within Merseyside and highlights the area's marginal economic position.

The relocation patterns of the firms, in terms of the push factors from their original location, are simply related to the establishments' expansion policy. This is also enhanced by a need to acquire a better quality of environment and, as a

result, increase access to existing and prospective clients. In contrast, the relocation of the firms is not dependent upon the common problems exhibited by principal cities, such as diseconomies of congestion and recruitment problems normally associated with places near the top of the urban hierarchy.

Appendix 5iv also shows the pull factors of the new locations, for both area and premises. The preferential choice of area corresponds with the push factors above, as it is based upon a desire to move to a better environment. This factor is indicated as the most influential by 36% of firms which relocated. The most favoured secondary influence on the decision to relocate, refers directly to the 'suitability of the premises', with 39.5% of firms choosing this option. This response was also favoured as the third most influential factor, slightly ahead of 'communication links' (18%) and 'operational costs' (16%).

The pattern of choices for the least influential factors to relocate to a particular area are far more defined than the most influential. Forty two percent of firms chose the 'wage differentials' factor as the most ineffectual influence on choice of area, whilst 61.5% of firms chose 'Local Government incentives' as the second least influential factor and 66.5% chose 'Central Government incentives' as the third least effective influence to relocate. These frequencies clearly indicate the lack of consideration given to labour costs, indicating a ubiquitous supply, and the expression of extreme indifference towards any form of public economic policy.

The frequency patterns for the most influential factors dictating choice of premises, replicates those indicated for choice of area (appendix 5iv). As the most influential, 33% of firms designated the 'quality of environment' factor for choice of premises. Whilst, for the second and third most influential, 37% and 29% of firms respectively, indicated 'suitability of premises'.

As the most influential factors for choice of premises duplicate those for the choice of area, so the least influential factors for choice of premises corresponds with the least influential factors for choice of area. Forty percent of firms designated 'wage differentials' as their first choice, for the least influential factor in choosing their premises. For the second and third least influential factor on choice of premises, 65.5% of firms selected 'Local Government incentives' and 68.5% chose 'Central Government incentives'.

The pattern of selections for factors least affecting choice of new premises, reiterates the conclusions drawn from the area factors. The cost of labour has little, or no, effect upon the firms' relocation decision; again indicating the possible ubiquitous supply of labour, due to demand levels for skilled labour remaining low and the supply of menial labour remaining high. Also, the locational decisions on choice of premises are, as with the area decisions, in no way effected by any form of public economic policy. This highlights the lack of public incentive for this particular economic sector, even in an area such as Merseyside, inundated with all forms of economic regenerative strategies (Chapter 3).

To give substance to these comments, Table 5.4 shows the crosstabulation of the relocation variable with the types of firms. There is no distinction between blue or white collar operations with regards to their relocational influences. It appears that the lack, ignorance or distrust of public policy occurs throughout the whole range of producer services and that strategic economic planning does not incorporate this sector, on a regional or national basis.

The other major findings from this section of the study point towards the desire for a satisfactory working environment and a lack of consideration given to labour costs when firms seek new locations. The 'quality of environment' is a very subjective view and will change from firm to firm, and these opinions can only be assessed by qualitative techniques (see chapter 7). The lack of effect of 'wage differentials' reflects two phenomenon: firstly, the excessive supply of menial labour, which is relatively available throughout Merseyside, and secondly, the proportionally low demand for key personnel which tends to sustain subdued wage levels.

The crosstabulation of firms with relocation patterns (Table 5.4), also shows the breakdown of the firms that did not relocate. As with the relocated firms, there appears to be no overriding sub-set, disproportionate to their sample size, which have tended to remain in the same location for 9 years.

The factors indicating why certain firms maintained the same location throughout the 1980's are broken down into four sections (Appendix 5v); the most and least influential factors, with relation to area and premises. The first of these sections

Table 5.4

## Relocated and Non Relocated Firms

Firm Type	Relocate			Firm Type	Relocate		
	Yes	No	Total		Yes	No	Total
Accountants	25	25	50	Employment Agencies	0	5	5
Accountant Services	2	8	10	Engineering Consult.	7	7	14
Advertising	8	10	18	Estate Agents	7	4	11
Admin. Services	2	0	2	Export Agencies	0	4	4
Air Compressor Hire	0	6	6	Facsimile Hire	1	1	2
Air Conditioning Ser.	2	0	2	Financial Services	2	6	8
Architects	17	20	37	Freight Transport	2	4	6
Banks (Commercial)	0	17	17	Heating Services	3	0	3
Brick Merchants	0	2	2	Equipment Hire Ser.	2	7	9
Builders Merchants	6	0	6	Import Agents	3	0	3
Building Societies	2	12	14	Industrial Clothing	2	2	4
Buildings (Prefab)	0	3	3	Insurance (Commercial)	0	20	20
Burglar Alarms-Business	0	2	2	Landscape Architects	4	0	4
Business Consultants	2	0	2	Legal Services	11	18	29
Cargo Consultants	2	2	4	Management Consultants	11	9	29
Catering Equipment	2	2	4	Marine Surveyors	1	1	2
Caterers	3	3	6	Market Consultants	6	0	6
Chemists-Wholesale	0	4	4	Office Equipment	6	12	18
Cleaning Services	4	2	6	Photographers-Commercial	0	7	7
Commercial Vehicle	2	4	6	Printers	3	5	8
Commodity Brokers	4	0	4	Publishers	1	3	4
Computer Consultants	15	19	34	Quantity Surveyors	2	12	14
Container Services	0	5	5	Removals-Commercial	0	2	2
Contract Hire Services	0	2	2	Road Haulage	4	12	14
Couriers	2	4	6	Secretarial Services	0	2	2
Credit Consultants	2	2	4	Security Services	4	6	10
Design Consultants	5	7	12	Shipping Services	0	6	6
Drawing-Commercial	1	1	2	Sign Artists	2	0	2
				Surveyors	2	3	5
				Training Consultants	0	2	2
				Wholesale Operations	4	4	8
				Column Total	200	324	524
				Percentage	38.2	61.8	

(greatest influence for remaining in the same location) is divided into three preferential choices. 'Client access' was deemed to be the most influential attribute, by 54.3% of firms, for remaining in one area. For the second most influential factor, 26.5% of firms also chose 'client access', with 'quality of environment' and 'suitability of premises' playing more of a dominant role. The third most influential factor chosen by the greatest number of firms, was the 'suitability of premises' (17.9%), closely followed by operational costs (15.4%). Therefore, for most firms, apart from 'client access', the importance of the premises overrides other attributes of the surrounding area.

The least influential attributes for services remaining in one area are clearly defined (Appendix 5v). The least influential being designated as 'development assistance' by 73% of firms. The second least influential being 'Local Government incentives', noted by 79.3% of firms, and the third being 'Central Government incentives', selected by 79.9%.

It is obvious from these results that the reasons why firms remained in one location throughout the 1980's are vague in terms of a positive need, revolving loosely around 'client access'. But, by comparison, the firms are much clearer as to what has not influenced them; public policy. Once again proving the lack of involvement of public incentives within this economic sector and the fact that these services recognise this deficiency (see also PSWP 1986).

The final two sections, addressing locational decisions, cover the issues of why firms remained in the same premises



throughout the 1980's (Appendix 5iv). The most prominent factor indicated by 42.9% of firms was that of 'client access'. 'Suitability of premises' was designated as the second most influential factor as to firms remaining in the same premises (17.3%), which was also indicated as the third most influential factor by 29.3% of firms.

The least influential factors for remaining in the same premises, were the same as indicated for maintaining the area location: 'development assistance', Local Government incentives' and 'Central Government incentives'. These were all selected as playing no role in the locational decisions of the firms which remained static throughout the 1980's.

It is apparent from the locational results that non-market development strategies have had little, if no, effect upon the surveyed producer services. And this is exhibited to such an extent that it would be improbable that any significant section of the producer service sector on Merseyside had been influenced by public policy.

#### 5.2.4/ Employment Structure of Respondent Firms

An overall picture of the employment structure of the respondent firms is shown in Table 5.5 and additional information is also provided in Appendix 5vi. The Tables presented in the appendices break down the specific structures of the firms, by frequency for all occupational types and it was considered appropriate to show all the tables recorded for several reasons.

Table 5.5

Percentage of firms employing specific categories

Employment  
categories

Male F-T Female F-T Male P-T Female P-T

Directors	94.1	20.6	3.2	4.4
Admin	22.3	38.5	1.7	12.4
Profess	37.2	17.9	3.1	4.2
Technical	32.6	9.4	1.9	5.5
Sales	24	13	0.8	4.8
Marketing	8.2	3.6	0.4	0.8
Secretarial	14.5	55.7	0.8	30.9
Government training	13.2	10.5	0.8	0.4
Other Ser. employees	23.3	3.6	6.7	10.1

Firstly, to give an accurate account of the quality of employment being provided, in terms of the occupational careers available for a large unemployed labour force needing reintegration back into the market place. This is especially important considering the 'human capital' factor of producer services and their possible regenerative attributes, in contrast to the social polarisation between the elites in the workforce and the provision of menial low quality opportunities (Abercrombie and Urry 1983).

Secondly, to display the gender divisions that exist within the producer service sector. This involves social constraints and relations restricting female entry into the upper employment ranks, whilst economic structures utilise their surplus value at the bottom end of the labour market. Thereby emphasising the contradictory powers of capitalist production; developing new industries during the 1980's and 1990's, whilst maintaining and reinforcing the social relations of production with regards to class and gender.

The third reason, is to illustrate the range of employment structures within the producer service sector, which in the majority of cases tend to be the smaller size firm. There are obvious exceptions in the sector as a whole and in the survey population, but the majority of employment numbers are fairly limited. This demonstrates the lack of ability this sector has for soaking up unemployed resources or for creating opportunities.

It is understood that the "growth in producer services is no panacea for the deindustrialisation in manufacturing"

(Marshall 1985, page 14), but the results of the survey shown in this section (and Chapter 3) question the sector's ability to create moderate job growth. Also, as it is the case that the majority of firms in this sector are small, then it would need a massive increase in their numbers to have any impact upon Merseyside's economic and social fabric. Considering their rate of growth throughout the 1980's (Chapter 3), this appears an unlikely scenario.

One of the first contrasts to be drawn from the employment data (Table 5.5, Appendix 5vi) is between male and female managing directors; whilst only 5.9% of firms do not possess a full time male director, nearly 80% of firms do not have a full time female director. In the cases where firms do have a female director, 84% only possess one, whilst, at the most, 4.6% of firms employ up to 3 female directors.

In comparison, of the 94% of firms that possess a male director, the number of directors per firm ranges from 1 to 13. The part time members of this group are very minimal, with only 3% and 4% of firms possessing male and female part time directors respectively (Table 5.5, Appendix 5vi).

The range of administrative staff is slightly skewed towards female participation, but as indicated by the tables for this employment category (Appendix 5vi), the overall contribution of this sector to the employment level of firms is limited. Only between thirty to forty percent of firms utilise specific administrative staff, with extremely low figures for all categories of employment (Table 5.5).

There are two possible reasons for the low representation of this group; firstly, the firms do not categorise administrative staff (those who organise and manage office functions) into the type of job description given, placing them amongst technical and secretarial staff. Secondly, the firms surveyed do not employ a large number of administrative staff, as these are being replaced by multi-functional staff or investment in IT. These types of development, Rajan (1987), show the decreasing need for administrative staff, as they are being replaced by advanced expert systems; removing the personnel but not the function.

Examining the data on professional staff (Table 5.5, Appendix 5vi), the gender divisions within the firms becomes more obvious. The majority are full time male staff, with 40% of the firms employing male full time personnel, as opposed to 20% employing full time female professional staff.

Apart from the reduced numbers of firms employing female staff, there is a considerable difference in the range of numbers these firms employ. Those firms using professional staff, employ between 1 to 17 full time male employees, whilst the range for full time female members is between 1 and 9.

Part time professional employees are virtually insignificant, with only 3% of firms employing males with a possible range of 1 to 4, and 4% of firms using part time female staff, ranging between 1 to 3. Therefore, this not only shows the limited ability of the firms to use professional part time staff, but also the restricted entry of personnel into these posts. The complete range of professional staff employed is

greater in number than the administrative staff, and this range of employees (accountants, solicitors, consultants, brokers, etc.) could be said to play a more pivotal role in the firms. Also, there are far more restrictions to replacing these personnel with alternative staff or increasing productivity via IT, than there are with administrative staff.

The role of the professional is crucial to the operation of these firms and, because it is virtually impossible to erode their power base and protected niche, the numbers are fairly secure with this sector. Long term employment prospects for this group of people are relatively stable, primarily because of their position amongst the power elite, with specific class and educational requirements (Bottomore 1979, Goldthorpe 1980, Abercrombie and Urry 1983). The professions offer little in the way of social rejuvenation for the depressed areas of the county; limited employment opportunities and high levels of social closure (see Chapter 2).

Employment levels of technical staff highlight even further the gender divisions within these firms (Table 5.5, Appendix 5vi). The members of this category are heavily skewed towards male employees, with little female representation. Approximately 33% of the firms employed full time male technical staff, ranging from 1 to 13, as opposed to female technical staff, which were only employed by 10% of firms. The part time employment of this group was negligible, but tended to be skewed, as in other cases, towards female inclusion.

The constituents of this technical group have previously been mapped out (Malecki 1980, Markusen 1983, Wood 1982, Rajan

1987), but several points are relevant here. Firstly, the male dominance of this sector can be traced through working class gender relations. The whole spectrum of training from school onwards, imposed by established social relations, has constrained and prohibited female entry into this category, as much as it promoted and enabled male dominance. Therefore, it is not simply the direct effects of the working relationships within the service sector which have engendered this position, but rather the reproduction of existing capitalist relations.

Secondly, that with increasing intelligent systems and operations being introduced, such as image scanning and Computer Aided Design (C.A.D.), the difficulty and time consumed in performing technical tasks is being reduced (Wood 1982, 1987). Therefore, the employment base of this sector is being eroded by encroaching technology and concentrated into sub-contracting operations (Holmes 1986). This is because their services are needed less frequently than previous technology would allow, and as a result these services are becoming externalised, removing the overall potential for technical employment.

Sales and marketing employees are usually grouped together in quantitative surveys (Daniels 1987), but this ignores the increasing trend of sub-contracting marketing operations (including advertising), whilst sales, for obvious reasons of loyalty and motivation, are kept inhouse. This type of sub-contracting occurs throughout a whole range of industries and is in fact one of the reasons for the specialist demand in producer services (Daniels 1988), but there has been no research as to

the effect this trend has had on producer service firms themselves.

The separate figures given for sales and marketing employees (Table 5.5, Appendix 5vi), tend to confirm the assumptions above. Sales staff, predominantly male, are utilised to a reasonable extent by 24% and 13% of the firms, with regards to male and female employees. In contrast, the marketing employee figures are relatively low for both full and part time staff, with the highest employment level being male full time staff, which were used by approximately 8% of the firms.

Aside from the managerial employee figures, another strong indicator as to the gender divisions within the labour force, is the structure of secretarial employment. The figures for this sector (Table 5.5. Appendix 5vi) clearly reveal the disproportionate involvement of female labour. The tables also show that, apart from being female dominated, it was the highest employment sector amongst the firms. Because of this, the inclusion of full time male labour is relatively high, with 15% of the firms utilising this type of staff, employing upwards of 10 full time secretarial male members. But, by far the largest employment sector of the firms surveyed was full time secretarial female staff. Approximately 60% of firms employed this type of worker, with the majority (73%) having three or below.

Secretarial male part time employment was virtually non existent, below 1%, whilst the contribution of part time female employees was disproportionately larger, over 30%. This final distinction is clear evidence of the criticism of the gender



imbalance within producer services (Urry 1987, Marshal et al 1988). It outlines not only the magnitude of the disparity, but also the quality distinctions that are placed upon the human capital within these firms.

It is not within the scope of this section to discuss the feminisation of the labour force (Wood 1987, Bowlby et al 1989). However, it is appropriate to note the empirical evidence provided, which confirms the previously stated gender related problems within producer service firms, and the inability of this sector to provide a sound base for economic regeneration or encourage rejuvenation for the socially deprived sections of the Merseyside area.

The final sections of the employment categories (Table 5.5, Appendix 5vi) analyse government trainee schemes and any other additional personnel that did not fit into previous categories (drivers, couriers, etc.). These employment groups provide a limited contribution to the sectors employment levels, apart from the 'other' male full time category. This group recorded semi and non skilled personnel, such as drivers, labourers or couriers, in haulage, wholesale and building merchant firms. Even though this group provides the largest contribution of the two remaining sectors, only just over 20% of firms utilised this form of human capital.

The employment profiles of the firms undoubtedly highlight the prominent characteristics of the human capital within this sector. They tend to reaffirm the assumptions that: producer service employment is not compatible with the labour market base of a deindustrialised area, and that the human capital patterns

of the firms reinforce and polarise the structural disparities within the labour force. These are: the dominance of male managerial and professional roles, in conjunction with a reliance upon menial, often part time, female labour. This reproduces the influences of wider social structures which are indicative of the problems that cause the degradation of industrialised areas; promotion of an elite working group and exploitation of a wider subservient social class, which has ultimately resulted in the polarisation of economic activity and the social consequences of spatial uneven development (Massey 1984, Marshall et al 1988).

#### 5.2.5/ Change in Employment Characteristics 1981-1989.

It was not sufficient to merely record a static picture of employment characteristics (as described above), because this ignores the possibility of contradictory trends. Therefore, the employment trends of each group were assessed, from 1981 to 1989<sup>3</sup>. The tables shown in Appendix 5vii have been chosen so as to reinforce the points made in the previous section.

The first two tables show the change in composition of full time managerial jobs, and as indicated , the greatest proportional growth occurred amongst female workers. However, in relative terms this is a very small increase in comparison to the 25% growth in male managerial workers. For the majority of firms the managerial staff, over this period, remained static

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<sup>3</sup> This analysis relates to section 3.2 of the questionnaire (Appendix 5i).

and around 10% incurred a decrease in both male and female managerial employees.

Within the managerial category, the firms witnessed an overall increase, but this growth has been minimal. The majority of the firms experienced a static level of managerial employment, which in comparison to the rest of the nation during the same period, indicates a negative growth rate (Rajan 1987, Marshall et al 1988). Therefore, there was very limited growth of managerial positions on Merseyside throughout the 1980's, and there is no guarantee that these posts were taken by people from the local area (see Chapter 7).

The tables indicating the change of full time administrative staff show that, for both male and female, there was an overall growth. However, in the case of the male staff a considerable number of firms experienced a decrease (22%), by comparison with the number of firms incurring a loss of female staff (6.5%). This indicates the greater stability of female administrative staff, possibly due to restrictive work practices and limited career structures.

The Tables in the appendices (5vii) displaying the change in professional levels of employment, demonstrate an interesting contrast between male and female employees. The firms indicating female employment show no decrease in numbers at all throughout the 1980's, whilst the pattern for male employment presents an average picture of loss, gain and static job levels.

This (professional) group is male dominated with long term work histories, and the limited female contribution to the

professions has meant their growth is mainly a recent phenomenon.

The rest of the Tables produced for this section, apart from those indicating the change in secretarial employment structure, do not provide any additional information, other than displaying minimal growth rates over the nine year period. Therefore, the final tables shown in Appendix 5vii examine secretarial employment, and they tend to confirm the growth rates of female employees, especially in part time occupations, above that of the male increment.

Of the small number of firms indicating the use of male secretarial employment, less than half increased their use with the rest displaying negative or static employment patterns. This contrasts with the female involvement in this category, both full and part time which, considering the large percentage of firms involved, display large increases in employment levels. It is especially conspicuous that only a small number of firms (4.6%) recognised a decrease in secretarial female part time employment, confirming this as a particular growth sector.

#### 5.2.6/ Training Facilities

The results from this section of the questionnaire are self explanatory, revealing the training patterns of the firms surveyed and giving an indication as to the types of priorities producer services pin point for human capital development.

Table 5.6 displays a crosstabulation of the firm types with whether or not they provide any training facilities. This gives

Table 5.6

## Comparison by Firm of Training Facilities

Firm Type	Provide Training			Firm Type	Provide Training		
	Yes	No	Total		Yes	No	Total
Accountants	39	11	50	Employment Agencies	2	3	5
Accountant Services	7	3	10	Engineering Consult.	11	3	14
Advertising	12	7	18	Estate Agents	10	1	11
Admin. Services	0	2	2	Export Agencies	4	0	4
Air Compressor Hire	4	2	6	Facsimile Hire	1	1	2
Air Conditioning Ser.	2	0	2	Financial Services	7	1	8
Architects	23	14	37	Freight Transport	4	2	6
Banks (Commercial)	17	0	17	Heating Services	3	0	3
Brick Merchants	2	0	2	Equipment Hire Ser.	6	3	9
Builders Merchants	0	6	6	Import Agents	3	0	3
Building Societies	13	1	14	Industrial Clothing	2	2	4
Buildings (Prefab)	3	0	3	Insurance (Commercial)	20	0	20
Burglar Alarms-Business	2	0	2	Landscape Architects	4	0	4
Business Consultants	2	0	2	Legal Services	19	10	29
Cargo Consultants	2	2	4	Management Consultants	19	1	20
Catering Equipment	3	1	4	Marine Surveyors	2	0	2
Caterers	5	1	6	Market Consultants	6	0	6
Chemists-Wholesale	2	2	4	Office Equipment	14	4	18
Cleaning Services	4	2	6	Photographers-Commercial	7	0	7
Commercial Vehicle	6	0	6	Printers	6	2	8
Commodity Brokers	4	0	4	Publishers	4	0	4
Computer Consultants	28	6	34	Quantity Surveyors	8	6	14
Container Services	3	2	5	Removals-Commercial	2	0	2
Contract Hire Services	0	2	2	Road Haulage	10	6	16
Couriers	6	0	6	Secretarial Services	2	0	2
Credit Consultants	4	0	4	Security Services	8	2	10
Design Consultants	8	4	12	Shipping Services	6	0	6
Drawing-Commercial	2	0	2	Sign Artists	2	0	2
				Surveyors	5	0	5
				Training Consultants	2	0	2
				Wholesale Operations	6	2	8
				Column Total	410	114	524
				Percentage	78.2	21.8	

a clear insight into the categories of firms that favour human resource development and points towards a deficiency of training provided by blue collar operations. This is a culmination of: a lack of resources and/or time to undertake this type of activity, and the reduced necessity for these firms to provide training for basic, menial operations.

Table 5.7 indicates the distinction between inhouse and external forms of training and clearly shows the former to be more popular. This corroborates the survey results of Beyers et al (1986), which revealed companies were far more willing to cater for human resource development inhouse rather than use external methods. The reason for this being; to provide personalised training programmes specifically linked with the firms working practices and to minimise external contact which could result in higher costs.

Table 5.7 also reveals two key characteristics of the firms training patterns; firstly, more firms provide inhouse training to secretarial/clerical staff than any other occupational group, and secondly, the highest rate of external training is given to managers and directors. It is difficult to relate this characteristic to the work of Beyers et al (1986), because of the different training categories this study used. The high rates of training for secretarial/clerical staff is a result of these employees being drawn from a pool of unqualified or unskilled labour. This tends to be the case for changing labour markets for these industries (Wood 1988), where female staff are drawn back into the work force after a long absence, or alternatively, because of the rapid development of office IT and

Table 5.7

Percentage of firms providing training provision

<u>Occupational Category</u>	<u>Inhouse</u>	<u>External</u>
Directors/Managers	26	30
Administrative	23	15
Professional	20	22
Technical	21	18
Sales	24	16
Marketing	9	8
Secretarial/Clerical	33	10
Government training	10	4
Other service employees	11	3

Table 5.8

Percentage of firms experiencing certain business trends 1981-1989

	<b>Increase</b>	<b>Static</b>	<b>Decrease</b>
<b>Turnover</b>	86.6	8.4	5.0
<b>Services Offered</b>	68.9	30.3	0.8
<b>Client Base</b>	83.0	10.5	6.5

Table 5.9

Percentage of firms conducting business with each economic sector, 1981-1986

	<b>1981</b>	<b>1989</b>
<b>Primary Sector</b>	13.4	13.9
<b>Secondary Sector</b>	68.3	68.7
<b>Tertiary Sector</b>	96.6	96.8

the need to constantly update computer skills (Henwood and Wyatt 1986, Nelson 1986). Under both circumstances, there is continuous pressure to maintain office efficiency, and quick, effective, sometimes informal inhouse training facilitates these needs.

The second characteristic outlined in Table 5.7, that of priority given to directors and managers for external training, does concur with the work of Beyers et al (1986). This type of priority given to managerial development has been previously noted as part of the traditional managerial role (Hannah 1976, Chandler and Daems 1980). It fulfils many functions within the firm; such as facilitating economic and social linkage to external institutions, via formal and informal channels, but because this type of external professionalisation occurs, it reproduces the working relationships between the elite groups and the other employees. These relationships are a contributory factor to:

"...the restructuring of the patterning of social inequality, to a system based on the salience of occupation, to legitimation via achievement of socially recognised expertise, and to a heightened concentration on education and the possession of credentials." (Urry 1986, page 51).

It is intrinsic to the role of the service and managerial class<sup>4</sup> within the firms to separate themselves on a hierarchical

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<sup>4</sup> See Chapter 2 and Chapter 7 for a full explanation of these social groups.



basis from those performing the neo-working class functions<sup>5</sup>. It is because of these relationships, personal ambition and the structural conformities of managerial development, that external training is so important to this particular occupational group.

#### 5.2.7/ Business Trends and Export Markets

Table 5.8 presents the percentage of firms that have undergone changes in specific business patterns between 1981 and 1989: turnover, the range of services available and client base. If these responses are taken to be true, for which there is no certain answer, then the overall business performance of these producer service firms appears successful.

For the majority of firms (86.6%), turnover (in real terms) increased during this period, which would indicate a reasonably buoyant producer service sector on Merseyside. This assumption is also supported by the 83% of firms that increased their client base between 1981 and 1989, and the 68.9% that diversified their business markets.

Set against this, is the lack of knowledge on the exact details of these business trends. The increase in business turnover could range from one pound to one billion pounds, the number of services could have merely increased by one and the client base could have increased by one or one hundred. Whatever the actual changes are, there is no detailed evidence, and the

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<sup>5</sup> The neo-working class functions tend to be the menial white collar jobs, which may have previously been referred to as lower middle, but today are at the bottom of the employment structure.

only assumption to be made is that net growth, as opposed to decline, occurred.

Table 5.8 indicates the firm's diversification pattern is not as prominent as the changes in turnover and client base, because it is not necessarily related to business growth. In general, the trends reflect the growth that occurred throughout the service sector in the 1980's (Allen 1988), and the overall growth in prominence of producer services in contrast to other declining economic sectors on Merseyside (Chapter 3). Therefore, this simply provides confirmation of the national trends, that producer services, whilst not only growing in employment terms, have also witnessed a growth in business transactions (Daniels 1988).

A logical progression is to assess where this increased demand has emanated from, as this is crucial to the assumption that producer services provide a valuable contribution to metropolitan economies:

"There are hierarchical links in the destinations of interregional business-service output and by far the largest proportion of the sales income of some producer services clearly originates from cities or regions well outside the local market area, especially for smaller firms. The significance of this for regional economic adjustment towards a post-industrial structure is that, contrary to belief producer-service development in under-provided provincial areas can perform an export (basic) as well as import substitution (non-basic) role."  
(Daniels 1986, page 309)

Table 5.9 reveals the percentage of firms that conduct business with each economic sector. This tends to confirm the findings of Beyers et al (1986) and Cuadrado (1986) which state

that the majority of producer service firms deal mostly with the service sector. This is a result of the inhouse services used by the manufacturing sector and the small contribution of the primary sector to advanced economies.

As can be seen from Table 5.9, there is virtually no change in the percentage of firms trading with each sector between 1981 and 1989, but this does not relate the detailed change in market areas shown in Appendix 5viii. These tables show the changing structure of the producer service market area; steadily moving away from the primary and secondary sectors towards the tertiary sector.

This conclusion is indicative of the Merseyside area, where there has rarely been a total dependence upon manufacturing and services have continually taken the lead (Hubbard and Nutter 1984). Therefore, the geography of the area's business structure has dictated the sectoral market areas for producer services. This moves away from the concept of these services operating independently of a particular locality, with regards to self sustaining growth (Daniels 1986).

Table 5.10 shows the geography of the firms' exports, 1981 and 1989, and demonstrates the dependency the majority of firms have upon business generated from the local area. This tends to confirm the findings by Daniels (1987 page 25), which reveals a local dependence of the producer service sector within the area, contrary to national trends (Daniels 1986). This has lessened throughout the 1980's, but Table 5.10 indicates the business conducted outside of Merseyside tends to make up a small percentage of the firms' revenue.

Table 5.10

Geography of responent firms' business

a/  
Percentage of firms conducting business in Merseyside

<u>% of business conducted</u>	<u>1981</u>	<u>1989</u>
0-20	10	15
21-40	7	12
41-60	13	12
61-80	24	25
81-100	46	36

b/  
Percentage of firms conducting business outside of Merseyside, within the British Isles

<u>% of business conducted</u>	<u>1981</u>	<u>1989</u>
0-20	62	51
21-40	17	19
41-60	10	11
61-80	5	12
81-100	5	7

c/  
Percentage of firms conducting business outside of the British Isles

<u>% of business conducted</u>	<u>1981</u>	<u>1989</u>
0-20	96	95
21-40	2	3
41-60	1	1
61-80	1	1
81-100	NA	NA

The clients of the firms who conduct business outside of Merseyside can, via the questionnaire, be placed in a regional context and Table 5.11 reveals the geographical extent of these exports. It indicates that those firms exporting outside the area are still geographically constrained within a Northern business hinterland. Again, this local focus of export markets refutes the export potential of this sector touched upon in previous research (Daniels 1986 and Beyers et al 1986).

The firms' export markets did not radically disperse between 1981 and 1989. This is in contrast to the Beyers et al (1986) study, which showed:

"While less than 15% of the firms reported they were externally orientated in their beginning, more than a third of firms stated that they now focus on external markets." (Beyers et al 1987, Page 130).

Producer service firms in Seattle have diversified their market areas, whilst the Merseyside firms have tended to maintain their local focus. This contradicts the understanding that producer services can and do operate independently of a locality; in the case of Merseyside they are inextricably linked to the local economy, providing only a moderate export function. Even though 81.5% of firms do conduct some business external to the area, the bulk of their operations are geographically constrained.

Table 5.12 displays the characteristics underlying the export markets: motives, how the business was obtained and factors discouraging export. The perceived primary reason for export is indicated as 'external demand' (Table 5.12a). For whatever reason the firms become aware of a demand for their

Table 5.11

Regional destination of export, 1981-1989

Regional location of clients	% of firms exporting to regions	
	1981	1989
North West	46	34
Wales	20	17
North East	15	18
Midlands	6	10
South West	3	6
South East	8	10
Scotland	2	5

**Table 5.12****Characteristics of export markets outside Merseyside**

a/

<b>Motivation for export markets</b>	<b>% of firms <sup>1</sup></b>
Inadequate size of local market	63.9
Founders discretion	34.4
Head office requirement	16.2
Following competitors	15.5
External demand	81.3
Natural expansion	36.3
Deregulation of external markets	1.2
Other	5.9

b/

<b>How firms obtained export business</b>	<b>% of firms <sup>1</sup></b>
Personal contacts	51.3
Advertising	45
Clients leaving area	35.8
Government contracts	8.4
Reputation	90.4
Subcontracts	13.1
Other	6.5

c/

<b>Factors discouraging export</b>	<b>% of firms <sup>2</sup></b>
Unable to obtain permits	2.3
Regulated entry into market	4.7
Financial constraints	64.3
Lack of information/advice	60.5
Other (Corporate policy)	36.8

<sup>1</sup> These are only the firms exporting outside of Merseyside 427 (81.5).

<sup>2</sup> All firms in survey (524)

services and as a result they fill this requirement. Second to this, 63.9% of firms exported their business because of a 'lack of a local market', which was found to be the primary reason in the Beyers et al study (1986, page 132). These two motives, firstly a pull factor and secondly, a push factor, are clearly compatible, creating the overall export pattern of the firms as described above. Other less prominent motives recognised by certain firms (Table 5.12a) are: 'discretion of the founder' (see also Beyers et al 1986) and natural expansion of the firms business (Daniels 1987).

Table 5.12b indicates how the firms actually enter external business markets once the decision to export has been made. The reasons noted, 'reputation' and 'personal contacts', operate outside of a purely economic approach (advertising or sub-contracting) and highlight the importance of social networks for enabling business development. This contrasts with the Beyers et al (1986) study, which showed sub-contracting ("carried" into external markets) to be the primary medium for obtaining external business.

The firms' markets are restricted because they cannot afford the financial cost of expanding into wider geographical markets, incurring the additional expense of: advertising, marketing, technological developments, extra personnel, etc. Compounding this, the firms simply do not have the knowledge of how to approach external markets, with regards to official regulations and representative bodies facilitating the establishment of external channels.



The third most popular category, of 'other' (36.8%), discouraging export markets, was designated as the structural constraints placed upon multi site establishments. This meant they had to operate within a specifically defined geographical area, allocated as part of a corporate strategy. They do not aspire to generate external markets as it is not within their remit.

#### 5.2.8/ Sub-contracting and Inter-industry Linkage

One of the main themes of the research is to discover the type of economic linkage producer services create, and as a result, the type of multiplier and knock on effects they encourage within a metropolitan economy. Therefore, questioning the ability of this supposedly stimulating and dynamic economic sector acts as a seed bed for economic regeneration through its connections with the local business community.

In the questionnaire, two forms of external contact were examined (Appendix 5i, section 4.6 and 4.7): firstly, external establishments that have a direct input into the production process of a firms services, and secondly, external firms that enable the daily running and functions of a firm to take place. Fifty one percent (268) of the firms utilised the first type of linkage, whilst forty five percent (239) acknowledged the use of the latter.

The first type of linkage, 'sub-contracting', is fundamental to the production process of the firms. Appendix 5ix shows the range of establishments that the surveyed firms use to provide

these types of service, the main ones being: accountants, lawyers, advertising, haulage, engineering consultants and business consultants. Appendix Six also displays a crosstabulation of the regional location of the firms used with their main service; this initially reveals that 66.8% are located on Merseyside.

The crosstabulation also indicates that the 33.2% of firms that are used from outside the area, predominantly from the rest of the North West, are all 'advanced' (professional) services. The local area clearly supplies a range of low status operations and a certain proportion of professional services, but it is not unusual that firms on Merseyside seek high status operations outside of the local business market. It is also not exceptional that these services are provided from the rest of the North West, predominantly Manchester, as this higher ranking urban area is in close proximity. Manchester, as the regional capital, operates as the key location node for the area, and offers specialist consultant services (legal, advertising, engineers) which are of a necessity to certain firms on Merseyside (Daniels 1982).

In addition to the 19.4% of business that is conducted in the North West, 5.6% of trade leaks to the South East for further specialised services (promotional, marine and business consultants). Considering the range and expertise of services within the North West, and the professional expertise within its academic institutions, it appears surprising and unnecessary for local firms to search nationally for specialised services. But it does confirm previous observations on the complex operating structures of this economic sector (Marshall et al 1988), through

the use of localised expertise in any area of the country by sub-contracting operations and the national structures of multi site establishments (Marshall 1983).

Table 5.13 outlines the reasons for, and how, these contacts were developed. As indicated, the primary method of communication is via personal association, once again demonstrating the vital importance of social networks for these activities. This, along with the informal network of 'reputation' awareness, provides the basis for establishing external links with the supporting services. These issues highlighting the lack of formal or official channels through which links are made.

The reason for these external links (Table 5.13b) appear to be simply a necessary part of the firms business activities, without which they could not operate. And there is little indication that the services required are not offered locally or that their use is a result of internal corporate policy. Therefore, the business patterns of external linkage are a result of connections being acquired when and where they are necessary via informal means. The arrangements tend to be very flexible and increase the specialist application of the sector to meet the fluctuating demands that are placed upon it.

The second type of external linkage, developed through the practical necessity of running a business operation, was acknowledged by 45.6% of the firms surveyed (239). The crosstabulation of these firms and their location is shown in

Table 5.13

Characteristics of interindustry linkage  
for subcontracted services

a/                    **How the subcontracting firms were chosen** <sup>3</sup>

<b>Contact media</b>	<b>% of firms</b> <sup>4</sup>
Professional Lists	5.6
Yellow pages	1.9
Personal Contacts	75
Reputation	60.6
Professional Advice	21.6
Other	6.7

b/                    **Reasons for utilising external contacts**

<b>Reasons</b>	<b>% of firms</b> <sup>4</sup>
Necessary as part of trade	84.7
Services not available locally	28.4
External industrial links	5.6
Competitive reasons	24.3
Intrafirm contacts	19
Other	11.6

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<sup>3</sup> Percentage of firms using external contacts 51.1 % (268)

<sup>4</sup> Percentages do not total 100 as responses not mutually exclusive.

Appendix 5x and, as indicated, 63.2% lie within the Merseyside area.

The majority of the operations employed by the firms tend to be either accountants (56.9%) or lawyers (25.9%), which appear to be prerequisites for a typical business operation (Daniels 1987). The professional services sought outside of Merseyside are predominantly used from within the North West region. The North West is indicated as the second most popular area from which services are drawn by 29.3% of firms.

Under these conditions it is difficult to assess whether or not the firms using services external to the local area, are merely using the resources because it is dictated by firm strategy or simply because these external operations offer a better quality of service. However, it is conspicuous that no lower order services, apart from one haulage firm, are used outside of Merseyside. A network of lower order services is obviously available but due to the cost/distance ratios of these services, it is impracticable to use them on a wider geographical scale.

Table 5.14a shows that the external contacts made were a result of personal relationships and 'reputation awareness', again displaying the importance of social networking. The general reasons for these contacts (Table 5.14b) merely indicate these services as being necessary to allow continual trading; they provide a stable base from which the firm can remain competitive and, under certain circumstances (for one third of the firms), the services were not available locally.

Table 5.14

Characteristics of interindustry linkage  
for the operation of internal business affairs

a/                    How the subcontracting firms were chosen <sup>5</sup>

Contact media	% of firms <sup>6</sup>
Professional Lists	2.5
Yellow pages	1.7
Personal Contacts	82
Reputation	66.2
Professional Advice	19.2
Other	7.9

b/                    Reasons for utilising external contacts

Reasons	% of firms <sup>6</sup>
Necessary as part of trade	92.1
Services not available locally	33.9
External industrial links	0.4
Competitive reasons	34.7
Intrafirm contacts	24.7
Other	10

---

<sup>5</sup> Percentage of firms using external contacts 45.6 % (239)

<sup>6</sup> Percentages do not total 100 as responses not mutually exclusive.

As stated, it is difficult to draw specific conclusions from these linkage patterns without critically analysing the mode of business conducted and the particular operating strategies of the firms. But it can be assumed that with the second type of linkage described, the external services acquired to aid the internal daily affairs of the firms are not predominately used for business conducted external to the area. These firms use services from the rest of the North West and hence cause a certain amount of economic leakage, which is to the detriment of the area.

All of the possible problems created by economic linkage are part of a wider situation, where Merseyside suffers because of its marginal economy and lower economic ranking to that of Manchester (Wray 1986, Frazer-Hamilton 1989). Because of the diversity of services and competitive advantage Manchester has, firms are drawn to it as:

"...the prevailing criterion in most companies, is that of acquiring from outside all those services that cannot be produced internally in the right conditions of quality and cost. (Cuadrado 1986, page 8).

#### 5.2.9/ The Human Capital of Respondent Firms

"The producer service industry relies on creative human labour as an input into the production process to a much greater extent than many other types of service industry." (Beyers et al 1986, page 85).

Figures 5.3, 5.4, and 5.5 show the educational characteristics of the surveyed founders/M.D.'s, which tend to reinforce previous assumptions about the level of academic

Figure 5.3

### Educational Institutions of Surveyed Founders

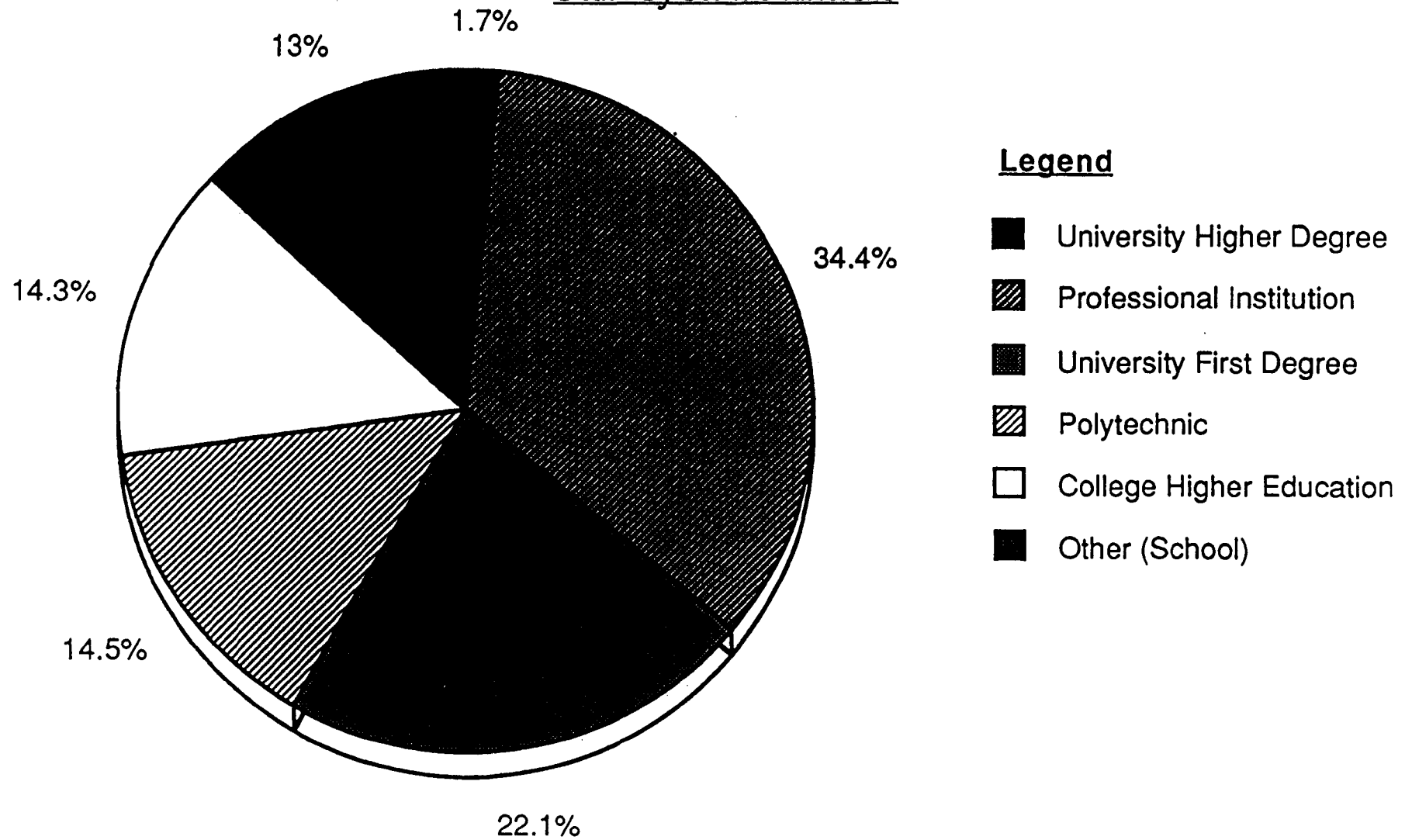




Figure 5.4

Regions where the founders were educated

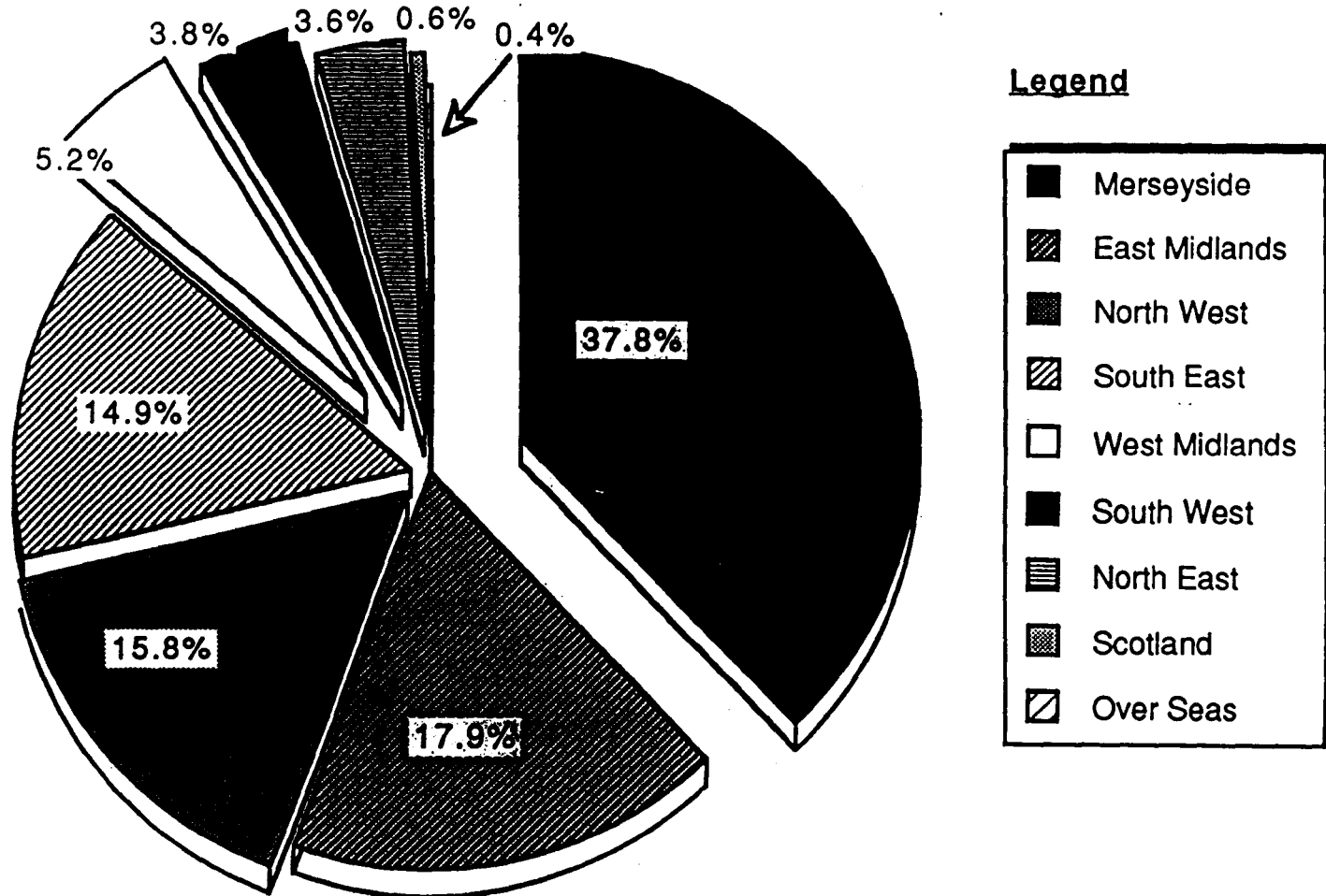
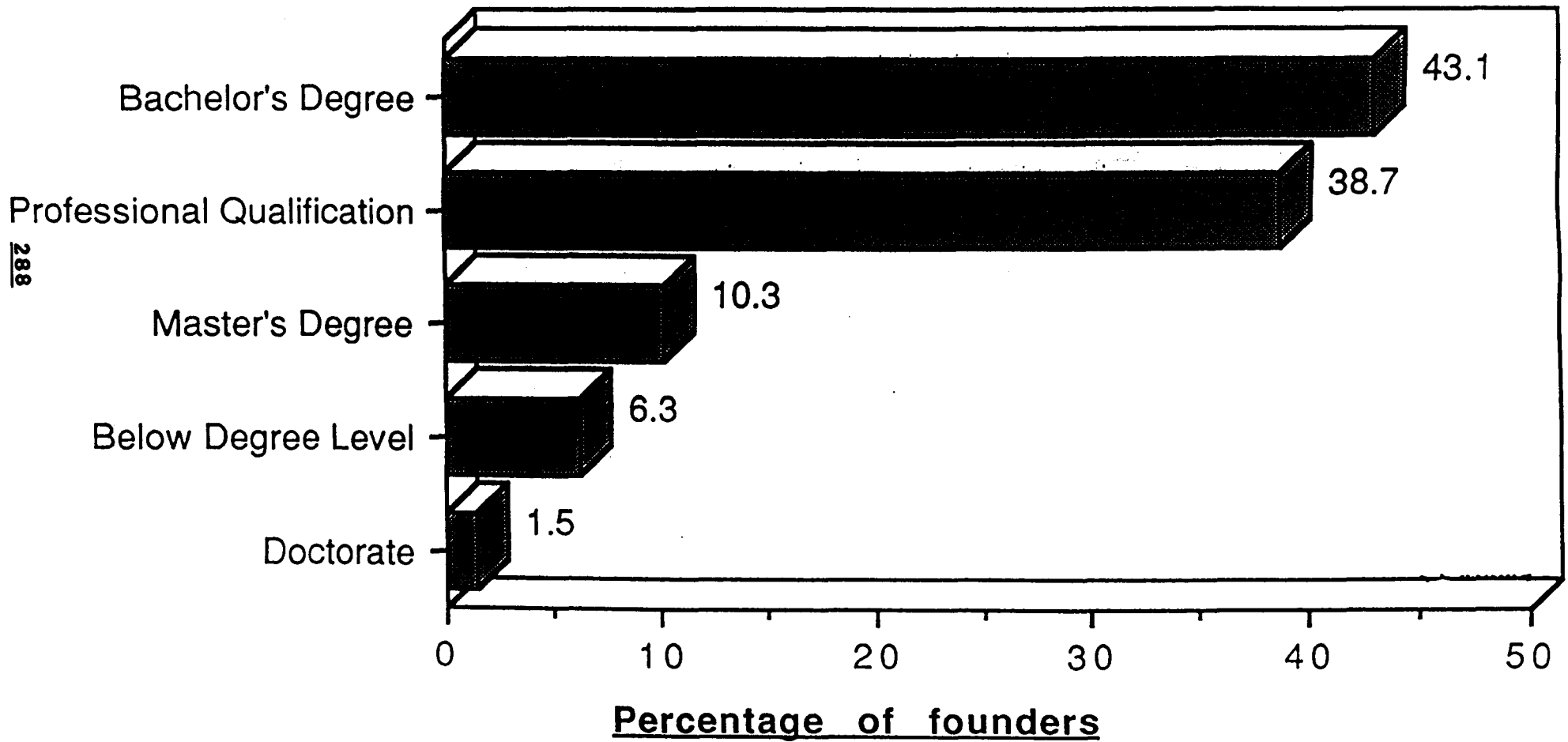


Figure 5.5

Academic qualifications of founders



attainment. Figure 5.3 shows the types of establishments where the founders/M.D. were educated, indicating the high proportion educated at a university or professional institution.

Due to the nature of the higher educational system in Britain, it is to be expected that the spatial distribution of educational institutions attended by the founders covers a wide range of regions (Figure 5.4). Those educated in colleges of higher education and the 'other' category (mainly school education, see figure 5.3), predominantly attended establishments on Merseyside, and there is a tendency for these founders to be attached to blue collar establishments (Appendix 5xi).

It would be incorrect to state that founders of blue collar establishments exhibit a low level of education. Rather, it would be appropriate to contend that they were educated within the local area, which accounts for the high proportion of founders (37.8%) educated on Merseyside, and that this can be associated with the social background of the founder and their segregation from traditional 'middle class' educational channels, rather than their academic ability.

These characteristics are supported by figure 5.5, which shows the range of primary qualifications held by the founders. It reflects the findings of Beyers et al (1986) which demonstrates, even when excluding service classes for which higher 'education is a necessity', two thirds of the remaining founders had at least a bachelor's degree. (page 90). Figure 5.5 clearly shows that over 90% of the founders hold at least a bachelor's degree, with only 6.3% exhibiting a lower

qualification. From these proportions it is obvious that virtually all firms were established by a reasonably highly educated founder.

These founders are a very highly concentrated, highly qualified set of individuals. They are definitely not characteristic of the area and as the majority are, what could be described as, members of the 'service class' or 'management class', they have particular socio-cultural requirements (Bledstein 1976, Renner 1978) which can be represented by their place of residence.

Of the founders surveyed, 30% did not live on Merseyside. Considering the travel to work areas of the county (Lawton 1982), it is an unusual phenomenon for such a large proportion of any employment group to live outside the area. A break down, by firm type, tends to reveal the founders of blue collar operations have a greater tendency to live within Merseyside, than do the founders of white collar firms: 77% blue collar, 66% white collar. The latter group favour external residences which cover a wide range of locations, including: Widnes, Warrington and Manchester. The main three preferred areas however, were: Chester (10%), Cheshire (11%) and Ormskirk (6%). These are not specific locations, but it would be expected that this group have a preference for 'residentially desirable areas'.

Of the 70% that live within Merseyside, over one hundred locations were specified, these ranged from Birkdale to Garston to Thornton, covering the whole of the area (Figure 3.2). From these, the most frequently designated locations were: Southport (6.3%), Wallasey (4.2%), Hoylake (5%), Heswall (4.8%), Crosby

(5.2%), Allerton (4.0%), Formby (3.1%) and Woolton (3.2%). These areas can be categorised as high status residential locations, covering some of the most 'desirable' housing districts on Merseyside.

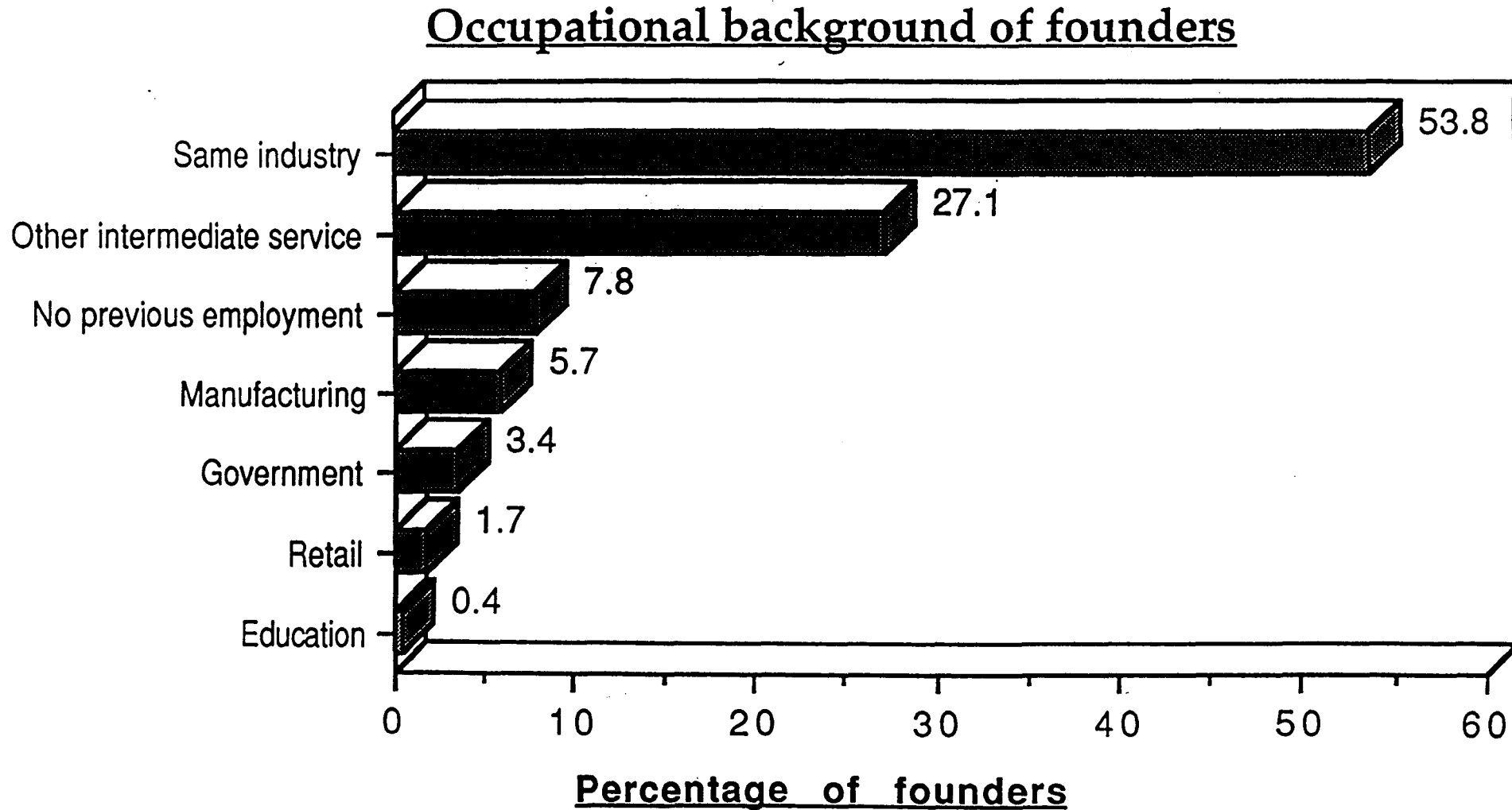
The implications for the area and the service class:

"by virtue of its relatively privileged social position, will be particularly pressured in its politics towards ghettoisation and retreat into 'life style'." (Goodwin 1980, page 98).

To conclude this section on the founders' characteristics, their occupational background is presented. The results indicate, once again reflecting the work of Beyers et al (1986), that the majority of founders performed the same function in their previous employment, in either the same or a different industry. Fifty three percent were from this main category, whilst the bulk of those remaining came from either, other intermediate service industries or 'no previous employment' (Figure 5.6).

Table 5.15 displays the motives for the founders establishing their businesses, with the most popular reason being a desire to become independent. This coincides with the Beyers et al (1986) study, and also links with a large proportion of the firms being established in the 1980's; the decade of enterprise and entrepreneurship, perpetuated and marketed by the Thatcher administration (Parkinson 1989). This had a direct effect upon the small firm sector in general and resulted in the growth of small independent producer service operations.

Figure 5.6



**Table 5.15**

Reasons for founders establishing business

Reasons	% of firms <sup>7</sup>
Independence	78
Dissatisfaction	30
Fill niche in market	26
Professional advice	5.4
Personal contacts	22
Other (redundancy)	13

**Table 5.16**

a/ Percentage of firms registering an effect of IT on employee structure, 1981-1989

Personnel Category	Decrease	Static	Increase
Directors/Managers	4.3	73.1	22.6
Administrative	14	52.8	33.2
Professional	7.5	62.1	30.4
Technical	9.8	57.1	33.2
Sales	5.0	57.9	33.2
Marketing	-	54.2	45.8
Secretarial/Clerical	12	51.6	36.3
Government training	-	79.8	20.2
Other	1.5	77.1	21.4
b/ Male Full-time	7.2	62.9	30
Male Part-time	-	74.4	25.6
Female Full-time	23.6	45.1	31.3
Female Part-time	6.6	44	49.4

<sup>7</sup> Percentages do not total 100, categories are not mutually exclusive.

Figure 5.7 shows the sources of funding for the firms, at the time of establishment and in the later half of the 1980's. The pattern of funding is clearly biased towards the founders own sources, in both circumstances:

"This type of personal funding highlights the low initial capital requirements for starting most service firms." (Beyers et al 1986, page 8).

It also displays the distinct lack of government involvement in this sector, as stated earlier with regards to locational factors, and the limited involvement of the banking sector to support the service sector.

As Figure 5.7 shows, there was a slight increase in the later half of the 1980's in the take up of bank/venture capital, which may have occurred for three reasons:

1/ The banking sector positively turned its sights towards the small firm sector in the 1980's, presenting a high profile image through the media (small business advisors), following in the wake of the enterprise era.

2/ Banks are more likely to supply funds to established businesses, seeing them as a lesser risk than new ventures; especially at a time when the nationally economy was at a peak and the capital assets of the banks were at a high.

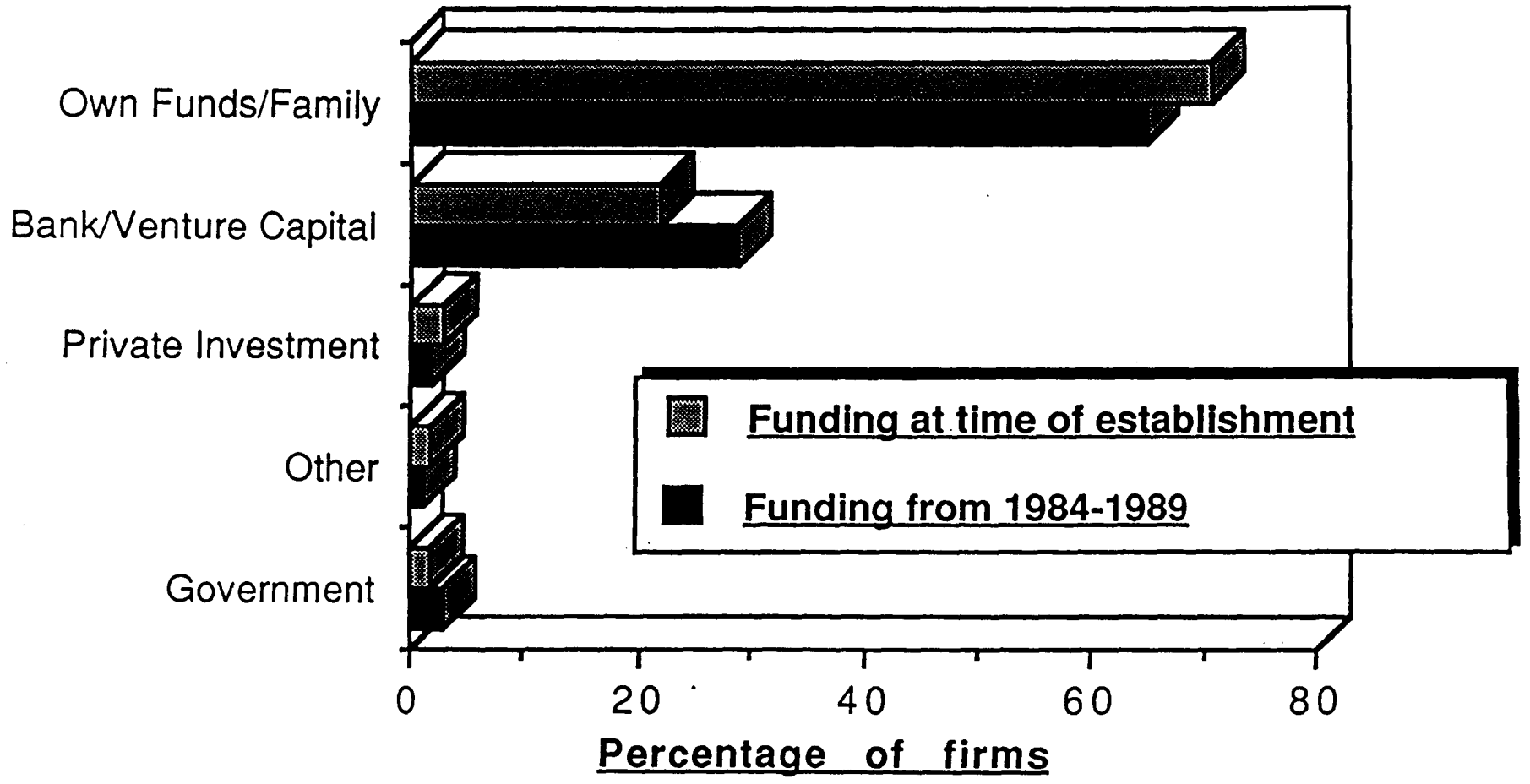
3/ As service firms become established and they develop as a business, there is a need to invest in fixed capital (IT) and there is therefore a demand for additional funding.



Figure 5.7

### Sources of funding

295



### 5.2.10/ Contact with Educational Institutions

As a dynamic, labour intensive sector, producer services are assumed to become linked with the expertise resources of an area, especially educational institutions (Beyers et al 1986, P.S.W.P 1986, Marshall et al 1987). The Beyers study discovered that only 33% of surveyed firms had no contact with educational institutions. The remaining group, having some communication with these institutions, used their contacts for a wide range of activities: continuing education, use of library, consultancy and placement centres.

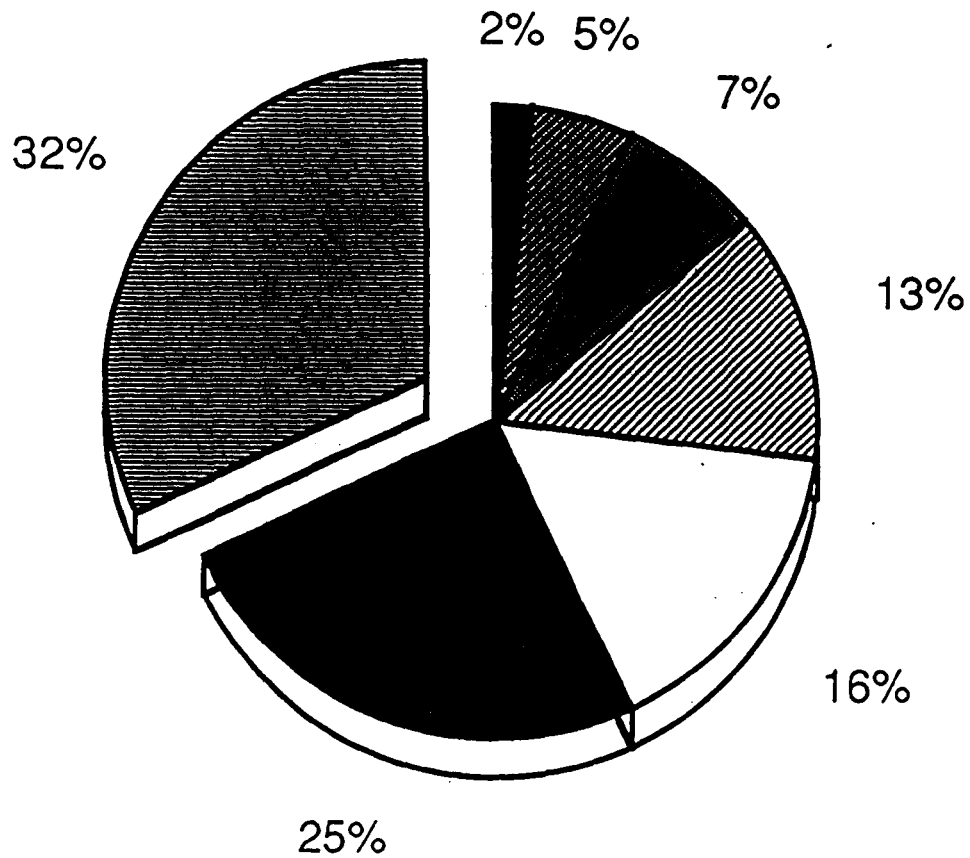
In the case of Merseyside, only 39.7% of surveyed firms had any form of contact with educational institutions, a distinctly lower proportion than the Seattle study (Figure 5.8). Within this group there is, also, a marked distinction between white and blue collar firms. Fifty percent of white collar operations had some form of contact with an educational institution, whilst 80% of blue collar firms had none.

The institutions where contact was most prevalent were schools and colleges. These accounted for approximately 60% of the overall contact, whilst Polytechnics, Universities (throughout the North West) and public training agencies accounted for the remaining communications. Figure 5.8 shows the main reasons for these associations, indicating that recruitment and public relation schemes are the most common causes.

The purpose of the contacts does not confirm the results of the Beyers study because the Merseyside firms have a very structured relationship with educational institutions and

Figure 5.8

## Uses of educational contacts



### Legend



virtually no interface for research development. Apart from the main recruitment usage, the institutions are predominantly used for established courses as placement centres, which are associated with polytechnics and colleges.

There is little indication that the Merseyside firms utilise the full potential of the educational institutions in the area. There are no established channels through which the whole range of resources of the educational institutions can be tapped. The results show that the relationships and communications between what is, supposedly, the most dynamic section of the local business community and valuable human resource centres are very limited.

#### 5.2.11/ Use of Information Technology

One of the greatest controversies involving producer services, is the continuing debate on the effect information technology will have on the labour market (Gershuny and Miles 1983, Urry 1987, Wood 1988). The question being: will technology via its multiplier effects of research and development, increased productivity, enhanced service facilities and the operation of remote sites, increase the overall employment level ? Or will IT merely serve to replace and deskill the presently employed ?

"The established patterns of labor inputs are, however, currently experiencing rapid change because of innovations, associated primarily with communications and information technology, which are having major effects on patterns of job loss and gain

across the whole spectrum of employment." (Wood 1988, page 97).

Of the firms surveyed, only 7.4% admitted to having no access to the types of IT shown in figure 5.9. If the 92.6% of firms using IT are split by function, 98% of white collar operations use IT in comparison to 84% of blue collar operations. Figure 5.9 shows the most common types of IT being used.

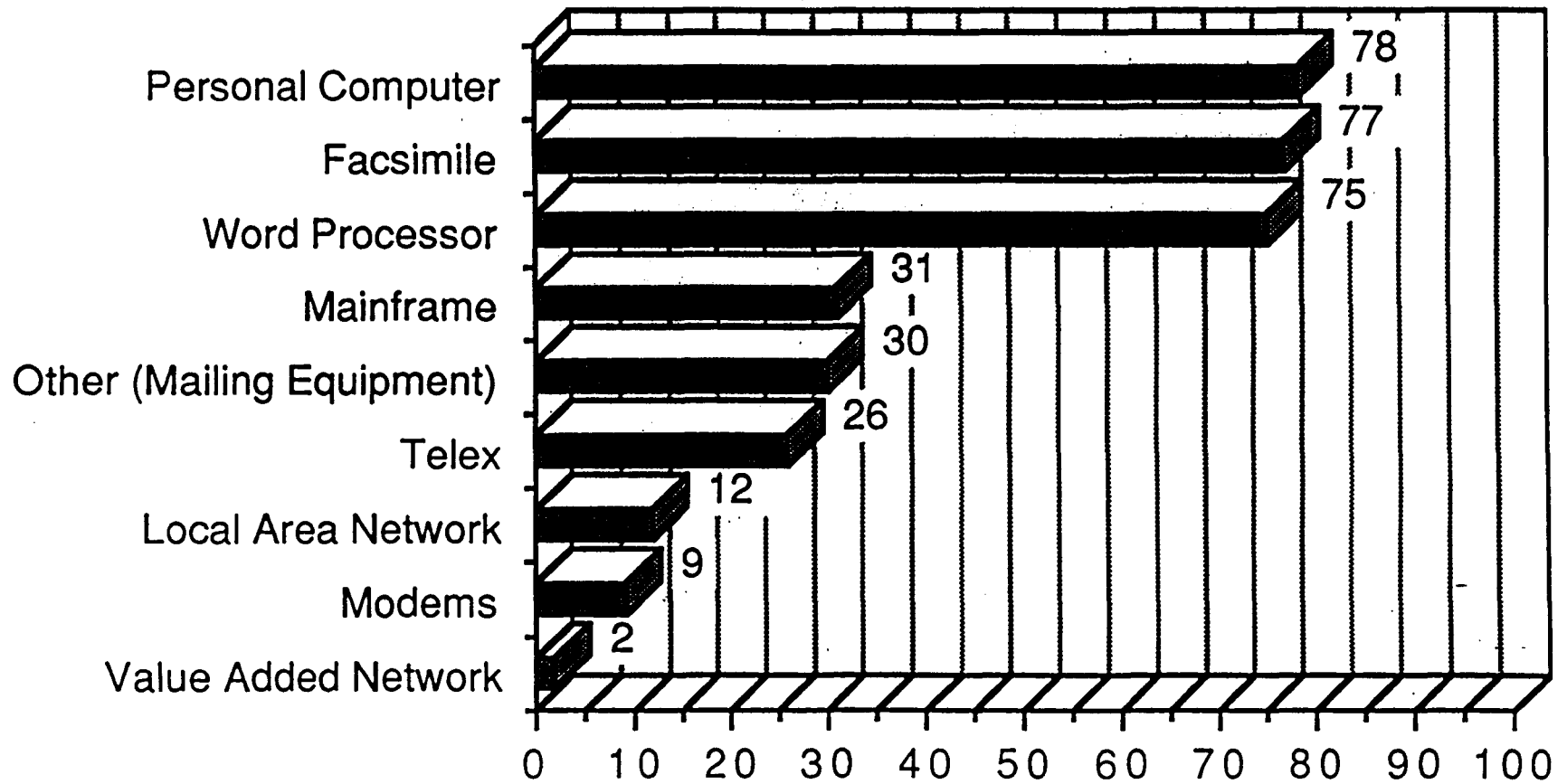
It is apparent that the use of IT is fairly restricted to the more basic types of technology: personal computers (PC's) and word processing. The distinction between the two is important, as it assesses whether the firms utilise a PC as a data management system, or if they are simply a substitute type writer. This will have drastically different effects in terms of staff skill, staff training and productivity.

As stated, the uses of IT tend to be at a basic level and the firms lag behind the uptake of advanced technology advocated by U.S. firms (Office of Technology Assessment 1985) and firms in other parts of the U.K. especially the Capital (Thrift et al 1987). The Merseyside firms show little use of Local Area Networks, Value Added Networks and modems, which are indicators of a dynamic economic sector operating on a wide geographical basis (Amin and Goddard 1986).

The majority of firms indicated that their use of IT had increased the productivity of their operations. Twenty percent of firms noted that IT had had no effect on employee productivity, 0.8% indicated there had actually been a decrease in productivity, and 79.2% registered an increase in

Figure 5.9

Percentage of firms using  
specific IT applications



300

productivity. Economically, the majority of firms had benefited from the use of IT, whilst a small percentage had used it as a direct substitute for previous production methods, incurring no benefit, and a virtually insignificant contingency had suffered a set back; possibly due to technical incompetence, inadequate application and unexpected expense.

The effect this use of IT has had on employee structure is shown in Table 5.16a (adjoining Table 5.15). A caveat to this is the difficulty most firms would find in disassociating the effects of IT from other influences on employee structure (eg. interest rates, market fluctuations). Examining table 5.16a, it would be erroneous to pin point any definite swing in the employment patterns of the firms and how this could be related to the effects of IT. Some of the employment categories which experienced the greatest downward turns, administrative and secretarial/clerical, correspond with the findings of Beyers et al (1986). However, this is the only similarity, as the greatest growth rates, apart from marketing, were experienced in the secretarial/clerical category of certain firms.

It is difficult to assess and relate these specific employment categories to the effect of IT, especially considering there are a series of complex issues underlying these trends: development stage of the firm, market area, establishment structure, external linkage and the specifics of IT application. It is more plausible to use Table 5.16a to indicate overall growth as the general effect of IT.

Table 5.16b gives a far better impression of the effects if IT on wider employment structures and tends to

support previous assumptions about gender divisions stated earlier. Three key patterns can be drawn from this table:

1/ The number of male employees, in the majority, either remained static or grew as a result of IT.

2/ Female full time staff witnessed the greatest loss and second greatest increase in numbers, indicating a highly volatile work force due to the effects of IT.

3/ Part time female staff incurred by far the greatest increase, with very little loss, showing it to be the main growth sector as a result of IT.

With regards to proposed increased use of IT, 75.8% of firms indicated they would accelerate their IT application, whilst 24.2% of firms stated they would not. Of the firms indicating they would not increase their use of IT, 62% were blue collar operations and 29% were those previously not using IT. Both groups implying either, a continual distrust of IT or a possible belief it has no relevant application.

Table 5.17a displays the perceived future effects of IT on employee structures. The male dominated employment categories (directors, professions, technical, sales, marketing) generally show an increase. Whilst by far the greatest perceived decrease was designated for secretarial staff. Specific categories (sales and marketing) show no decrease, which perhaps reflects the firms belief that interpersonal skills and imaginative qualities cannot be replaced by IT.

The general pattern of future employment structures (Table 5.17b) reflect the gender divisions previously outlined. Of all the groups, female full time employment will supposedly incur



Table 5.17

a/ Percentage of firms registering a possible future effect of IT on employee structure, 1989-1994

Personnel Category	Decrease	Static	Increase
Directors/Managers	1	75.1	23.8
Administrative	9.3	53.6	37.1
Professional	3.1	41.5	55.4
Technical	4.3	46.0	49.7
Sales	-	43.7	56.3
Marketing	-	50	50
Secretarial/Clerical	22.9	56.7	21.5
Government training	9.6	71.3	19.1
Other	9.1	75.8	15.2
b/ Male Full-time	5.1	48.5	46.4
Male Part-time	2.8	77.8	19.4
Female Full-time	24.9	46.2	28.9
Female Part-time	16.4	30.5	53.1

the greatest loss, whilst female part time will witness the greatest increase as a result of IT. The male categories, full and part time, predominantly show either static or growth patterns propagated by the future use of IT.

### 5.3/ Conclusion

The above analysis shows that in the case of Merseyside, the economic development that surrounds the producer service sector is limited and reinforces the structures of its marginal economy.

The structural dispersion of the multi site firms indicates the locational preferences of firms from the rest of the North West and South East not to decentralise strategic operations to Merseyside. Therefore, the multi site establishments within the area tend to be subject to external control and use internal support services, restricting their integration into the economic fabric of the area.

There has been virtually no inward investment, in terms of firm relocations from outside the area. Those that have relocated have merely moved within the county and these internal relocation patterns have reinforced the development disparities of the area. This is because the decisions to relocate are based upon a desire for an increased quality of environment and improved premises, in conjunction with a desire to leave behind unsuitable premises and communication restrictions. Thereby increasing the concentration of firms around the more 'attractive' sites, whilst severely degrading already poorly serviced locations.

The employment structures of the firms and their changes throughout the 1980's reflect the selective procedures adapted by this economic sector, which reinforce gender and socio-economic segregation. These patterns exacerbate the expanding

social divisions within an already polarised labour force, along with heightening the gender divisions of labour quality. Under these circumstances the firms do not offer potential mass employment of any reasonable quality, being incompatible with the labour force supply. The only growth and realistic vacancies of any proportion occur within the lower skilled part time categories.

The business trends tend to reiterate the findings of Hansen (1990) and Goe (1990), where the majority of business of 'independent' operations is conducted with other service industries. But, the export markets of the firms were comparatively restricted both in terms of geography and quantity. Even though the majority of firms do conduct a certain percentage of their business external to the area, the levels are not congruent with assumptions about producer services operating independently of a locality (Daniels 1986).

The multiplier links of the firms also reveal that the need for expert services and operations are disproportionately sought outside of the area. The specifics of these external links can be inferred to stem from a combination of effects: ignorance of the area's resources, lack of highly specialised local services, external business contacts and personal contacts. For whatever reasons, these links constitute economic leakage for advanced services, whilst lower status operations are accessed freely within the locality, once again reinforcing its marginal position.

The evidence relating to the founders' backgrounds confirms previous research defining the majority of them as an elite

group, possibly members of the service or managerial class, and hints at the consumption cleavage that has developed between these affluent service workers and those of the neo-working class performing menial service operations (Forrest and Murie 1987). A polarity of positions can be identified, and the group of founders tends to reinforce and perpetuate this situation, reproducing the already repressive social structures.

Finally, contact with educational institutions and the effect of IT on employment characteristics refutes the possibility that; producer services stimulate valuable dynamic networks (for the transfer of technology and knowledge), and that by opening up new avenues of productivity IT will boost the sectors employment base. In this case the effect of IT tends to degrade working practices creating a volatile menial labour force, whilst the main contacts with educational institutions revolves around recruitment operations.

An initial impression of the empirical evidence leads to the assumption that in most circumstances the role of producer services on Merseyside is not one of positive regeneration. This applies both on a purely economic level and on a structural level. There is a tendency for the actions of these firms and their key personnel to reproduce the exploitive structures (gender, production, class) and ultimately, the marginalised position of the area, which are the basis of its problems in need of regeneration.

## Chapter 6

### Factor Analysis of Firm Operational Characteristics

#### 6.1/ Introduction

This chapter presents the second level analysis described in Chapter Four; factor analysis of the operational characteristics outlined in Chapter Five. The characteristics (variables) are shown in Table 6.1, which also indicates how the data gathered by the questionnaire are transferred into different types of variables utilising a range of scales<sup>1</sup>.

The use of this type of analysis is designed to examine the internal relationships of the firms' operational characteristics. And, to assess whether the firm groups chosen (Table 4.2) have the ability to control their own operations, through the founders' control of the functions of capital, or whether the firms, and their collective labour, are more influenced by forces which are determined by constraining structures. These structures may be manifested in terms of corporate strategy, but are grounded in wider issues of relations of production and the spatial divisions of labour on Merseyside.

The internal dynamics of the firms reveal if operations are subject to external structural constraints or if it is possible that through the influence of social structures (such as class), the founder can control the functions of capital. This

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<sup>1</sup> Factor analysis is designed to cope with the use of the different scales shown in Table 6.1 as described in Appendix 6i.

Table 6.1

Variables Selected from the Questionnaire for Factor Analysis

<u>Variable Name</u>	<u>Variable Description</u>
1/ STEFF	The possibility of increasing the effective use of IT over the next five years. Rated on an Ordinal Scale.1: Increase 2: None 3: Decrease.
2/ STWME	The percentage of the establishments business, in terms of revenue, generated from within the Merseyside area. Rated on a Ratio Scale.
3/ STTUR	The trend in business turnover between 1981-1989, based on pounds per annum. Rated on an Ordinal Scale. 1: Increase 2: Static 3: Decrease.
4/ STTEC	Whether or not the establishment uses any form of IT (level above phone or electronic typewriter). Rated on a Nominal Scale. Yes/No.
5/ STEXP	Whether or not the establishment conducts any business outside of the Merseyside area. Nominal Scale. Yes/No.
6/ STEMP	The number of people working at the establishment where the questionnaire was sent. Ratio Scale.
7/ STFOU	What type of institution the founder attained his/her's final educational credentials. Ranked on Ordinal Scale.
8/ STQUA	The highest qualification the founder holds. Ranked on Ordinal Scale.
9/ STTRA	Whether the establishment provides formal training for its employees. Nominal Scale. Yes/No.
10/ STEST	The date the firm was originally established. Ranked on Interval Scale.
11/ STNOC	The change in the number of clients between 1981 and 1989. Ordinal Scale. 1: Increase 2: Static 3: Decrease.
12/ STNOS	The change in the number of services on offer between 1981 and 1989. Ordinal Scale. 1: Increase 2: Static 3: Decrease.

**Table 6.1 (continued)**

13/ STSTA	What the status of the establishment is within a multi site establishments. Ranked on Ordinal Scale.
14/ STEXS	Whether or not the establishment uses external sub contractors for specialist services. Nominal Scale. Yes/No.
15/ STEXA	Whether or not the establishment uses external sub contractors for routine operations. Nominal Scale. Yes/No.
16/ STFOR	Whether or not the founder lives on Merseyside. Nominal Scale. Yes/No.
17/ STSOC	The socio-economic status of the founder based on place of residence. Based upon Merseyside 1988 household survey (MIS 1988). Ranked on Ordinal Scale.
18/ STPRE	Whether or not the founder previously worked within the service sector. Nominal Scale. Yes/No.
19/ STEDU	Whether or not the establishment has any contact with educational institutions. Nominal Scale. Yes/No.



will allow an insight into the interface between agent and structure by examining the outcomes of their interaction, but will not display the concrete events which reproduce the structures outlined in Chapter Two<sup>2</sup>.

This section of the research relies upon a more complex understanding of data analysis than has previously been discussed, and even though some explanation of its application has already been given (Chapter 4), it was felt necessary to provide additional information for the reader unfamiliar with its use. But, as a description of the fundamentals of the technique is not integral to the main text, the details of the method are presented in Appendix 6i.

The rest of the chapter is broken down into discrete sections, which utilise the methods described in Appendix 6i to analyse various groups of producer service firms drawn from the questionnaire respondents. These groups correspond with the divisions developed by the working hypothesis (Chapter 2) and are designed to examine the validity of the classification matrix. The categories of firms which are examined are theoretically abstracted from different areas of the matrix, to correspond to its different characteristics (Chapter 4, Table 4.2).

The initial analysis presented below examines the full sample population which responded to the questionnaire. It is used as an example analysis for the reader to understand the various processes involved. Its findings reflect the mixture of

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<sup>2</sup> The structures relate to the issues of spatial divisions of labour, the relations of production and class, outlined in Chapter 2, which are reproduced with Merseyside as a marginal economic area.

firm types used in the analysis and apply to the general producer service sector on Merseyside.

It is not until the sample population is analysed in its separate subgroups, that the working hypothesis is properly assessed. But, the fundamental processes as to how this has been carried out are first related to the analysis of the total sample population, which apart from being used as a familiarisation process for the reader, also shows how the statistics used were selected for inclusion against a range of possible combinations (Appendix 6i) and the overall forces guiding the operations of this economic sector on Merseyside.

Finally, the factor analysis was conducted in two stages, which used different techniques so as to act as a statistical check for each other. Firstly, principal component analysis was employed to assess total variance (Appendix 6i) and secondly, principal axis factoring was used to assess common variance (Appendix 6i). In all cases, both sets of results are reported, with the principal component analysis presented first.

## 6.2/ Principal Component Analysis and Principal Axis

### Factoring of all Firms Responding to the Postal Questionnaire

The initial statistics shown in Table 6.2 display all the factors extracted from the correlation matrix<sup>3</sup> containing all the firms that responded to the questionnaire and, as shown, there are the same number of factors as there are variables, nineteen. In this initial extraction the communalities are shown as 1.0000, indicating that all the factors account for all the variance and that the variables have the same amount of variance in common (each have the same proportion of variance correlated with each other). The eigen values of factors one and two (3.148 and 2.367) are predominantly higher than the remaining factors, which indicate two properties; firstly, the loadings on these factors will be the highest (as they equal the sum of the column of squared loadings for each factor), secondly, that the length of these principal components and the variance they account for is in proportion to these values.

This is reflected by the percentage of variance explained by each factor, as factor one with an eigen value of 3.148 explains 16.6% and factor nineteen, with an eigen value of 0.211 accounts for 1.1% of variance, which is calculated by dividing the eigen value by the number of variables and multiplying by one hundred.

These initial statistics display that of all the factors extracted, only seven have eigen values above one. The cumulative

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<sup>3</sup> The correlation matrix is created by the statistical package used and is explained in Appendix 6i.

Table 6.2

PRINCIPAL-COMPONENT ANALYSIS (PC) AND PRINCIPAL AXIS FACTORING  
OF ALL ESTABLISHMENTS RESPONDING TO THE POSTAL QUESTIONNAIRE

INITIAL STATISTICS:

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	1.00000	*	1	3.14831	16.6	16.6
STWME	1.00000	*	2	2.36750	12.5	29.0
STTEC	1.00000	*	3	1.71494	9.0	38.1
STPRE	1.00000	*	4	1.63669	8.6	46.7
STFOR	1.00000	*	5	1.41315	7.4	54.1
STFOU	1.00000	*	6	1.24222	6.5	60.6
STQUA	1.00000	*	7	1.05634	5.6	66.2
STEXA	1.00000	*	8	.89480	4.7	70.9
STEXP	1.00000	*	9	.76844	4.0	75.0
STNOC	1.00000	*	10	.73235	3.9	78.8
STTUR	1.00000	*	11	.65696	3.5	82.3
STNOS	1.00000	*	12	.57234	3.0	85.3
STEST	1.00000	*	13	.54978	2.9	88.2
STTRA	1.00000	*	14	.51380	2.7	90.9
STEMP	1.00000	*	15	.47165	2.5	93.4
STSOC	1.00000	*	16	.38215	2.0	95.4
STEXS	1.00000	*	17	.36894	1.9	97.3
STEDU	1.00000	*	18	.29874	1.6	98.9
STSIN	1.00000	*	19	.21091	1.1	100.0

percentage of variance explained by these factors is 66.2%, approximately one standard deviation and therefore is statistically, as well as intuitively, significant. Because these seven factors have eigen values greater than one they are possible choices for the parsimonious reduction of the original nineteen variables (Table 6.1).

This assumption is qualified by the scree plot of all eigen values against the number of factors (Figure 6.1). The change in the gradient of the slope is indicated (Break in pattern of slope) and even though there are more noticeable changes in the gradient, at two and twelve factors, the use of these would give too little explanation of variance or too many trivial factors. Also, the point marked for the break in slope coincides with the eigen values being larger than one.

The resultant factor matrix (Table 6.3) from the initial statistics and scree plot has only extracted seven factors. As stated in the title of the factor matrix, values below 0.3000 are not shown. This is because values below this threshold are deemed insignificant (Rummel 1970), as less than ten percent of a variables variance is in common with any factor. This matrix is the initial extraction and is an orthogonal representation, with the factors not clearly placed amongst clusters of variables.

An initial impression is that the two main factors have certain distinct loadings that can be characterised. Factor one has a wide range of loadings above 0.3000, but it is obvious by the higher loadings that the variables contributing most to its explanation are the first six in the matrix (qualification, place of education, living within or outside Merseyside, whether or not

**Figure 6.1**

**SCREE PLOT OF EIGEN VALUES EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS AND PRINCIPAL AXIS FACTORING FOR ALL ESTABLISHMENTS RESPONDING TO THE QUESTIONNAIRE**

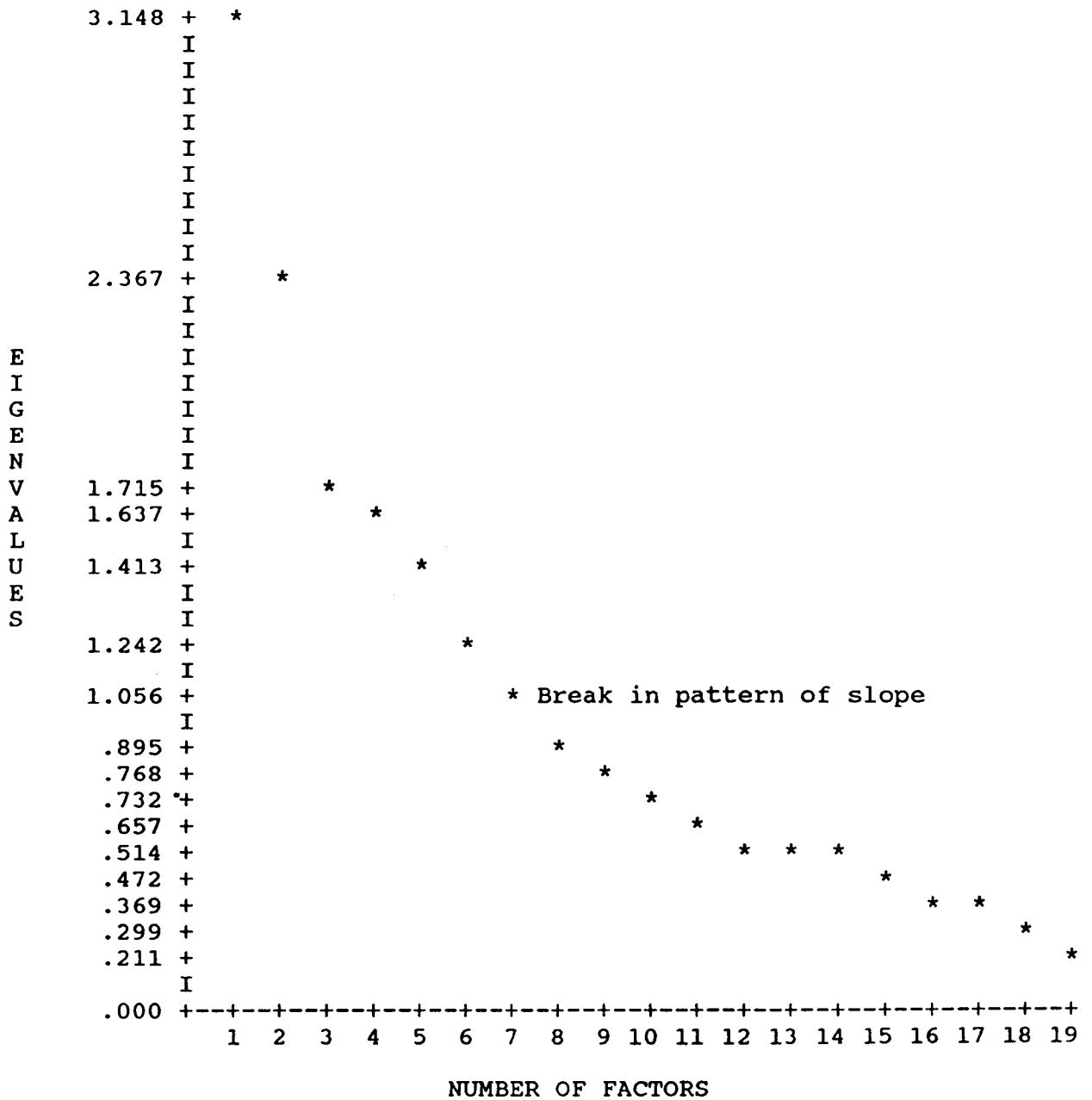


Table 6.3

PRINCIPAL-COMPONENT ANALYSIS EXTRACTED SEVEN FACTORS FOR ALL ESTABLISHMENTS RESPONDING TO THE POSTAL QUESTIONNAIRE (VALUES BELOW 0.3000 ARE NOT SHOWN)

FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.72556			
STFOU	.69327			
STFOR	.66464			
STSIN	-.61761			
STSOC	.49551			
STTRA	.47872	.43358		
STNOC		.71590	.34925	
STTUR		.69193	.45676	
STEFF		.57932		
STNOS	.34457	.55008		
STWME			-.46866	.64401
STEXS			.47078	.62538
STEXP				.62526
STEDU			-.35817	-.58772
STEST	.33592		-.31033	
STEMP	-.45794			
STEXA			-.32133	
STPRE				
STTEC	.37126		-.30003	
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU	.31677			
STFOR				
STSIN				
STSOC	.30234			
STTRA				
STNOC				
STTUR				
STEFF			.34191	
STNOS				
STWME				
STEXS	-.34625			
STEXP	.41124			
STEDU	.37925			
STEST	-.49757	-.33710		
STEMP	.49136			
STEXA		.62138		
STPRE		.59465		
STTEC			.61924	

it is a single office firm, the socio-economic ranking of the founder/MD, whether or not the firm provides training).

The loadings are correlations between the factors and the variables, and with higher values on factors explaining a large percentage of the variance, it is possible to infer the importance of certain variables. In this initial matrix there is a vague pattern emerging from the variables and factors, but the clusters are not discrete and are difficult to assess. Therefore, the seven factors are selected for rotation and the final statistics are presented in Table 6.4. This clearly displays the statistical significance of the factors, as they explain 66.2% of the total variance, but it also shows the communalities of the variables calculated from the data matrix.

The communality values represent the general ability of the seven factors to explain the total variance. Those variables indicating; the percentage of business conducted within Merseyside (STWME), the use of IT (STTEC), founder's place of education (STFOU), founder's qualifications (STQUA), whether export occurs outside of Merseyside (STEXP), change in number of clients (STNOC), change in turnover (STTUR), whether the firm sub-contracts business (STEXS) and whether it has contact with educational institutions (STEDU), all have high communality values. This means they have a large proportion of variance in common with each other, which can equally be explained by the seven factors. Therefore, the variance explained by the extracted factors is mostly apportioned to these variables, indicating the remainder to be more independent and attributable to other factors not extracted. Yet, none of the communality values are



Table 6.4

FINAL STATISTICS OF PRINCIPAL-COMPONENT ANALYSIS FOR ALL ESTABLISHMENTS  
RESPONDING TO THE POSTAL QUESTIONNAIRE

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.63226	*	1	3.14831	16.6	16.6
STWME	.76090	*	2	2.36750	12.5	29.0
STTEC	.71597	*	3	1.71494	9.0	38.1
STPRE	.53707	*	4	1.63669	8.6	46.7
STFOR	.59263	*	5	1.41315	7.4	54.1
STFOU	.70699	*	6	1.24222	6.5	60.6
STQUA	.73641	*	7	1.05634	5.6	66.2
STEXA	.53339	*				
STEXP	.76715	*				
STNOC	.74856	*				
STTUR	.78669	*				
STNOS	.51129	*				
STEST	.70017	*				
STTRA	.52300	*				
STEMP	.69400	*				
STSOC	.51824	*				
STEXS	.78776	*				
STEDU	.77847	*				
STSIN	.54820	*				

below 0.5, indicating the majority of their variance is interrelated and can be explained by the seven factors.

There can be no causal inference drawn from these figures, as this factoring technique does not compare just the 'common' variance of the variables (see Appendix 6i). But, it is not implausible to see a connection between the communalities, in that the business, functional and social characteristics are related in some way. This relationship is possibly based on the more successful firms relying upon the development of these characteristics; qualifications, sub-contracting, export, technology and external expertise, with one noticeable exception. The variable indicating the percentage of revenue generated within Merseyside (STWME) displays a high interrelationship between these variables, alongside the variable indicating export outside the area.

A possible explanation for this, rests upon the ability of most firms to export a certain percentage of their service outside of the area, whilst the large percentage of their business is still generated within the local economy. This is considering that the sample of producer service firms contains a wide variety of operations, and whilst patterns are not attributable to any one particular sector, they are possibly influenced by the characteristics of firms which may have contradictory practices.

To simplify the initially extracted factors, they were rotated obliquely to allow freedom of factor correlation. This resulted in the pattern and structure matrix shown in Tables 6.5 and 6.6. At a glance it is easy to see there is very little

Table 6.5

OBLIQUE ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR ALL ESTABLISHMENTS RESPONDING TO THE  
POSTAL QUESTIONNAIRE

(VALUES BELOW 0.3000 ARE NOT SHOWN)

PATTERN MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.83629			
STFOU	.82767			
STSOC	.68280			
STFOR	.54797			
STTUR		.86735		
STNOC		.85420		
STNOS		.56503		
STEXS			-.87534	
STEDU			.86302	
STEXP				.87346
STWME				.84538
STEST				
STEMP				
STPRE				
STEXA				
STSIN				
STTEC				
STEFF				
STTRA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STSOC				
STFOR				
STTUR				
STNOC				
STNOS				
STEXS				
STEDU				
STEXP				
STWME				
STEST	-.83501			
STEMP	.81769			
STPRE		.66633		
STEXA		.65261		
STSIN		-.43587		
STTEC			.85356	
STEFF			.70867	
STTRA			.48397	

**Table 6.6**

**OBLIQUE ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS FOR ALL ESTABLISHMENTS RESPONDING TO THE POSTAL QUESTIONNAIRE (VALUES BELOW 0.3000 ARE NOT SHOWN)**

**STRUCTURE MATRIX:**

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.84449			
STFOU	.82374			
STSOC	.65958			
STFOR	.63265			
STTUR		.85816		
STNOC		.84679		
STNOS		.60987		
STEXS			-.86812	
STEDU			.86065	
STWME				.85794
STEXP				.85417
STEMP				
STEST				
STPRE				
STEXA				
STSIN				
STTEC				
STEFF				
STTRA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STSOC				
STFOR				
STTUR				
STNOC				
STNOS				
STEXS				
STEDU				
STWME				
STEXP				
STEMP	.82535			
STEST	-.81397			
STPRE		.64692		
STEXA		.62925		
STSIN		-.52996		
STTEC			.81758	
STEFF			.74276	
STTRA			.59136	

difference between the two matrices in terms of the formats and the loading values. This is an instant indication that there is very little correlation between the seven factors, and this is supported by the factor correlation matrix (Table 6.7). Analysis of either of these matrices is sufficient, as the path coefficients display a remarkable similarity to the variable coefficients. Under these circumstances, it is generally accepted that the pattern matrix loadings are more reliable for interpretation.

"They display the saturation of the variables with the factors, whereas the loadings of primary structure give the correlations of the variables with the factors and are influenced by the interactions (correlations) between the factors." (Rummel 1970, page 479).

The nineteen variables have been reduced to seven factors, accounting for 66.2% of their variation, and these factors are shown in the final statistics for the seven factors (Table 6.4). Under normal circumstances, where there might be some degree of correlation between the factors, the pattern matrix would be used for interpretation. But in this case, the extent of the correlation does not warrant its use, with the complications it involves (Appendix 6i). Therefore, for the interpretation of the factors, the simpler orthogonal rotation will be employed (Table 6.8), and this rule will be adhered to in all the following analyses.

The orthogonal matrix indicates a clear hierarchical structure with well defined loadings and upon which the following interpretation is based. Factor one, which accounts

Table 6.7

FACTOR CORRELATION MATRIX BETWEEN SEVEN OBLIQUE FACTORS  
EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS FOR ALL ESTABLISHMENTS  
RESPONDING TO THE POSTAL QUESTIONNAIRE

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
FACTOR 1	1.00000			
FACTOR 2	.02969	1.00000		
FACTOR 3	.02259	-.01064	1.00000	
FACTOR 4	-.03453	.04358	-.02548	1.00000
FACTOR 5	-.14908	.03852	.07948	-.01181
FACTOR 6	.14050	.03886	-.01710	.02491
FACTOR 7	.08407	.19978	-.12317	.13735

	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>
FACTOR 5	1.00000		
FACTOR 6	-.14759	1.00000	
FACTOR 7	-.12659	.05576	1.00000

for the majority of variance 16.6% (Table 6.4), is based upon four social characteristics; level of qualification, place of education, residence inside or outside the Merseyside area and the social status of the founder's place of residence (Table 6.8). The combination of qualification and place of education is more directly associated than the other two variables, however the link here shows, due to the ranking scales, that it is a combination of higher degrees and university education, rather than college or polytechnic, that provides the basis for this factor. The other two associated variables designate this factor as being founded upon spatial as well as social divisions, indicating that even though the founder's/MD's residence appears to be primarily on Merseyside, the key choice of location focuses on socially 'desirable' areas. This selective process occurs as equally outside the Merseyside area as within.

Because of the loadings of the described variables on factor one its name should reflect its structure; 'Socio-Spatial Division of Labour' is proposed. This characterises both its elements and indicates the purpose of factor analysis in this case, to segregate the underlying factors of the variables determining the functional characteristics of producer service firms on Merseyside. This primary factor also indicates that the largest percentage of the variation amongst the nineteen original variables can be ascribed to this socio-spatial factor. In other words, the key differences between the operations of the firms can be explained predominantly by this factor.

Factor two (Table 6.8) is characterised by three variables concerning; firm turnover, change in the number of clients and

Table 6.8

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS FOR ALL ESTABLISHMENTS RESPONDING TO THE POSTAL QUESTIONNAIRE (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>				
STQUA	.84097							
STFOU	.82240							
STSOC	.66251							
STFOR	.61183							
STTUR		.85705						
STNOC		.84582						
STNOS		.58640						
STTEC			.82390					
STEFF			.72019					
STTRA			.53467					
STEST							-.81876	
STEMP							.80764	
STEXS								
STEDU								
STEXP								
STWME								
STEXA								
STPRE								
STSIN								
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>					
STQUA								
STFOU								
STSOC								
STFOR								
STTUR								
STNOC								
STNOS								
STTEC								
STEFF								
STTRA								
STEST								
STEMP								
STEXS	-.87051							
STEDU	.85774							
STEXP		.86180						
STWME		.84773						
STEXA			.64891					
STPRE			.63947					
STSIN			-.47039					



change in the number of services on offer, all between 1981 and 1989. Considering the combination of these variables, the proposed name for this factor is 'Firm Performance'. As indicated by the final statistics (Table 6.4) this factor accounts for 12.5% of the total variance and together with factor one they both account for 29% of the total variance.

The 'Firm Performance' factor is easily understandable, as all the variables involved reflect the growth/expansion of the firms surveyed. The loading indicating whether or not the number of services has increased is distinctly lower than the other two variables (Table 6.8). So, it is possible to state that an increase in the number of services on offer, is not as an important an attribute of firm characteristics as is turnover or client base.

It must be remembered there is a wide range of producer services under investigation here and this particular characteristic may differ from one sub group to another. Yet from this overall group of surveyed firms it is noticeable that the purely economic development factor, 'Firm Performance', is second to the socio-spatial characteristics.

Factor three in Table 6.8 is characterised by three distinct variables; whether or not the firm uses any form of IT, whether or not it will increase its future investment in IT and whether or not the firm provides any form of internal or external training.

Considering the combination of variables in this factor its proposed name is 'Technological Investment and Training'. This factor accounts for, individually, 9% of the total variance and,

together with factor one and two, 38.1% of the total cumulative variance. As shown the accountable variance decreases on individual factors. Yet as indicated by the eigen value being above one, it still accounts for more than its own variance and is still significant within this data set.

As with the other extracted factors, this technology and training factor is only a tentative exploration into the data matrix and as the third most important factor, it clearly indicates the deficiencies within the technique. It is only able to point towards general characteristics, and the subtle differences beyond these initial findings are masked by the overall concluding results. For example, whether or not the firm uses any form of IT, does not inform the researcher the full range of technological applications the firm may have endorsed. This is considering the possible choice that was given on the questionnaire (Appendix 4i), which ranged from everyday use of a facsimile machine to the use of value added networks.

Factor four (Table 6.8) is only composed of two variables; the date of the firms' establishment and the number of employees within the firm. Both these variables refer to the establishment where the questionnaire was sent. This factor is the first example of a negative loading, as there is a reverse relationship between the date of establishment and the size of the establishment. Initially, this may seem unusual, but this relationship can be expressed as, the earlier the data (ie, the smaller the number) the larger the number of people employed.

Due to the contribution of these two variables the proposed name of this factor is 'Community Status', because the size and

age of the firm can be used to rank its status amongst the local business community. This particular factor accounts for 8.6% of the total variance, virtually identical to factor three, and together with the previous factors, they all account for 46.7% of the total cumulative variance.

From the original nineteen variables the four extracted factors, described above, account for nearly 50% of their variation. In other words, these four factors account for, or are the reason for, fifty percent of the differences between the functional characteristics of the 524 firms surveyed. The underlying characteristics of the producer service firms on Merseyside have begun to emerge, but at this stage of the analysis, only statistical significance can be apportioned to the results.

The fifth factor (Table 6.8) to be extracted from the residual variance also indicates a negative relationship and is composed of two variables indicating; whether or not the establishment subcontracts work external to the firm and whether the firm has contacts with institutes of education. The reason for the inverse relationship lies in the firms' resources and markets; referring to those firms who do not subcontract due to internal resources and on the whole rank highly in terms of community status. These are the types of firms who have developed the majority of contacts with educational institutions. The contacts can be deemed promotional or casual, as they are generally directed at schools or colleges of higher education for charitable or recruitment purposes (Chapter 5).

The two variables involved within this factor, even though

inversely related, both indicate the resource base of the firms. It displays the need or ability to call upon other firms for direct input into the production process and gives some indication of the labour market and expertise the firms may call upon within local educational institutions. As a result its title is the 'Resource Attributes' factor. It accounts for 7.4% of the total explained variance, still showing a significant input with an eigen value of 1.41315 and together with the previous factors, accounts for 54.1% of the total cumulative variance.

Factor six (Table 6.8) incorporates two highly related variables, both facets of the firms' export/business markets. The first variable loaded on this factor signifies whether or not the firm exports its business, under whatever means, outside of the Merseyside area. Its high loading on this factor means that a high proportion of the surveyed firms do operate outside of the Merseyside area.

Juxtaposed to this export variable is an indicator as to the proportion of the firms' revenue generated from within the Merseyside area. The high loading of this variable on factor six demonstrates the majority of firms generate a significant proportion of their business from within the local area. Even though these firms do provide a fraction of the area's export base, the majority of their business is confined within the Merseyside area. This is more a reflection of the area's inability to; attract business from the rest of the country as a constrained marginal economy.

Because of the clear cut aspects involved within this

factor, its title is 'Export' and as can be seen from Table 6.4, it accounts for 6.5% of the total variance. Its addition to the other factors brings the cumulative percentage up to 60.6% and aids in understanding the diversity of the underlying factors, whilst still having a statistical significance displayed by the eigen value of 1.24222.

The seventh and final significant factor (Table 6.8) to be extracted is, as shown by its loadings, the weakest of those calculated. It is composed of three variables, not as deeply related as the components of the other six factors; whether or not the firm uses support services for its daily functional routines (cleaners, security etc), whether or not the founder/MD was previously involved within the service sector and whether or not the firm is a single site establishment.

As stated, these variables form a tentative link within the factor and their relationship is not directly obvious as with the other factors. Due to the loadings of the first two variables it is clear that the factor is mainly dependent upon external resource use and the previous position of the founder/MD. This relationship tends towards a positive combination of the variables, indicating a higher propensity to employ external resources when the founder's/MD's history lies within the service industries. Finally, the connection between this relationship and the last variable loaded negatively on the factor (single site establishment) leads to the conclusion that multi site establishments have a slightly increased chance of employing external resources and being controlled by a founder/MD who previously worked in the service sector.

Nevertheless, because of the low loading of this variable, it might be suggested that this phenomenon is merely a reflection of the dominance of single site establishments within the original data set. Avoiding the tautology of this argument the proposed title for this factor is 'Strategic Business Resources', covering internal and external expertise and relating this to the question of establishment status. Table 6.4 shows the small percentage this final factor accounts for, 5.6%, and that it brings the cumulative percentage to 66.2%.

Due to the uncertain nature of principal component analysis (Gorsch 1974, page 327), because of its inclusion of unspecified error into the analysis from the data set, the exact percentage values calculated by the factors are not finite. All the major proponents of factor analysis (Gorsch 1974, Cattell 1978, Rummel 1970) clearly state that it is not to be taken as the final stage of research. The methodological approach of the thesis (Chapter 4) determines that this quantitative analysis is not utilised as the final assessment, by advocating additional qualitative analysis, but even within this extensive form of study there is a need for a separate confirmatory procedure: principal axis factoring.

Principal axis factoring involves a distinctly different matrix formulation, which then proceeds to utilise the principles of component analysis. The contrast between the two different approaches is explained in Appendix 6i and for a fuller description, the reader is referred to Rummel (1970, Chapter 5).

Table 6.9 shows the final statistics for the principal axis

Table 6.9

FINAL STATISTICS OF PRINCIPAL AXIS FACTORING FOR ALL ESTABLISHMENTS  
RESPONDING TO THE POSTAL QUESTIONNAIRE

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.48573	*	1	2.68058	14.1	14.1
STWME	.65354	*	2	1.92610	10.1	24.2
STTEC	.37610	*	3	1.27488	6.7	31.0
STPRE	.20996	*	4	1.22320	6.4	37.4
STFOR	.49450	*	5	.94563	5.0	42.4
STFOU	.69838	*	6	.57955	3.1	45.4
STQUA	.72937	*	7	.52025	2.7	48.2
STEXA	.10520	*				
STEXP	.46413	*				
STNOC	.62090	*				
STTUR	.73963	*				
STNOS	.30530	*				
STEST	.48103	*				
STTRA	.39832	*				
STEMP	.49616	*				
STSOC	.20890	*				
STEXS	.58635	*				
STEDU	.63115	*				
STSIN	.43551	*				

factoring, which display certain differences between this method and principal component used in Table 6.4. The reduced values in Table 6.8 are a result of a conservative estimation procedure, which has a tendency to underestimate communalities and remove any exaggeration from the final analysis. The communalities which provide the diagonal of the data matrix are estimates, concurrent with the common factor model, and are derived from the squared multiple correlation method (for a discussion of this model and other possible estimate procedures, see Gorsch, page 92).

An additional difference between the two methods (Table 6.4 and 6.9), is the drastically reduced eigen values and, consequentially, a reduced percentage of explained variance. The primary reason for this reduced explained variance is because, the common vector space from which the factors are drawn, is a result of defining a specific dimension of the correlation matrix (Appendix 6i).

The initial factor matrix for the principal axis factoring of all firms is shown in Table 6.10 and like that for the component analysis (Table 6.3) the factors are not clearly defined, making interpretation difficult. Oblique rotation of the seven factors was performed, but as shown in Table 6.11, the correlation between the pattern and the structure matrices resulted in insignificant coefficients. This reveals the seven factors to be, once again, uncorrelated, and there is no need to utilise the more complex oblique procedure for interpretation.

The factors were orthogonally rotated to their simple structure (Table 6.12) and the solution reflects the format of



Table 6.10

PRINCIPAL AXIS FACTORING EXTRACTED SEVEN FACTORS FOR  
ALL ESTABLISHMENTS RESPONDING TO THE POSTAL QUESTIONNAIRE  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.74810			
STFOU	.70240			
STFOR	.60589			
STSIN	-.54993			
STSOC	.40903			
STTRA	.39927	.36572		
STTUR		.71917	-.41438	
STNOC		.69358		
STEFF		.49591		
STNOS		.44489		
STEXS			-.38538	.59632
STEDU			.33389	-.56971
STWME			.52303	.53476
STEXP			.30552	.45130
STEST	.30190			
STEMP	-.41274			
STPRE				
STEXA				
STTEC	.30924			
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA	.30061			
STFOU				
STFOR				
STSIN				
STSOC				
STTRA				
STTUR				
STNOC				
STEFF			.33506	
STNOS				
STEXS				
STEDU				
STWME				
STEXP	.31884			
STEST	-.44383			
STEMP	.43068			
STPRE		.36506		
STEXA				
STTEC			.39922	

Table 6.11

FACTOR CORRELATION MATRIX BETWEEN SEVEN OBLIQUE FACTORS  
EXTRACTED BY PRINCIPAL AXIS FACTORING FOR ALL ESTABLISHMENTS  
RESPONDING TO THE POSTAL QUESTIONNAIRE

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
FACTOR 1	1.00000			
FACTOR 2	.05913	1.00000		
FACTOR 3	-.02191	.03351	1.00000	
FACTOR 4	-.00587	.03314	-.01545	1.00000
FACTOR 5	-.21694	.11088	-.00662	.11170
FACTOR 6	.24764	.00849	.05014	-.06071
FACTOR 7	.08083	.25096	.22306	-.21190

	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>
FACTOR 5	1.00000		
FACTOR 6	-.19492	1.00000	
FACTOR 7	-.21842	.13499	1.00000

Table 6.12

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL AXIS  
FACTORIZING FOR ALL ESTABLISHMENTS RESPONDING TO THE POSTAL QUESTIONNAIRE  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.85802			
STFOU	.82496			
STFOR	.47574			
STSOC	.43640			
STTUR		.83551		
STNOC		.76572		
STNOS		.42076		
STEDU			.77030	
STEXS			-.74704	
STWME				.78582
STEXP				.66929
STEST				
STEMP				
STEFF				
STTEC				
STTRA				
STSIN				
STPRE				
STEXA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STFOR				
STSOC				
STTUR				
STNOC				
STNOS				
STEDU				
STEXS				
STWME				
STEXP				
STEST	.67751			
STEMP	-.66859			
STEFF		.63569		
STTEC		.58736		
STTRA		.44249		
STSIN			-.48726	
STPRE			.41587	
STEXA			.40372	

factor distribution shown in Table 6.8, but not the order. This confirmatory analysis only accounts for a cumulative percentage of explained variance of 48.2% for all seven factors (Table 6.9). Also, the eigen value rule of being equal or greater than one has been broken, because factors five, six and seven all have values below one. The reason they are included in the analysis is to boost the significance of the explained variance, which otherwise would be a mere 37.4%.

The reason for the reordering of the factors and the apparent weakness of this method, is because of the common and not total variance explained (Appendix 6i). This partial correlation approach can therefore be used to make causal inferences about the order and the structure of the factors, as they are all dimensions in a common vector space. Table 6.12 reveals that within this space, the first two and the seventh factor maintain the same order as with the component analysis, however, the 'Resource Attributes' factor becomes the third most significant, 'Export' factor the fourth, 'Community Status' the fifth, and 'Technological Investment and Training' sixth. The positive and negative relationships within the factors remains the same, even though the negative sign may have changed from one variable to another within a specific association.

This secondary analysis confirms the composition of the initial extracted factors by the component technique, but shows that the causal/common relationships is not truly reflected in the analysis of total variance. This is because the total variation includes the unique variation of the matrix, incorporating random and specific variation.

With principal axis factoring, the factors are directly related to each other in explaining the functional characteristics of the producer service firms involved. Therefore, the 'Socio-Spatial Division of Labour' factor (apart from explaining the greatest amount of variance) can be said to have the greatest influence over the other factors involved.

The 48.2% of cumulative variance explained is a function of the common variance, which is a reduced fraction of the total variance. Table 6.9 shows that the proportion of variation accounted for by each of the lower order factors is minimal. The further inclusion of additional factors would result in a diminishing proportional return, in terms of factors used and variance explained.

As the rotated factor matrix shows (Table 6.12), the interdependency of the underlying functional structures is dominated by the social and spatial elements of factor one. Hence, it is primarily the social structures of; education, elitism, professionalism and spatial socialisation which, influence and direct the functioning of the producer service sector on Merseyside. This is a generalised statement considering the sample structure under investigation.

The other factors indicated in Table 6.12 tend to fall under an economic heading, based primarily upon firm operations. Unlike Table 6.8 this matrix clearly shows that the 'Technological Investment and Training' factor is not as important when common links between the factors are drawn, and that the 'Resource Attributes' and 'Export' factors have a more pivotal role to play.

The second, third and fourth factors ('Firm Performance', 'Resource Attributes' and 'Export') indicate that the producer service sector is highly volatile. The functioning of the firms depends upon market orientated strategies, especially its performance, which whilst appearing transparently obvious, is part of a complex interrelated process within the Merseyside area. This function corresponds with the firms export based operations; mostly constrained within the area, but with certain markets orientated towards an international sphere.

The lower order factors in the matrix (Table 6.12) show that within the operation of the firms, the 'Community Status' and strategic functions play a lesser role in influencing the other factors. This suggests that these factors are uniquely orientated, providing a distinct input into explaining the total variance, but a reduced importance in terms of combined common influence. They have less of a causal influence in the functioning of the firm and can be considered as standardised attributes, ubiquitous to the firms.

Certain assumptions can be based upon these results. Firstly, the factors illuminating the social segregation within the human capital of the producer service sector give a clear answer to the driving force behind the different attributes of these services. Secondly, based upon this initial assumption, it is possible that certain firm types have the ability to control the functions of capital, because economic and technical factors have a secondary importance in influencing the development and functioning of these particular services. Thirdly, whilst the economic factors play a significant role in swaying the separate

characteristics of producer services, wider structural constraints on the Merseyside area have a deeper causal affect on the production processes and systems of these firms.

The central reason for utilising the two methods of factor analysis can be seen from the extractions described above. The principal components providing the largest amount of total variance explained; irrelevant of the relationship between the factors. The principal axis factoring highlighting the more influential and unique factors, with some taking a leading position in controlling the functional characteristics of the firms.

As already stated, the depth of this analysis is restricted because it does not provide concrete evidence, as the factors that are extracted are a form of abstraction of the concrete structures and agents under inquiry. Its limitations are realised and the qualitative analysis will provide a deeper level of understanding, approaching the concrete.

The analysis of the whole sample population, described above, is a prelude to a segregated factor analysis, which whilst not so elaborately explained, will rely upon the same format and the results are shown in Appendix 6ii-6viii.

## 6.3/ Sub Group Analysis

### 6.3.1/ Multi Site Establishments

The first disaggregation of the sample placed under investigation is that of multi site establishments (Appendix 6ii). The scree diagram shows a break in the slope directly relating to eight factors and the final statistics show this corresponds with the Kaiser (1960) criterion of eigen values greater than one. The final statistics show the eight factors account for 68.3% of the total variance, slightly more than for the total sample, but with the addition of one factor.

The orthogonally rotated matrix of these eight factors, extracted by principal component analysis, highlights the different order and structure of these factors to those extracted for the whole sample. The 'Technological Investment and Training' factor displays the same components, yet becomes the primary factor explaining 12.9% of the total variance for multi site establishments.

This may appear contradictory to the previous statement about IT not being a crucial influence, but it provides an opportunity to highlight the fundamental differences between those firms possessing a corporate structure and those operating from a single establishment base. This is primarily for two reasons; firstly, the type of market and secondly, corporate strategy.

The multi site establishments tend to be large financial institutions, banking, insurance and accountancy, and as a



result have a large national client base covering a multitude of functions. Corporate strategy breaks down the workforce and operations of these firms, creating spatial divisions of labour, which need not only standardised recruitment procedures, but also complex orchestration of management systems. The combination of these elements results in a high dependence upon IT and training, which provides a strong common ground for the importance of this factor amongst the firms involved.

The second factor, 'Firm Performance', accounting for 10.6% of the explained variance, indicates that the basic success of the firm, mainly in terms of turn over and client base, are primary requisites for the development and functioning of any multi site establishment. This is based upon basic economies of scale and central place theory (Green and Howells 1987) and spatially orientated market segmentation policies.

This factor, together with the first, accounts for nearly one quarter of the total variance and could be viewed as economic influences, which determine a large percentage of the variation of the firms' operational characteristics. So, there is an apparent contrast between the total sample and this subgroup, which unlike the former can not have their variability primarily explained in terms of social characteristics.

The human capital element of multi site establishments is not as dynamic in influencing the firm, and innovative/creative skills are subsumed within the overall company policy and structure. This is in agreement with the working hypothesis, that the agents of the producer service sector are consumed within the larger structures and their flexibility and causal

influence is not equal to the same situations within single establishment operations.

The remaining rotated factors for the multi site establishments (Appendix 6ii) are, 'Credentials', 'Resource Attributes', 'Founder's Background and Community Status', 'Export', 'Social and Economic Status' and 'Residential Preference'. Of these, the first two relate to the human capital (resources), internal and external, of the firm. The 'Credentials' factor indicates that the founders/MD's of these firms have attained a high level of formal education and this accounts for 10.1% of the total variation.

The 'Resource Attributes' factor shows, once again, that those firms which have contact with educational institutions tend not to sub-contract out. This reiterates the contact as being centred upon recruitment and/or promotion, as with the whole sample. This factor accounts for 8.6% of the total variance and brings the cumulative percentage of explained variance to 42.2%.

The fifth factor, 'Founder's Background and Community Status', combines a previously established factor with the variable which designates, whether or not the founder/MD worked within the service sector prior to their present occupation. From this factor it can be inferred that, the older firms tend to be larger in terms of employees and are more prone to control by people who have worked within the same sector or business.

This explains the reason for the negative relationship within this factor and suggests that there is a particular type of person, with a specific occupational background, who is in

charge of these firms. As an underlying influence, this phenomenon accounts for 7.7% of the variance and raises the cumulative percentage to 50%.

The sixth factor is a previously defined parameter, 'Export', showing each firm to have a predominantly Merseyside orientated export base, yet with a high propensity to export a small proportion of their business out of the area. This factor accounts for 6.7% of the total variance and increases the cumulative explained variance to 56.6%.

The seventh factor, 'Social and Economic Status', is the third occurrence out of the eight factors which includes a negative relationship. At first an inverse association between firm status and social status of the founder/MD appears erroneous. However, this is because the firm status scale is based upon lower status firms being indicated by a lower number, whilst the socio-economic scale has higher numbers to denote the more affluent. The factor simultaneously displays this relationship, with whether or not the firm uses external resources to provide support services, which are not directly connected to the production process; cleaning, catering, etc. The loading (0.74890) indicates the lower status firms to be more prone to accessing this type of resource.

The 'Social and Economic Status' factor, being ranked seventh and only accounting for 6.0% of the total variance, is obviously a low order phenomenon. But it does show, that the social and spatial are not as directly linked as in the case of the total sample population.

From the moderate loading of the socio-economic variable (-

0.64693) on factor seven, it can be assumed that there is a wide range of social groups involved within this characteristic. This takes account of the people managing the lower status firms, which tend to be small branch or subsidiary operations, along with MD's and chief executives of regional and head offices.

The eighth and final factor, accounting for a mere 5.7% of the total variance, is primarily evolved from the variable indicating residence on Merseyside. The subsidiary loadings of, firm status and previous employment are virtually insignificant. The negative loading of the status variable suggests that the founders/MD's of the higher ranking operations, within the firm structures, have a tendency to live outside of Merseyside. This factor has been designated as 'Residential Preference', which, is influenced to a certain degree by; firm status, and the probability of people previously employed within the service sector to live (selectively) within the local area. This reflects the underlying service economy of the area, which the indigenous population are highly likely to be involved in previous to working in the producer service sector. Yet these firms tend to be lower ranking operations within corporate structures.

The orthogonal rotation of the same eight factors extracted by principal axis factoring (Appendix 6ii) shows an expected reduced explained variance, 47%, due to its explanation of common variance. As previously indicated common factor analysis not only shows a reduced explained variance, but also a reordering of the factors. Within the common vector space, in which the factors influence each other, unlike the

individualistic explanation of total variance, the 'Firm Performance' factor is dominant and the 'Technological Investment and Training' factor is demoted to second place.

It can be inferred from the extracted factors that, the 'Firm Performance' of multi site establishments is the driving force behind the whole range of characteristics included within the survey. The first three factors of this analysis show the dominant factors to be economically based and concurs that the main influence amongst the factors is within the economic sphere of firm operation.

In conclusion, this confirms the premise that the human capital/social influence is not such a dominant functional characteristic in multi site establishments. The results from this analysis show the relationship between the economic and the disaggregated social factors to be a dominant one. The latter are segregated because their constituent parts no longer have any cohesive bond within the multi establishment structures and have become subsumed by economic factors. Under these conditions, the simple definition of a social factor is not absolute and the influence of social class and background is not as amplified within the firm structures.

#### 6.3.2/ Single Site Establishments

The scree diagram, final statistics and orthogonally rotated factor matrices, for both principal component and principal axis factoring are shown in Appendix 6iii. The scree diagram is for both factor techniques and, in combination with

the final statistics, shows the selection of seven factors.

The principal component analysis of the seven factors accounts for 72.6% of total explained variance, a much higher proportion of explained variation than with the multi site establishments. This is due to two reasons; firstly, this sub group of firms is a much larger group and its relative ratio size (variables to cases) is more conducive to factor analysis, and secondly, the contradictions in the factors are reduced as it is composed of mainly white collar operations.

The orthogonally rotated matrix for the component analysis (Appendix 6iii), defines the clear structure of the factors and the dominance, of explained variance, by factor one. This factor, as defined earlier, 'Socio-Spatial Divisions of Labour', outlines the principle of the working hypothesis, that amongst smaller firms, social influences are the key determinants of their functional characteristics. Under these circumstances, the majority of the firms founders/MD's are highly educated, indicated by the 0.90579 loading and the majority in residentially 'desirable' areas.

As shown by the final statistics (Appendix 6iii), this first factor accounts for 18.6% of the total explained variance and is the primary input in explaining the variability of the firms. However, with reference to the sample group a note of caution should be added, that due to the poor response rate of single site blue collar establishments, the high percentage of variance explained by these factors mainly relates to white collar establishments. Because of this, the interpretation of the sub group will be brief and detailed analysis will be

retained for the subgroup of single site white collar establishments.

Factor two, 'Firm Performance', has also been defined before, and in this example, because of the loading format, client base is tied more closely with turnover, whilst an increase in the number of services is not such an important link with the factor. The third factor combines export markets with training and as a result is entitled 'Export and Training'. This connects the market area of the firms with the training facilities provided by it. Yet, the loadings show this is a weak link and the factor is primarily based upon the, previously defined, 'Export' factor.

Factors four and five have also been defined earlier; 'Resource Attributes' and 'Community Status', which hold the same internal variable relationships, being inversely related. These factors exhibit the same information about the firm characteristics as they do with other subgroups. They show extreme uniformity throughout the subgroups and are a reliable indication that these factors are virtually ubiquitous in their influence.

The sixth and seventh factors account for an identical amount of variance, 5.7%, and therefore have no priority over each other. Factor six is simply a combination of variables relating to IT and as a result its designated name is 'Technological Investment'. As the loadings indicate, the present use of IT is extremely high amongst the firms, but the future investment loading does not indicate such a strong relationship with this. As a result, most firms that use some

form of IT, consider future requisitions to be of limited value. This is purely related to personal perception of IT development and application, and probably reflects the tentative approach most founders/MD's have, toward long term, costly, IT investment.

The seventh factor combines two indirectly related variables; previous employment of the founder/MD and the use of external firms for routine operations. The loadings show an inverse relationship between these variables demonstrating the low propensity of external firm use for those founders/MD's previously operating within the service sector. This reflects the taxonomy of the group, which tends to be controlled by people with a service industry background and firms of a limited size, which restricts this type of external linkage. Due to the involvement of these characteristics the factor has been labelled 'Auxiliary Supporting Expertise'.

The matrix of the orthogonally rotated seven factors for principal axis factoring (Appendix 6iii), displays a relatively high account of common variance, 57.8%. In addition, it also exhibits exactly the same structure and format as the component analysis. Therefore, the causal influences have the same ranking order as described above.

This matrix demonstrates the strong influence of the social characteristics in determining, not only the variance of the factors, but also the bearing they have upon modulating the other factors. The higher ranking factors have strong common influence over the other lower ranking factors and provide a leading directive for these lesser characteristics. Accordingly,



the social variables have a strong bond with each other and a far stronger common presence amongst the firms involved than the other attributes.

The lower order factors of 'Community Status' and 'Auxiliary Supporting Expertise' reveals their restricted ability in affecting the other factors. It also displays their independence from the other factors and the restricted influence, business linkage and occupational background features of the founder/MD have over the social and 'Firm Performance' characteristics.

### 6.3.3/ White Collar Firms

The results from the factor analysis of this group of firms (Appendix 6iv) displays a striking similarity to that performed on single site establishments, indicating that the majority of these firms fall within the same category. This is a reflection of both the sample population, which is biased towards white collar operations, and the producer service sector on Merseyside, which is unevenly weighted towards single site establishments.

The initial component analysis selected seven factors, explaining 66.5% of the total variance, of which four are identical to those selected for single site establishments; 'Socio-Spatial Divisions of Labour', 'Firm Performance', 'Community Status' and 'Resource Attributes'. They are not in the same sequence, but the 'Socio-Spatial Divisions of Labour' factor still accounts for the greatest amount of total variance

16.6%. 'Firm Performance' and 'Community Status' are the next highest ranking factors, accounting for 12.5% and 9% respectively. This is a reflection of the group's mixed, single and multi site, composition.

The fourth and fifth factors 'Technological Investment and Training' and 'Resource Attributes' contribute an additional 16.2% to the cumulative percentage total. These display the firms' tendency to rely upon a certain level of human capital input, both internal and external, and that the larger firms which have developed external educational links tend not to use external sub-contractors. This is in accordance with larger firms, which unlike the single site establishments, are influenced by a combination of technology and training, indicating an investment in fixed capital.

The final two factors, 'Export' and 'Strategic Business Resources', increases the cumulative total variance to 66.5%. The 'Export' factor is the same composition as that extracted in previous examples and can be interpreted in the same way. The 'Strategic Business Resources' factor incorporates; external input, previous employment of founder/MD and whether the firm is a single or multi site establishment. The negative relationship amongst these loadings indicates it is mainly the larger multi site establishments that utilise external routine operations.

These seven factors positively identify a parallel structure to single site establishments and highlight the social characteristics as the primary explanation for the functional activities of firms in this category. The component analysis simply accounts for sections of the total variance, which could

be apportioned to unique variation and provides little indication of the interdependence of the factors.

The orthogonal rotation of factors extracted by principal axis (Appendix 6iv) provides an answer to the interdependence problem and shows the common factor space is still dominated by the social and performance factors, which maintain the same positions. Factors three to six have had their status reordered and consequently the 'Resource Attributes' and 'Export' factors have taken on a pivotal role within the middle order factors.

Amongst the white collar firms the middle order factors illustrate how, external connections and market area (especially within Merseyside) are important facets of their operation. But, as the inverse association of loadings on the 'Resource Attributes' factor signifies, there is still a wide range of firms within this sample (single and multi site establishments), holding opposing business characteristics. Yet, for the majority, the market area is still contained within the Merseyside area, revealing the underlying (constraining) influence of the area's marginal economy.

The fifth, sixth and seventh factors; 'Community Status', 'Technological Investment and Training', 'Strategic Business Resources', indicate, due to their position, a more independent influence. This relates to the mixture of firms within the group, as 'Community Status' directly affects the autonomy of a firm, providing set constraints upon the operations of each operation.

Because of the large number of single site establishments within this group, the 'Technological Investment and Training'

factor does not radically alter the other factors. This is probably due to the smaller levels of investment and lesser importance placed upon IT to perform other than routine tasks.

The final factor has not altered its position from the component analysis and therefore, not only explains the smallest amount of variance, but it also operates as the most independent factor extracted. This is probably due, partially, to the tenuous connections between its component elements, which merely indicates, a higher propensity of single site establishments to be controlled by founders/MD's with a service industry background and a lesser tendency to utilise external routine services.

#### 6.3.4/ Blue Collar Firms

The scree plot, final statistics and orthogonally rotated factor matrices for both component and principal axis factoring are shown in Appendix 6v. Principal component analysis extracted seven factors, based on the criteria of the scree plot and the eigen values. These factors are shown in the orthogonally rotated factor matrix and together they account for 66.4% of the total variance.

Factor one combines two external linkage variables and an economic status variable, and as a result it has been labelled 'Status and Linkage'. Of the firms involved, it appears the single site establishments from this group are not prone to developing external links. The lack of external ties, either for routine operations or specialised sub contracting, is

illustrated by the negative relationship amongst the factor loadings and show a strong display of internal self-sufficiency.

Factor two accounts for virtually the same amount of explained variance, 13.7%, yet consists of four variables with more moderate loadings. Its composition is based upon the previously defined 'Firm Performance' factor, with the addition of the training variable and is accordingly designated the name 'Firm Performance and Training'. It demonstrates the significance of success and development within this group, especially associated with an increase in the number of services available. Training is the least important loading on this factor, but signifies the correlation between firm growth and the facilities provided for personnel development.

The third factor is as previously defined, 'Export' and needs little elaboration here, apart from acknowledging it accounts for 10.3% of the total variance and performs the same function as with other firm groups.

Factor four provides a new interpretation of the variables, combining the socio-spatial and background characteristics of the founder/MD. The designated title of this factor is 'Socio-Spatial Founder Status' and as shown by the loadings, the first two variables determine the primary structure of the factor. These demonstrate an inverse relationship, indicating two possible scenarios, either; those founders/MD's who reside in preferential residential areas live outside Merseyside, or alternatively (and more plausible), the majority of founders/MD's who live on Merseyside, do not live in the most

preferable areas.

The second scenario has a higher probability of occurring because the majority of blue collar firm founders/MD's live within the local area. Nonetheless, of the few larger blue collar establishments that reponed to the survey the founders/MD's tended to live outside the area with a preference for more desirable residential zones. Therefore, both facets of this factor are providing an input into this group of firms.

The fifth factor is dependent upon both technology and contact with educational institution variables, and has been categorised as 'Technological Investment and Educational Contact'. Under these circumstances, it tends to be firms already utilising some form of technology that are prepared, to a certain extent, to invest in future developments. It is probable that these firms are of a larger size and because of this, tend to have contact with educational institutions. Occasionally, this communication is used for professional guidance, but primarily for recruitment and promotional reasons.

Factor six, a lower order factor in terms of variance explained, 6.8%, is based upon the founders/MD's educational background. This factor is termed 'Credentials' and indicates that the people in charge of certain firms, who have some form of formal education tend to be of a high academic standard. 'Credentials' is more of a unique factor restricted to a limited firm base and provides a small proportion of the total variance. It tends to favour larger establishments, which are more probable to have stricter recruitment conditions and complex internal structures.

The seventh and final factor, accounting for 6% of the total variance, and previously defined, is 'Community Status'. In this case it holds the same significance; the larger firms, in terms of numbers employed, tend to be the older establishments. Yet the loadings upon this factor indicate a weaker relationship within its component parts and hence the association is not as clear cut as previously defined.

The format and rankings of these seven factors, demonstrates the underlying structures of this firm group are primarily explained by economic determinants. These are focused upon; selective external links, increased service development and business operations within the local area. The middle and lower order factors contain indicators of social significance and show these to be less crucial determinants in explaining the variability of the firm characteristics.

Examining the orthogonal rotation of these seven factors for principal axis factoring (Appendix 6v), the ranking of their positions is only partially altered. The two main factors maintain their structure and position, showing their influence, not only in terms of total variance but also within the common vector space. They provide a strong bond with the rest of the factors and a primary force in the operations of these particular producer service firms.

The lower order factors are rearranged in these different analyses, but the 'Export' factor still takes priority over the remaining four, showing the firms' market area (mainly Merseyside) has a stronger influence amongst the factors, than was apparent from the total variance it accounted for.

The 'Credentials' factor, even though accounting for a minimum of total variance, displays by its position, that it has a more positive role amongst the common factor space. When it is examined in this context, this factor exhibits a greater tendency to govern the lower factors; 'Technological Investment and Educational Contact', 'Socio-Spatial Founder Status', and 'Community Status', which all tend to be connected with the size and status of the firms.

Obviously, from the analysis above, the essential motivation behind the functioning of this group of firms lies with economic/industrial linkage. Only when the firms in question tend to be of larger proportions, do factors of educational resources and founder/MD influence come into play. This is not because they are primary determinant factors throughout the group, but with firms ranking highly on the 'Community Status' factor, issues such as technology, training, management skills and educational credentials are of elevated importance.

#### 6.3.5/ White Collar Multi Site Establishments and Blue Collar Single Site Establishments

These two sub groups have been placed together because they hold similar positions within the matrix of firm classification (Chapter 2). Their characteristics are deemed to overlap and provide a duplicate insight into the underlying structures of their operational characteristics. A similar factor matrix was generated for both these groups and to avoid repetition, their



analysis has been placed together.

The scree diagram, final statistics and orthogonally rotated factor matrices, for both principal component and axis factoring are shown in Appendix 6vi. An elementary difference between the scree diagrams and tables for the two groups is that, eight factors have been extracted for the white collar multi site establishments, whereas, seven factors were extracted for blue collar single site establishments. The question is, does this initial difference invalidate the hypothesis that these firms should have similar underlying characteristics ?

Firstly, the contrast could be explained by the different number of variables involved within the separate analysis. The group of multi site establishments contains one extra variable. This pinpoints the status of the office under investigation within the wider firm structure. Secondly, juxtaposing the similarity of the factor matrices and the possible margins for analytical error, it is a remarkable phenomenon that the firms' factors bear such a resemblance to each other (Appendix 6vi).

It is due to sources of error and differences in sub group composition that the factor matrices do not perfectly reflect each other, and a certain inconsistency is to be expected. The structural patterns of the factored groups show comparable formats and the results do parallel each other, which is to be expected considering the middle ground that these firms cover within the hypothesis matrix and therefore the analysis performs a confirmatory role.

The seven extracted factors for blue collar single site establishments (component analysis) account for 71% of the total

variance, whereas the eight factors for white collar multi site establishments explain 69.1% (Appendix 6vi). From the matrices it possible to recognise that the first four factors (for both analysis) have virtually the same orientation. The high order factors for the white multi site establishments are entitled; 'Technological Investment and Training', 'Firm Performance', 'Credentials' and 'Resource Attributes', whilst the corresponding factors for the blue collar single site establishments are; 'Credentials and Firm Size', 'Firm Performance' and Firm Age', 'Technological Investment' and 'Resource Attributes and Service Range'.

There is a similarity between the factors, apart from the addition or subtraction of one variable loading per factor. This illustrates the subtle differences between the firm groups, partly due to; usual discrepancies in social data analysis and disparities within the firms' operational characteristics. It is impossible to precisely calculate the effect of errors and it must be assumed the deviations derive from expected heterogeneity of the firms.

The final three factors for blue collar single site establishments (component analysis) are designated as, 'Export', 'Social Status' and 'Resource Development'. Whereas, the final four factors for white collar multi site establishments are entitled, 'Founder's Background and Community Status', 'Export', 'Social and Economic Status' and 'Merseyside Residence'. There is a certain similarity between these sets of lower order factors, but as they account for, relatively, a reduced amount of variance, there tends to be a greater deviation between the

format of the extracted factors.

A judgement as to whether these lower order factors are of lesser importance in their influence over the other factors, and are therefore uniquely orientated, can only be based upon examination of the principal axis factor matrix for both sets of firms (Appendix 6vi).

The principal axis factoring matrix of the orthogonally rotated factors for blue collar single site firms shows the common vector space is virtually identically structured to the component matrix. It is only the middle order factors that are rearranged into new rankings; 'Export', 'Technological Investment' and 'Resource Attributes and Service Range'. This matrix demonstrates the dominance of 'Credentials and Firm Size', which indicates that the larger firms within this group tend to be controlled by founders/MD's with higher educational credentials. The negative relationship is a product of the higher the credentials indicated by a lower number which corresponds with a greater number of employees. Second to this, the factors are influenced by 'Firm Performance and Age', which indicates the greater performance by the older firms.

These factors tend to show that such firms are mainly influenced by a set of parameters combining, certain economic and social status variables. This is to be expected, as this subgroup lies in the mid range of the classification matrix where the extremes of economic or social influences are not of pivotal importance. A qualification of this is the lower ranking of the 'Social Status' factor.

This analysis also displays the reduced influence the

'Technological Investment' and 'Resource Development' factors have within the common vector space. This is attributable to the limited IT investments amongst blue collar firms, due as much to restricted application opportunities as to reluctant endorsement attitudes. The 'Resource Development' factor being placed last, also displays a lack of strategic investment and forward planning which may not be a conscious decision on behalf of the founder/MD, but is more likely to reflect the financial and time restrictions upon the operations of these firms.

The principal axis factor matrix for white collar multi site establishments needs little elaboration, as the factors maintain the same position as with the component analysis (Appendix 6vi). They hold the same rankings and names as before, and the relationships are identical. The difference being this structure shows the hierarchical pattern of influence the factors have over each other, and indicates the primary determining relationships between them.

#### 6.3.6/ Blue Collar Multi Site Establishments

The scree diagram, final statistics and orthogonally rotated factor matrices for component and principal axis factoring are shown in Appendix 6vii. The scree diagram and final statistics have guided the extraction of seven factors and for the component analysis they account for 68.0% of the total variance.

Even though the component analysis of these firms does not explain the greatest percentage of variance within the sub

groups, it must be recognised that in relative terms it does account for one of the highest amounts of variance. This is because within this group there are nineteen variables, due to the inclusion of the status variable which, unlike the other groups containing the same number of variables, are parsimoniously reduced to eight factors. Therefore, a greater reduction process has been undertaken, whilst still maintaining high levels of variance accountability.

The first factor is an original composition for the analysis and is designated, 'Business Linkage and Resources', based upon, training, subcontracting, founder's/MD's business experience and services available. This factor accounts for 14.5% of the total variance and displays a negative association amongst its loadings. It indicates that those firms, increasing their available services, providing training (internal/external) and with a founder/MD who has prior service industry experience, do not tend to sub contract out sections of their production process.

Speculation as to the cause of this relationship relies upon the assumption that firms able to diversify their business and provide strategic training have internalised all their production processes. This is primarily because these are large multi site establishments with completely internalised resources, which result in a lack of business linkage for fundamental multiplier effects within the area. This enhances the theory that these types of producer services operate with relatively isolated production process.

The second factor 'Technological Investment', as defined

earlier, incorporates present and future investments in IT. The loadings clearly show the positive stance these firms take with the application of technology, not only with present levels but also with future investment. It is a strong probability that this factor reflects the need for these firms to apply IT not only for enhanced service provision but also for internal management and communication.

Factor three has been defined before, 'Export', and provides the same influence here, accounting for 9.6% of total variance. Therefore once again, the firms involved, whilst having a high propensity to export outside the area, conduct the bulk of their business within the local area.

The fourth factor is a composition of two factors defined earlier, 'Firm Performance and Community Status', which simply shows that the larger firms of the group have tended to increase their turnover and client base. Under most circumstances these firms are some of the older establishments within the area, which is indicated by the inverse relationship on the establishment date variable.

The 'Credentials' factor has once again been extracted by the analysis and ranks fifth of the seven. It indicates the need for high level human capital input into the supervisory and developmental roles within the firms. The first loading shows a reasonable level of university education, yet the second loading does not show such a high level of attainment. Also, as it is a lower order factor, it only accounts for 8.5% of the total variance and reveals its overall reduced influence.

Factor six is another new interpretation of the variables

and combines educational contact, Merseyside residence and firm status. The first two are seen as links with the local area, in terms of connections with surrounding institutions and actually living within the area. Therefore, the factor has been designated 'Community Links and Firm Status'. As the loadings show, there are two negative relationships with this factor which can be interpreted on two levels. Initially, the smaller status firms within the area, that are controlled by personnel living on Merseyside, tend not to have contacts with educational institutions. Secondly, the higher status establishments, supervised by founders/MD's living outside the area are more likely to communicate with educational institutions. These, as previously stated, will be the larger operations and the contact will tend to be for recruitment and promotional reasons.

The final factor combines two indirectly related variables and, because of the low loading of the socio-economic variable, only a tenuous connection can be drawn between the two. It could be stated the higher the social status of the founder/MD the greater the probability the firm uses external routine support services. Due to this composition the factor has been entitled 'Routine Business Links and Social Status'.

The seven factors show some interesting characteristics, mainly; the importance of internal production resources, a reliance upon IT, the priority of local business demand, a limiting of external connections to routine operations and a subdued influence of formal credentials.

The hierarchical structure of the common factor matrix displays the priority of influence, each of the defined factors

has within their internal relationship. The order is as follows; 'Export', 'Technological Investment', 'Firm Performance and Community Status', 'Business Linkage and Resources', 'Community Links and Firm Status', 'Credentials' and 'Routine Business Links and Social Status'. The corresponding percentage of common variance accounted for by each factor is shown by the final statistics (Appendix 6vii).

This shows only a slight rearrangement from the component factor matrix, and does not contradict previous assumptions, but serves to confirm that the characteristics outlined are not just independently significant, but also interdependently influential. It is confirmation that the initial hypothesis on the functioning of blue collar multi site establishments correctly places them within the classification matrix (Chapter 2).

#### 6.3.7/ White Collar Single Site Establishments

The relevant tables and statistics for this analysis are shown in Appendix 6viii, which initially highlight the extraction of seven factors. These account for the greatest single amount of total variance explained, 72.7%, which can be attributed to this subgroups superior composition for analysis. As the largest sub group it is more conducive to factor analysis, which explains the slight increase in variance accounted for.

Of the seven factors only two are new formations of the existing variables. The initial factor 'Social and Spatial



Divisions of Labour' has previously been extracted and defined three times. It indicates its priority here by accounting for 18.6% of the total variance and holds the same internal relationships as with other sub groups: human capital is of primary importance which is derived from a specific social class and, even though the founders/MD's predominantly reside within the area, the basis of locational decisions are very selective.

The second factor is one of the two new compositions and is based upon performance attributes, with the addition of one variable concerning technology, resulting in its designated name, 'Firm Performance and Future IT Investment'. This suggests that those firms which increased their performance between 1981-89 are the same establishments which will increase their application of IT in the next five years. This differs from previous IT factors, which links those firms presently using IT to future investments.

Factor three, four and five have all been previously defined; 'Export and Training', 'Resource Attributes', 'Community Status'. These display the same characteristics as before, except for 'Resource Attributes', which shows a negative association based on educational contact. Therefore educational institutions play a negligible role amongst these firms, yet these single site establishments receive external support/expertise from other private operators.

The sixth factor is unique in this analysis, as it has only one loading upon it; 'Technology'. It is totally dominated by the firm's use of IT and shows the singular importance of this variable amongst the establishments involved. It is possible to

state that, these firms rely primarily upon the use of IT and this provides a key input into the underlying structure of the firms' functional characteristics. All firms in this group are dependent upon the use of IT, but from this analysis its specific uses are unclear.

The final factor has been designated before; 'Auxiliary Supporting Expertise', demonstrating the majority of the founders/MD's have had previous experience in the service sector. The firms, due to the negative relationship in this factor, avoid the use of external routine services, either, providing their own or having no use of them.

The principal axis factoring of the seven factors, shown in the orthogonally rotated matrix (Appendix 6viii) displays the same hierarchical ranking as the component analysis. It accounts for 57.9% of the common variance, an extremely high proportion, and for the final analysis, shows the dominance of social characteristics within this sub group of firms. This is not only their independent importance, in terms of influencing the greatest proportion of the firms' operations, but also in guiding the subsidiary factors.

In both cases, the analysis tends to support the classification hypothesis of firm operation and highlights the importance of human capital in this sub group. It reinforces the idea that, the key personnel in the white collar single site establishments have the ability to control the functions of capital, as the operations of these firms are not as constrained by the economic factors which relate to the marginal position of the area. These personnel are themselves, along with the firm,

in a far better position to influence the regeneration of Merseyside outside of the imposing structures which determine its marginal economy, than any of the other subgroups analysed above. However, based upon the analysis of their characteristics in the previous chapter, there is no evidence that these firms act as a dynamic growth sector or that they operate in any way to counteract the disabling structures which limit the development of the area.

## 6.4/ Conclusion

The basis for utilising factor analysis as a method of data analysis, was derived from the intention to separate and examine the key functional characteristics of producer service firms. This intention was generated by a need to assess the viability of the working hypothesis developed in Chapter Two, based upon a classification matrix.

The analysis in the previous chapter (Chapter 5) shows the functional characteristics<sup>4</sup> to have certain individual patterns, such as the limited geographical markets for the majority of exports, but it does not examine how these characteristics are involved in the differences between firms or how they relate to each other. Understanding these relationships is vitally important to this thesis, because these interactions between the characteristics, even though they are an abstract conception<sup>5</sup>, reveal how the tensions between structure and agency are played out. This is not to say agents and structures are themselves examined, but rather the outcomes of how people act in relation to the enabling or constraining effects of structure.

The result of the analysis displays the outcomes of this interface<sup>6</sup> so that, in accordance with the working hypothesis,

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<sup>4</sup> The functional characteristics of the firms are used as variables in the factor analysis (Table 6.1).

<sup>5</sup> The characteristics are statistically generated from theoretical frameworks of groups and do not deal with concrete events.

<sup>6</sup> The word interface, simplifies and distorts the more complex idea of a duality, which is how structure and agent can be conceived (Giddens 1984), but is used here to simplify the context.

the firms' ability to control the functions of capital have been assessed. In other words, the analysis has been used not to just assess the basic autonomy of the establishments, but also the possibility that constraining structures, manifested in the marginal economy of the area, can be subdominant to other social structures. Where this occurs, there is a strong possibility that the actions of the founder/MD, through the collective labour of the firm, have a greater influence over the functions of capital and the firm is in a better position to act as a regenerative 'spark' than other establishments.

The factor analysis of the various groups has revealed that, within certain firm types<sup>7</sup>, the influence of the social characteristics of the founder is greater than economic determinants. This is consistent with the assumptions made on firm operations in Chapter Two and indicates that certain firm types have a greater ability to act as a regenerative base. This became more obvious as the analysis was performed on the different subgroup categories, especially the single site white collar establishments. For all the firm types the hypothesis holds true, placing the firms in the correct area of the theoretical classification matrix, indicating either their greater or lesser ability to control the functions of capital.

The larger (multi site) establishments exhibit economically determined tendencies related to the marginal situation of the area. These are mainly based upon; firm performance, technology, internal/external resources and export markets.

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<sup>7</sup> The firms types tend to be white collar establishments, but particularly single site white collar establishments.

The characteristics of the firms that are not at the extremes of the theoretical matrix tend to overlap and the divisions between them are blurred; leading to an agglomeration of factors. Even though these firms do not provide such a clear demonstration of the hypothesis they do reveal the central composition of the theoretical matrix and the way in which there are no finite boundaries between the underlying structures.

As the analysis of the operational characteristics in the previous chapter revealed, even though certain firms within the producer service sector on Merseyside have this regenerative potential, it is not manifested in any form of dynamic economic development. But more importantly, these firms are reliant for their position upon the structures which cause the problems in need of regeneration (exploitive divisions of labour and class tendencies) and these structures are reproduced through the actions of the founders.

To assess if the actions of the founders do reproduce the structures which are involved in sustaining Merseyside as a marginalised economy, the concrete events of their social practise must be examined. This can only be achieved through a more intensive qualitative analysis of the people involved which is explored in the next chapter.

## Chapter 7

### Qualitative Analysis of Producer Service Personnel and Class Structures on Merseyside

#### 7.1/ Introduction

The underlying theory and methodological approach behind the qualitative analysis in this chapter has already been explained (Chapter 4), therefore, this brief introductory section will simply reiterate a few basic points and clarify the approach.

This chapter presents the results from the third level analysis of the thesis and, as explained in Chapter Four, it is primarily based upon an analysis of class structure and formation within the area. The analysis examines key personnel selected from the firms already examined in the previous chapters. Table 7.1 shows the people involved in this intensive survey.

The general aim of the chapter is to examine the social practices and class assets of producer service personnel, in order to assess if these people reproduce the structures which have been an integral part of the area's restricted development. These structures are specifically manifested in the social polarisation of the area, the marginalisation of its economic position and its restricted labour markets (Chapter 3).

The intensive survey particularly focuses upon white collar firms, as these have shown to be the operations best placed to offer some form of regeneration, because they have a greater

## Table 7.1

### Categorisation of Interviewees

#### External Service Class

Accountant 1<sup>1</sup>  
Architect 1  
Engineering Consultant 1

#### Indigenous Service Class

Accountant 2  
Advertising Agent 1  
Architect 2  
Commercial Photographer 1 & 2  
Computer Consultant 1 & 2  
Estate Agent 1  
Financial Consultant 1 & 2  
Management Consultant 1 & 2  
Marketing (Design) Consultant 1  
Solicitor 1 & 2

#### Indigenous Management Class

Accountant 3  
Advertising Agent 2  
Bank Manager 1 & 2  
Building Society Manager 1 & 2  
Estate Agent 2  
Insurance Agent 1 & 2  
Quantity Surveyor 1 & 2

#### External Dominant Class

Accountant 4  
Engineering Consultant 2  
Marketing (Design) Consultant 2

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<sup>1</sup> The numbers after the occupation types are the codes to refer to either one person or another.



ability to control the functions of capital than do the blue collar establishments<sup>1</sup>. The analysis is not just a composite examination of a group of key personnel, it is far more segregated and represents the views and histories of specific individuals.

As explained in Chapter Four, the people selected to be interviewed were taken from certain firms which responded to the postal questionnaire and, prior to the interviews, it was uncertain as to their social status or class assets. Once the interviews were completed it was then possible to broadly divide the respondents into groups with similar class traits. Therefore, previous to the analysis of the interview material, the agents were segregated into different groups, not just for ease of analysis, but to reinforce the differences that exist between separate social classes.

The interview material is presented as a set of social profiles and underlines the idea that not all key personnel in producer service operations are members of the service class<sup>2</sup>, as there are structural tensions (Chapter 2) related to the spatially constituted processes of class formation, which result in the involvement of both the service and managerial class in the producer service sector.

The use of class analysis in this chapter has three key

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<sup>1</sup> Chapter 2 initially outlines the theoretical development behind this assumption and the quantitative analysis presented in Chapter 5 and 6 provides offers some empirical support.

<sup>2</sup> An examination of service class theory is presented in Chapter 2, which covers the work of the early theorists such as Dahrendorf (1969) and Renner (1978), to the more contemporary work of Savage et al (1992).

aims: firstly, to illuminate the processes whereby agents reproduce structures which perpetuate the exploitive relations of capital, secondly, to assess the types of people involved within the privileged sections of the service sector on Merseyside (which can be related to the wider labour markets of the area) and thirdly, to understand the concrete effects of structural forces (on Merseyside) in constraining or enabling the actions of agents.

The final section of the chapter presents a brief analysis of specific business characteristics of the repondents' firms. This provides an additional link with the quantitative analysis (Chapters 5 and 6) and reveals how the concrete actions of these people directly feeds into the operations of the firms.

## 7.2/ Social Profiles

The majority of people who were interviewed originated from Merseyside and, in the case of the small capitalists, all were born in the local area. The main exceptions to this indigenous group were senior personnel from large multi site establishments, the main bulk of whom originated from the South East (Table 7.1).

### 7.2.1/ External Service Class

The three people in this sub group originated from outside the North West, and two of these moved to Liverpool during their working lives from the South East (Table 7.1). The moves were a result of personal promotion within multi site establishments, as the firms expanded their operations into the area due of the branch plant economy boom within on Merseyside (Chapter 3). The third person also moved from the South East, but this was a result of a parental relocation in the 1960's due to business development on Merseyside.

This low representation of non indigenous population is by no means conclusive evidence that Merseyside has, for a long period, offered little attraction for relocation or expansion from outside the region. But set against the results of the quantitative survey, which indicate limited inward investment, and the Manchester Business School survey of southern based business attitudes to the North West (Piesse 1988), showing 93% of senior staff would not be prepared to relocate in the North West, it indicates the typical nature of the interview

population.

Both of the people that moved from London, during their working lives, found the initial transition extremely stressful, but for very different reasons. In the case of one structural engineering consultant from London, who had been educated and married in the North West, his return to London was made impossible due to family pressure:

"My wife hated London and it wasn't just the place but the people aswell, and after a while it became unbearable and something had to give. Her family came from the Wirral and the company was opening an office in Hamilton Square (Birkenhead) to take care of the structural engineers in Bootle. So the move was inevitable." (Engineering Consultant, 1).

In the case of the young Architect, his initial move out of London was to North Wales, due to the establishment of an office by the firm to handle local government contract work. Supposedly, this was a short term position but, due to business expansion, the firm wished to keep him there:

"I couldn't believe it. The move was only going to be for six months originally, and then they decided to keep the office in operation and it was made very clear they wanted the existing staff to stay. I just couldn't stomach the place and with no family commitments, I used the connections I had made in the area and got out to Liverpool. This was supposed to be a temporary measure too, but one thing led to another and I ended up getting married here." (Architect, 1).

The third person interviewed, who moved into the area from outside the North West, did so at the age of eight because of his father's relocation to Liverpool. He stressed, however, that

at that time the area was seen as thriving, and it was not uncommon during the 1960's for this type of managerial relocation to take place:

"Obviously at the time I didn't know much of what was going on but, having lived in the area for most of my life, I now know that in those days, when the car industry and industry in general was picking up, it wasn't so bad to move here. A definite bloody change from the last two decades!" (Accountant, 1).

The Architect (1) is now a senior partner in one of the largest architect firms on Merseyside, the Engineering Consultant (1) is the managing director of a medium sized structural engineering operation (now part of the Halcrow Group) and the Accountant (1) is an independent chartered accountant and financial consultant.

It appeared that their career structures were determined by their private education, professional qualifications and personal commitments rather than parental influences, which were more constrained within typical managerial career structures (Sofer 1970, Abercrombie and Urry 1983). Indeed, the basis of their position to exploit and control, is not primarily structured around managerial hierarchies, but is centred upon knowledge (cognitive base). This asset, which is an autonomous quality based upon their past and present social relations, is part of their cultural base (Savage et al 1992).

These initial findings indicate that these three people are members of the middle class, as are all the people interviewed. However, a more precise terminology within this all consuming social group would be service class: they do not entirely own

the means of production or the capital resources, which would place them in an upper class group, yet they are in control of the means of production, and their professionalism is not significantly limited by bureaucracy (Abercrombie and Urry 1983, chapter 8).

These assumptions are conclusively supported by the life style characteristics of the three people, two of whom live outside the Merseyside area for two reasons: firstly, a personal preference to disassociate themselves with not just the place but its reputation, and secondly, a craving for cultural capital provided by the semi-rural location of their homes in Cheshire (Architect, 1 and Engineering Consultant, 1). The Accountant (1), due to his longer association with the area, felt a stronger affinity for the county as a whole, but his feelings of acute depression for its decline were targeted at Liverpool:

"It's like the third world over there (Liverpool). Not just the unemployed, but the workforce. They are uncontrollable and don't realise the effect of wage increases which cripple the area. There must be a chief and there must be indians. All you get today is the bad news: £2 million spare parts stolen from Fords, youths stealing open top cars so they can throw bricks at the police. People vote with their feet and business is going with it." (Accountant, 1).

His reference to 'over there', relates to his location in Wirral, which he views as separate from both Merseyside and Liverpool, because there is an "enormous distinction" between the two:

"Liverpool should be down graded as the centre, to draw attention away from it and let the peripheries

grow, because people want a decent standard of living; they don't want thieves and the like." (Account, 1).

This opinion was also reflected in the statements of the other two interviewees who expressed their convictions as a general belief held by their peers in the business and social community.

As a result of their financial resources and cultural capital, developed through educational privilege and social closure, they are able to disassociate themselves from what they perceive to be historically working class traditions: public houses, television, public services and the general urban environment.

The type of exploitive relations they develop, directly of their own employees within the producer service sector and indirectly of manual workers within manufacturing, gives these people the potential to form as a social collective. Due to the contingent conditions on Merseyside (Chapter 3), promoting social polarisation, exacerbated by the boom in the national service economy during the 1980's, the causal powers of the service class are cultivated through the actions of these agents.

These actions are manifested in both a social closure and a physical closure from environments which they not only cannot obtain entry into, those of the dominant classes, but also from which they disassociate themselves:

"The only attraction Liverpool has left is the Philharmonic Orchestra, but even then there's always the danger of leaving the hall to find your car has

gone. Because of this many of my friends have stopped going into the city at night, we have started going to the theatre in Clywd rather than Liverpool." (Architect, 1).

This territorial division that has become an intrinsic part of the service class genre, has been highlighted by Thrift (1987), and is described as 'the ubiquitous use of space by the monotonous reproduction of place'. This allows the supposedly easy transition from one area to another without disruption, similar to an 'accidental tourist' mentality. However, in the case of Merseyside, due to its severe problems and size, the inward transposition of a cloistered service class lifestyle is far more problematical. But, as the following transcriptions will show, not impossible.

The three people introduced above are characterised as members of the service class, based upon: their exploitive position within the production process, their social relations and their ownership of capital (property assets, organisation assets and cultural assets, Savage et al 1992 page 44). The next group of people to be discussed, also display similar characteristics, but they are extracted from the indigenous population, which makes up the majority of the interview group.

#### 7.2.2/ Indigenous Service Class

This group consists of those shown in Table 7.1 listed under indigenous service class, but the reference to their occupation is not the basis for their class description, and is only used as a coding scheme to preserve their anonymity. This



group only holds this status because of the dynamic between their social relations and their class assets (organisation, culture and property).

Of the fifteen in the group, an examination of those who could be described as: emanating from non middle class or service class backgrounds, will be conducted first. The criteria for this will be based on: parental status, place of birth and education. This analysis will be solely based upon the social characteristics of the people interviewed and their causal powers as members of the service class. The business characteristics, which are not as uniquely attributable on an individual basis, are discussed in a final section of this chapter.

Computer Consultant (1), Financial Consultant (1) and Commercial Photographer (1) emanate from non middle class backgrounds and did not follow the more typically privileged career structure available to the majority of the people interviewed:

"I was born in Birkenhead in one of the houses that used to be behind the Morpeth Dock area, which was where my father used to work. He suffered with the gradual closure of the docks because it was his life, and at his age it was virtually impossible to move on." (Commercial Photographer 1).

In the case of the other two interviewees, their family histories were also of working class origin: the Computer Consultant's (1) father was involved in the haulage trade connected with the docks, and the Financial Consultant's (1) father was a semi-skilled engineer who had worked for Triumph.

In all the cases, as is clearly reflected here, there was no initial mention of the mother's career or employment. Only after further prompting did the interviewees give a brief description of their mothers' involvement within the home and then their employment outside of it. This displays the patriarchal influence on these people and indicates the disabling effect this would have had on the female members of their households. As a result of this gender structure, female entrance into the service class from this position is extremely restricted, as social closure is as inherently constructed within one's own origins as it is defined on an internal basis by a particular social group.

In the case of the Computer Consultant (1), who was born in Liverpool, he left his local comprehensive school at the age of 15 with "poor results":

"At that time I had no idea what to do next and with my poor results I had few options. So eventually I joined the police cadets but quickly realised it wasn't for me. However, I stuck it out for three years, because during that time I attended night school, which eventually got me onto a HNC business studies course at the Polytechnic (Liverpool), whilst I did a basic rep's job for a local firm." (Computer Consultant 1).

The Commercial Photographer (1) also had no qualifications when he left school at an early age, but was sure about the career he wished to follow:

"I'd always had a keen interest in photography and knew the only way to make any head way was through experience. So I started as an apprentice in a small dark room in Birkenhead, with what you would now

describe as 'hands on' experience. This is the way it's been for years, but graduates I get now need retraining and have little, if no, experience.

After several years of night school, and my day to day practical experience, I became an Associate of the Institute of Photography...with no previous qualifications this was a long process." (Commercial Photographer 1).

Similar conditions applied to the Financial Consultant (1) who, due to his home environment, was not encouraged in his earlier years to pursue any academic qualifications:

"I went to work in the family concern, which was established by my grandfather. This was built out of the wholesale business creditors, who were known as the 'Tally Men'. But I became more interested in the financial side of the business, which revolved around small credit loans, and this led me into taking a part time accountancy course at Liverpool College." (Financial Consultant 1).

The three people now operate on an independent basis within their profession and are sole controllers of their businesses. They all employ at least two people and their present lifestyle and income, derived from their exploitive position as autonomous operators within the service industries, places them within the service class.

Considering these people originated in the area, only one thing keeps them on Merseyside:

"We don't need to be here, but for the family ties".  
(Computer Consultant 1)

This applies to all three, who work and live within the area, but clearly have strong views about the environment which now

suits them. As part of the late 1980's growth sector, they were keen to segregate their business and their homes from the early 1980's "Militant Merseyside". They achieve this by living in the more affluent locations of the area. This is permitted by the convenient access to the majority of places within the county, due to the close proximity of the different centres and the limited traffic congestion; an ironic bonus for a shrinking economy.

In addition to their ability to dictate their residential environment, they were in strong support of the government's attitude towards urban regeneration and clearly favoured the heritage and 'flag ship' approach of the Merseyside Development Corporation (Garside 1989):

"During the militant times we had problems dealing with south east clients who wouldn't come to Liverpool. The situation was self defeating. But now it's getting better and when people come to the area we can show them the docks and the heritage of the area. This is what should be preserved and built upon. The MDC is doing a tremendous job and, hopefully, this Albert Dock style development will continue."  
(Computer Consultant 1).

The individuals portrayed here showed the same characteristic preferences for residential and social isolation, from, what one described as:

"The undesirable face of Merseyside." (Financial Consultant 1).

The above comment refers to: the central areas of Liverpool, crime and various attributes within the realm of urban

deprivation. Via their business (control of capital) and acquisition of cultural capital, they are able to achieve this 'preferential' segregation. This situation is legitimised through state legislation and the education system<sup>3</sup>, and is reinforced by the structural conditions within the area, based upon its social and economic development (Chapter 3). These conditions are also a product of state policy, especially regional, urban and housing policies (see especially Meegan 1989, Parkinson 1989).

The causal powers of the service class are shown to be divisive and integral to the reproduction of uneven patterns of development. They clearly support the state policy of privatisation and the movement towards a post modern heritage regeneration style (Garside 1989), which they feel is indicative of their cultural capital and beneficial to the area as a whole.

The next group of people to be examined, are those categorised as members of the service class originating from either the service class or the more traditional management class (Abercrombie and Urry 1983, Giddens 1985, Savage et al 1992). This group of people are categorised along with the previous sample because they also are part of the indigenous population. Because of the larger numbers involved in this group the individual analysis are not as detailed. The selected comments and descriptions used have been chosen to give a representative insight into this influential group's social attributes.

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<sup>3</sup> The use of the professions is demanded by legislation and the education system is the embodiment of social segregation (see Savage et al 1992)

Of the fifteen people in this group, only one did not attend grammar school. She (Management Consultant 1) was born in Wallasey in Wirral and completed three 'A' levels at a local college after leaving school. Her father worked in the banking sector and her mother worked at home. After completing her 'A' levels she went to a college in London and completed a degree in business studies, which led to her first job as an administration officer in a training organisation:

"My father always wanted me to follow the family tradition and work in banking, but I had different ideas. You could tell this got to him, but it wasn't for me....My mother never had a job, she looked after us at home....They still live in Wallasey and we live just outside it....Yes, it's a nice quiet place to live, away from the hassle of the centre." (Management Consultant 1).

She described her parents and her original home in sufficient detail to classify her origins as 'middle class': her father occupied a class position exploitive of the lower class, yet was exploited by the dominant class, and his loyalty to his career was not rewarded by any great trust in his judgement, as she would automatically expect from her clients.

As interesting as her background details was her use of language. She appeared to adopt a stereotypical male approach to gender issues, such as the question of her mother working in the home. This general issue of gender was questioned further and her opinion led to the conclusion that, due to the particular excessive male dominance in the producer service sector, it was impossible for a woman to attain any form of 'success' unless she empathised with the exploitive position of the male. Whether

consciously or not.

This sort of social contradiction does not, in any way, challenge the established gender relationships that are prevalent within the producer service sector and society at large (see Chapter 3). If anything, this behaviour only serves to reinforce, from the top down, the bias that exists within the gender division of labour, restricting female labour markets and limiting the resource potential of any particular area in need of employment stimulation.

The Management Consultant (1) under examination, being a female (the only one in the interview population), has been focused upon for this reason only. Her perception of the Merseyside area, and her lifestyle, follow the same characteristics as the rest of this subgroup. This is reflected by her comments in comparison to the other interviewees.

The Advertising Agent (1) commented about staff he had recruited from outside the area:

"Their initial reactions were, 'it's a hell hole'. But, after six months opinions changed and they now appreciate the vibrant lifestyle of Merseyside."  
(Advertising Agent 1).

Their attitudes have now changed because he later commented on their residential status in the more 'salubrious' areas of Merseyside, in which he included himself. His lifestyle and that of his senior partners tended to focus upon the Wirral and Southport; and this is what he termed the 'vibrant lifestyle of Merseyside'. Demonstrating a highly selective and biased understanding of the county, which relies upon, and reinforces,

the marginal status of the area.

"We've lived in Chester for eight years, but we're moving to Hebden Bridge in West Yorkshire...I don't like the city even though I've tried it, and to be honest, the village environment is far more relaxing after a long week...We don't go out at all during the week and my idea of entertainment is to go on holiday four times a year." (Marketing Consultant 1).

These members of the service class display a high residential mobility primarily influenced by their personal choice and unrestricted by resource or accessibility. This is a result of their position in the social division of labour, relative to their 'cognitive base' (Savage et al 1992) and the prevailing economic circumstances on Merseyside allowing rapid commuting.

The Marketing Consultant's (1) operations were conducted from the Albert Dock, as he considered this to be the only 'image building' location in Liverpool. When clients travel from the South he plays on the negative sides of the area:

"Some of our older southern clients can be anxious about travelling to Liverpool, but we try to make it appear a real adventure. A kind of 'see where it all happened' attitude." (Marketing Consultant 1).

He believed this approach worked, as the majority of his business at the time of the interview was involved with media operations. He considered it to be 'alarmist intrigue', which in his line of work created interest and business, whilst also perpetuating the image differential working against the area for other industries:



"I've never been tied to Liverpool for business. And there are three simple reasons why I'm here: I was born here, educated here and my wife likes working here. Its really down to personal preference. The fact that the 'Arts' are strongly supported, which brings in business, is the closest thing to an economic factor I can think of." (Marketing Consultant 1).

The Commercial Photographer (2) was born on the Wirral and educated at grammar school. His father worked and lived on the Wirral as an accountant, and his mother was an English teacher. He openly described his background as middle class, pointing out the family security and the fundamental characteristics he believed categorised his origins. Due to the exploitive position held by his father however, having controlled and operated his own independent business, which tended to be financial consultancy rather than accountancy, his origins would appear to be based more in the service class than the management class:

"You could say I had a typical middle class upbringing. My father was in charge of his own accountancy agency which tended to perform a consultancy service as much as routine functions...it was a village orientated lifestyle and my mother used to work as an English teacher in the local school. Not what I'd describe as suburban, but definitely middle class." (Commercial Photographer 2).

In his opinion he has made: "no conscious decision to be involved with any class system". This is true, but he has the exploitive and capital base which clearly place him amongst the service class. He has had many different occupations, all involved with commercial photography (technician, apprentice, assistant) and within this labour market he has had different employers which have contributed to his career development. This, together with his cultural assets, reproduced from his

parents and transformed into educational credentials, and his autonomous control of his occupation and firm, are qualification of his service class status.

As part of the service class, he too has exercised his power to choose and thereby influence his lifestyle and residential environment. From his house in a salubrious residential area on the Wirral, he has little to do with Liverpool outside of work, and tends to use either the cultural amenities directly around him, or much further afield; boycotting the majority of the area as a personal decision to avoid contact outside his social group:

"I've lived on the Wirral for over eight years, but in different places, and I've just recently moved again....I see the tunnel as a barrier to the start and stop of work". (Commercial Photographer 2).

The majority of those interviewed who lived outside Liverpool were of the same opinion:

"I think the Wirral is a separate place and this is where we conduct all our professional work. I use the entertainment side of Liverpool very infrequently and this area provides most things necessary. For people in a similar income bracket, Wirral offers a better environment, maybe like Formby. A lot of people commute over the water." (Estate Agent 1).

This person (Estate Agent, 1) was born in south Liverpool and was educated at a grammar school in Crosby. After poor 'A' level results he worked for a surveying firm in Manchester and did one year of a correspondence course. He then went to a London college and did a degree in Estate Management, which meant, with his work experience, he became an Associate of the

Royal Institute of Chartered Surveyors. After a few years work at the district valuers office in Southport, he moved into commercial estates and property management by becoming a senior partner in a large Wirral based operation.

This briefly reflects the type of career development which is based upon the same labour market, yet is the progression of different types of occupation, primarily based upon the transformation of cultural assets into qualifications without being organisationally dependent. Therefore, he is in less of a position to be exploited by a dominant class, and can exercise a greater degree of autonomy than would be appropriate for a member of the middle class.

He (Estate Agent 1), like the majority of this subgroup of interviewees, tended to exhibit the type of control over his lifestyle which manifests itself in a pseudo rural existence, typically characteristic of the patterns noted by Thrift (1987):

"I chose my house because of the surrounding countryside and for the peace and quiet, also, because it's an ideal place to bring up children. It gives you peace of mind and a sense of security. Plus we had friends round ----- (deleted) before we moved in and it's good to be surrounded by people you know".  
(Estate Agent 1).

This, and previous remarks about community and 'village' lifestyle, strongly suggests a level of consciousness which combines members of the service class. Whilst not radical in its intention, this degree of social cohesion gives strong support to the causal power of this class to influence, and even take over, places which provide the necessary requirements for their

social needs.

The views and traits of the remainder of this subgroup duplicate the details already presented. To this extent are briefly presented in a series of selected comments, which illustrate their perceptions as members of the service class:

"With regards commercial business, confidence returned to the city in 1988 with the input of new government policy, helped by the work of BOOM, the Tech Park and the MDC. The council are returning to their senses and the market confidence in property is strong enough to make it difficult for executives from the South to move North, due to the prices." (Solicitor 1).

Considering this interview took place at the end of 1989, this comment reflects the over optimistic, if not unrealistic, stance taken, and displays a biased confidence in the government's regeneration strategy. This is probably due to the more professional approach taken by this solicitor, being a senior partner in one of the larger firms on Merseyside, with a considerable involvement in the official promotion of the local business community.

This professionalism also tended to overshadow other interviewees (Solicitor 2, Accountant 2, Architect 2) who were in control of well established businesses. However, even though these people stated their confidence in the general area (considering two were representatives of BOOM - Business Opportunities On Merseyside), they displayed the same characteristics of social closure, extending to physical segregation, as did other members of the service class:

"I've lived in Birkdale all my life, but if I had to

choose, coming from outside the area, I would probably pick the same place, or possibly the Wirral....I don't believe the higher rates we pay in Sefton are justified by the range of services on offer, and a return to Lancashire might improve this situation." (Accountant 2).

Their class formation characteristics clearly emanated from the professional service class, with all but the Architect (2) following a similar career structure to their fathers. In the case of the Architect (2) his father was a engineering consultant and his mother an advertising artist.

The recollections of the places where this present service class grew up were not set in an urban context, but were coloured with memories of rural images and private schools:

"Ainsdale was the ideal place to grow up in. Parents didn't fear for the life of a child when out alone. You were away from the city, or any centre as such, and the appeal of the open space is one of the reasons we decided to make our home there." (Solicitor 2).

The three people described above (Solicitor 2, Architect 2, Accountant 2) are a product of privileged backgrounds. It was apparent from their perceptions of the area that they were conscious of the social divisions that existed, but that these were understandable and acceptable as part of the functioning of the area. Yet, it was also clear that they did not see their role in perpetuating the social divisions of labour from the exploitative dimension of the service class.

The final three people in this group: Computer Consultant (2), Financial Consultant (2) and Management Consultant (2), are, because of their career structure, exploitive position and

assets (cultural and property), members of the service class. However, they were far more conscious of their role, socially and economically, within the area, and displayed a greater awareness of the on going processes within Merseyside:

"Expertise in the service industries can lead to expertise in warehousing and processing, but these tend to be traditional industrial, with historical development. All these are totally different to the mercenary service operations of the 80's, in which I am involved and of which there is a distinct lack on Merseyside". (Management Consultant 2).

"Merseyside has a terrible image and I get this when I travel around. When I'm marketing my own firm, I always say its a Wirral based organisation, never Merseyside or Liverpool. If I had time again, ten years ago I would have moved out, I only stayed because of friends and family, because the office could be anywhere." (Computer Consultant 2).

"You could say Merseyside is picking up, but only after everywhere else, and its commercial market is still restricted. There is more of a general awareness of financial help, but in a lot of cases that is the problem, the pick up tends to be based on credit." (Financial Consultant 2).

All of these people have changed employers on several occasions, yet their careers have progressed until they have taken charge of their own company or an established operation. Their qualifications are all at degree level and above, and their property assets are situated in affluent areas. They commented that their segregation from other class areas was a conscious decision, and know that their power to maintain the area in which they live is based on price and mobility:

"I chose where I live because of friends and, I suppose, the environment, but the two came together.

It's out of town, but that's how I prefer it and travelling in is no problem....That's why there's no gentrification on Merseyside, because if you have the money there's no restriction, and you don't have to travel far before your into the country." (Management Consultant 2).

### 7.2.3/ Indigenous Management Class

This group of eleven people, as indicated in Table 7.1, are segregated from the service class (above) on the basis of: career, assets (cultural, organisational, property - see Savage et al 1992) and their position in the social division of labour. This relates to: their background environments, their exploitive position within the relations of production and their labour market position.

Virtually all the members of this group have progressed through a distinct career pattern, based upon an organisational internal labour market. This ascending progression has been noted in many studies (Weber 1978, Abercrombie and Urry 1983, Savage et al 1992) and developed under many guises: 'bureaucratic succession', 'occupational succession' or 'firm internal labour markets'. These concepts relate to the cognitive base (of a person) being context specific to one employer and limiting their assets to organisational capital. Thereby confining their ability and their agency within the bureaucratisation of the wider firm structure, and restricting their control of the functions of capital.

The two Bank Managers (1 & 2) both entered their respective organisations after completing their 'A' levels. Bank Manager 1 initially started as a trainee cost accountant working for a

small banking operation in Manchester, this was taken over by a much larger firm in the 1980's and he worked steadily up through the various levels of the company until he became an area manager in charge of the company's commercial business based on Merseyside. This progress took thirty years and many moves between different branches, yet all within the North West.

In many ways this career structure replicates that of Bank Manager 2, only that this younger person has remained within the Merseyside area during his career development and tends to hold less individual responsibility for the commercial business of his bank:

"I'm a Merseysider born and bred, and I came into banking after my 'A' levels. I worked my way up through the ranks, starting as a trainee clerical officer, and now I hold joint responsibility for the majority of ----- (deleted) commercial business within the area.....Today there tends to be more streamlining of graduates, but there is still full inhouse training to qualify the person for managerial material, and we take very few people from outside for positions of responsibility." (Bank Manager 2).

In both cases, they originated from middle class backgrounds and they tended to be extremely family orientated which, together with their career structure, has focused their development within the Merseyside area. Their property assets tended not to be as conspicuous as those of the service class, with their homes, whilst still displaying financial security, being based in a more conventional suburban environment.

Their use of the local amenities, and involvement in the social fabric of the area, tends to be restricted to a parochial area; based upon social relations with members of their own



class.

Their views on the regeneration of the area were totally in agreeance with the government's urban flagship policy, advocating heritage tourist industries and business-led development<sup>4</sup>.

Alongside the social closure, based primarily upon organisational assets, they also revealed their limited physical input into the area's economic and social operations, preferring recreational and social facilities outside of the area, avoiding the central urban environment. This self inflicted alienation, which is influenced by the structural conditions of the area as a depressed peripheral conurbation, directly reproduces the inequalities on Merseyside:

"It's very rare that we come into town in the evening because, even though the media hype does present a bad image, the reality is not far behind. There are only certain places you can go to, but there appears to be an attitude or something which takes the enjoyment out of it." (Bank Manager 1).

The two quantity surveyors (Quantity Surveyor 1 & 2) interviewed displayed a more diverse career development, yet they were still very much tied to occupational succession within an internal labour market based upon a specific cognitive base:

"I was born in Birkenhead where my parents had lived all their lives. After secondary school and national service I started work as a surveyor's clerk in

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<sup>4</sup> For a long time there has been criticism of the effectiveness of this type of development (Hayes 1985), but recent evidence (Robson et al) confirms the inability of these policies to regenerate the deprived urban areas of Merseyside.

Hamilton Square for ----- (deleted). In 1967 ----- (deleted) became part of ----- (deleted) and I was encouraged to qualify as a QS by taking evening classes.....After 20 years ----- (deleted) decided to reorganise and they moved most of their operations to London. At the age of 48, and with my commitments, I couldn't move or get alternative employment so I set up on my own." (Quantity Surveyor 1).

His mobility was restricted, being at such a late stage in his life and based upon the tendencies of this class to remain in the same area. His experience highlights the vulnerability of this group to economic determinants.

After 30 years employment with an international civil engineering firm, Quantity Surveyor 2 did not have the choice to move with the firm when he was made redundant. Having no experience outside his firm, he was left with little option other than to establish his own business.

These people indicate the narrow career development of this class and the inflexibility of its labour markets, which tend to be radically affected by changes in external firm structures. This emphasises the exploitive position of the members of this class in terms of its relationship to the production process, which is in no way as autonomous as the service class and, therefore, more subservient to capital.

The role occupied by these class members is conditional upon the structural conditions within Merseyside, meaning, its position within the spatial division of labour (historical development, Chapter 3) which has led to the multitude of branch and sub-regional operations in the area.

The profiles of the remaining people in this group closely match those already described: they have either worked for the

same firm for at least twenty years, or the firm they originally started with was taken over by a larger organisation. In both circumstances they have worked their way up through the ranks. However, these people, unlike the two quantity surveyors, are still working for their 'original' firm:

"In a nutshell: I was born in Southport and went to the local school. I think my father had the idea I would follow him straight into insurance but I wanted to go to university....After Leicester (University) I started work for ----- (deleted) in Manchester, which was quite lucky considering my degree results. In 1975 I became branch manager in Warrington, then to Preston and eventually ended up here (St. Helens) as area manager." (Building Society Manager 1).

"After my national service I started as an auditor with a small Manchester based firm, but this was totally absorbed by ----- (deleted). In 1972 I was offered the job of manager in Liverpool." (Building Society Manager 2).

"I was born in Crosby and went to school in Southport, which I didn't particularly like. After that I tried to get into university, but there was some problem with the matriculation requirements because I didn't have French. Anyway I went to Huddersfield Tech, now the Poly, and started a maths course, but this fell through and I ended up working for ----- (deleted) as a trainee Accountant. The business was mainly refinery accounting, but this was a side arm of the firm and I eventually moved over to the insurance side. After 7 years training I became a qualified loss adjuster and when the company opened up a branch in Liverpool, 22 years ago, I moved here." (Insurance Agent 1).

These quotations give a brief idea of the historical profiles of the remaining members of this group, and reiterate the point concerning the role of the managerial class and their firm orientated careers.

In this subgroup not one of the interviewees displayed

signs of conspicuous consumption, equal to that of the service class. But, because of their organisational assets, they were obviously privileged to a reasonably affluent existence and this, like the service class, promoted a distinct social division.

#### 7.2.4/ External Dominant Class

The selection of the three people placed in this subgroup (Table 7.1) has been based upon the same criteria as those for the other groups: social division of labour, career structure and assets. As indicated, all were born outside the area, two (Accountant 4, Engineering Consultant 2) originated from Cheshire and the third (Design Consultant 2) from Bedfordshire.

In the case of the Design Consultant (2), his original family home was in Knutsford and his father owned a large chain of newsagents:

"After failing most of my exams at school and scraping two 'A' levels, I did a Diploma for the Institute of Company Directors.....I then went to work for several firms in London as a Design Consultant over a number of years and became involved in all kinds of things....Before the move to Liverpool I owned a considerable portion of a design and marketing operation in London which, due to various reasons I can't go into, I sold." (Design Consultant 2).

The reason for the move to Liverpool was due to his involvement with the Merseyside Development Corporation, which provided considerable benefits for the location of his new firm. During the 1980's he built up a direct marketing company, second

only to Mount Pleasant in London, and in 1988 the firm bought the previous largest marketing company in Liverpool.

His company employs over 300 people and, along with his group of directors, he still controls the majority of operations and assets. He personally vets his managers and works together with other large institutions throughout the area, being the Post Office's largest customer in the whole of Northern England.

It is because of this control and ownership of capital and his position within the social division of labour, that he has been placed in the dominant class subgroup. At the time of the interview he had great faith in Liverpool, even though he recognised the possible loss of business because they were a 'Merseyside' company.

"It's harder setting yourself up as a Merseyside company and it did effect business. You could say it caused a few ripples and people did stay away."  
(Design Consultant 2).

When he worked in London and was looking to relocate, he said he had to drive potential managers round the area to show them the improved lifestyle they could expect:

"The travel to work time is virtually nothing within a thirty mile radius, and the accessible areas within this zone can be extremely exclusive....Liverpool has an initial problem, but one which can be over come as an educational experience." (Design Consultant 2).

Considering he lives in Chester and his three directors live in Blackpool, Chorley and Birkdale, he can appreciate the variety and freedom the area has to offer in terms of

residential opportunities. This clearly promotes the hierarchical social divisions that already exist within the area and in comparison to surrounding areas.

The other two people in this sub group are joint partners in large established corporations, the Accountant (4) originally trained as a solicitor and was educated in South Africa, completing his articles in London. The Engineering Consultant (2) is now part controller of a large structural engineering firm and obtained his professional qualifications and experience whilst working for British Steel. He has been on Merseyside for 10 years and was previously based in London in charge of their southern operations:

"I was personally fed up with London. More personal problems than anything else....Moving North was not an issue. I already had friends in Cheshire and I think the North/ South divide is one based on ignorance: the North has a complex, a chip on its shoulder and the South has an arrogance about it....and Merseyside was the oldest established office outside of London, so it was more of an obvious decision." (Accountant 4).

In the case of the Engineering Consultant (2), his move to Merseyside was based upon a fifty percent relocation of his firm's operations to the North West, due to their involvement in Health Authority and European Commission operations. According to the Engineering Consultant (2), the office on Merseyside is of equal status to that in London; it employs approximately 250 people throughout the region and is autonomous in its functions.

In the case of the Accountant (4), the firm employs over 100 people, depending on the time of year, and controls its own

recruitment and market operations. As these operations are coordinated on an equal footing with the London office, the partner in charge of the Liverpool business (Accountant 4), who also owns a considerable portion of the controlling shares, is a member of the dominant class.

In this subgroup, the people are not only in control of capital and labour, but also personally own a considerable share in the means of production. As members of the dominant class they are privileged to cultural and property assets, which excludes them from virtually any involvement in the social fabric of the area, isolated by their position in, and perception of, society. This reflects their pragmatic approach towards Merseyside, which they believe can be segregated into; the society (the problems) and the economy (profit generation):

"There are serious problems on Merseyside. These are not particular to Merseyside, they're more a reflection of society and the national condition. But these will not stop operations because they are only social problems and firms can be isolated from them. Business will adapt irrespective." (Accountant 4).

### 7.3/ Business Characteristics

This final section briefly confirms the characteristics of firms' operations outlined in the quantitative analysis (Chapter 5 and 6). It specifically examines the size differentials, from multi site to single site establishments, and the input into firm operations from an individual perspective. The aim is to illuminate some of the structural tensions at work within the area, with regards to individual action set against the regeneration needs of the area.

The characteristics of the firms' operations were remarkably similar, depending upon the distinction between multi site and single site establishments. The following section elaborates upon this and combines the operational characteristics into a composite description of these two main types of firms.

#### 7.3.1/ Multi Site Establishments

The position of the larger operations tends to be guided by company policy, which ultimately dictates the role of the managerial staff. This applies in relation to staffing and recruitment policy, and general business operations:

"We have a certain flexibility when recruiting staff, but this depends on the position they are moving into. Our senior personal are appointed through a series of discussions with central office and the power of veto rests with them. In terms of the lower grades, there is obviously a set geographical area, outside of which people are not prepared to travel.... Junior office staff are not a problem, it's the more specialised



personnel which are in demand, but not in supply."  
(Bank Manager 1).

In the case of the financial services, it was also made clear that there were certain restrictions on business operations which the managers interviewed found to be regressive for business development. One of the most disabling practices was the restrictive ceiling placed upon lending or underwriting capacities. This was mentioned by many of the managerial staff, and characterised as a disincentive for their larger customers, as it could prolong certain business decisions and, in some circumstances, they felt it may have lost them business:

"Certain decisions can not be authorised here. I can't divulge the extent of this limitation, but for an area such as this (Merseyside) it is yet another barrier to development....Authorization must come from London and considering we hold some of the largest accounts in the area, it can be a disincentive to our users and in the past has threatened business." (Accountant 3).

The market areas (geographic and product) of the larger firms were also constrained by operational policy. In addition, these branch and sub regional operations tended to be limited in terms of the services available. This narrow service provision offered their users no other choice than to seek specialised services elsewhere:

"Availability is the main priority where ever businesses want: personal corporate assistance, financial advice, consultancy, insurance, international facilities, leasing, factoring, investment. The list is endless and there's always something we have inhouse but not necessarily here."  
(Bank Manager 2).

The larger firms tend to stratify their labour markets and employ, what they term, 'a flexible application of their resources'. This is achieved by the stratification of the production process, which breaks down operations into manageable compartments and ties in with the use of part time workers:

"The staff structure is based upon jobs being broken down into the easiest possible stages, and that way we don't necessarily need people who are highly qualified....All the data entry is undertaken by part time staff and the telephones are now operated by part timers at night and during dinner....These part time staff are generally older women; women coming back to work. The full timers are our younger female staff." (Design Consultant 2).

"The majority of our middle ranking staff come from West Kirby, Childwall, Woolton; the home of the middle class. But this is something we do not try to encourage and we advertise in the local papers, but this has had little effect.....In the case of other senior staff there has been some external recruitment from Australia and New Zealand.....It's also important that we take in, what you could describe as 'drones', for keying in data and other menial tasks, who want no more and with no ambition." (Building Society Manager 1).

The managers interviewed, who were the senior ranking people in the area working for these firms, were primarily from the area originally and had worked for the company for a considerable length of time. Their roles were intrinsically linked to the bureaucracy of the company structure and their development, based upon a clear hierarchical structure.

The loyalty of the managers provided a stability for the organisations, especially in such a marginal area where dramatic fluctuations in business can occur. In reward, these people were

provided with a long term stable career, yet one which is not accessible for the majority of people in the area, who lack the qualifications and assets to place them in these positions.

The position of these managers reiterates the divisions in the labour force regarding producer services, and their own evidence highlighted their positions as relatively sedentary. This is in direct contrast to a more general perception of producer services; promoting a highly dynamic workforce carrying the trust and responsibility of the firm and interacting with the surrounding economic environment (see Chapter 1).

The evidence of firm linkage was incredibly small, with the majority of firms using their inhouse contacts for internal operations, whether for: stationary, computer equipment, office equipment, printing or further consultancy. The general pattern was that a corporate decision had been made by senior personnel outside the area as to what sub contractors to use, and these firms would then be used on a national basis, involving large contracts (minimising costs and standardising environments), with a tendency to benefit areas outside of Merseyside:

"All services for the most part are from Head Office, where I would initially have to go. There have been certain occasions where we have used local firms for placing ads. However, there is a strong feeling things must be kept internally official and it is up to HQ if outside firms are to be brought in....Even buying equipment, which could be local, has to be referred to HQ. They try to centralise all operations and standardise facilities, which means people can be moved around the country and be familiar with the set up where ever they go." (Building Society Manager 2),

Branch operations are not totally isolated from the surrounding area in which they operate, but it is clear the

majority of their linkage tends to be on an internal firm basis and directed outside the area.

"We work with surveyors, loss adjusters, estate agents and architects, who assess damage and estimate insurance, and with contractors and builders who tender for work. But this all depends on where the work is and it's not necessarily always on Merseyside. Other services, such as printing or furniture, are centrally operated. But local firms do sometimes use branches of national firms, which tend to be decided at the national level and the branch has little autonomy." (Insurance Agent 1).

To conclude this section on multi site operations, there are some other main points which need to be covered: the effects of IT, contact with institutes of higher education, government policy and general perceptions of Merseyside. These can be quickly illustrated by a series of representative quotations.

### **Information Technology**

"We use all forms of computers, but it is for dealing with the business side of things, which tends to mainly effect the clerical and secretarial staff.....we have been able to condense the admin side of things and make it far more flexible by training part time operators." (Insurance Agent 2).

"At the moment all branches are linked to our HQ mainframe which deals with all transactions, but we are moving towards automation at this level. This will release excess staff into areas such as selling and customer relations. As yet we are trying to hold onto our full time staff as the customers prefer to deal with one person all the time, but there is a growing trend of using part time staff and this will increase in the future". (Building Society Manager 1).

"The initial take up of office IT had a direct effect on staffing levels, reducing the need for back office operators within this field." (Bank Manager 1).

## Contact with Educational Institutions

"----- (deleted) has no contact with educational institutions. All training and advice is taken inhouse. Possibly the only contact is our recruitment drive when we go round the local schools..." (Bank Manager 2).

"The graduates we take on need to be retrained. They can design, but have no idea of the physics of the job....As a practice we have tried to feed back into the university, but this has not come over as being very welcome. Other practices have said the same thing, and the only time we do have any real contact is when the firms go in to pick out the best graduates." (Architect 1).

"There is no formal or informal network we can use to contact educational institutions and, if there were, I'm not sure it would help this firm. All our professional and technical advice comes from inhouse services, and the only contact we have with the local institutions is through our awareness and recruitment drives." (Insurance Agent 1).

## Policy and Legislation

"The MDC did provide incentives for our location and now we are the largest employer they have. But this encouragement was short lived and now we are having problems with the contracts. Their financial people are putting up problems and the penalties for delayed payment of bills are ridiculous....The only other direct government influence we are aware of, apart from soaring interest rates, is the Data Protection Act which appears to have been thrown out of an ivory tower, they just don't understand our business." (Design Consultant 2).

"The MDC has been influential for our parent company ----- (deleted), but the bids we made for Wallasey Dock just missed. We have done one or two bits of DLG work (Derelict Land Grant), but there is no particular legislation that helps the firm...Any form of public investment, such as the MDC, is totally out weighed by interest rates and bad publicity which destroys inward investment." (Engineering Consultant 1).

"We have no contact with public organisations in the

area and the various development incentives don't apply in our case....The service industries have never been supported by government and we do not look to them for a helping hand.....The only direct effect has been through the Financial Services Act, which meant we could be tied to one insurers or become independent." (Building Society Manager 2).

## **Merseyside**

"St. Helens has not had its act together and has been unattractive to business in comparison to Warrington. It does not provide an attractive living environment, shops are poor and it doesn't have that high service profile. Even Pilkingtons tends to be disembodied from the area name when advertised, and this is very much in its favour." (Building Society Manager 1).

"In certain areas, Liverpool's negative image needs, and is being, turned around, but how stable this is, is any ones' guess. It will take quite a few years of sustained growth to pull it out of its rut. As soon as the economy takes a down turn we are always the first to suffer." (Advertising Agent 2).

"For the majority of people who move to the area, they must have a good reason: born here or simply love the city. The media play it down and even government uses it as the worst case scenario. No wonder investment stays away. If only the communications could be improved, especially rail and air, this may help us in Europe. If this doesn't happen the area will sink lower, as it's hard enough trying to keep contact with firms in the South, let alone Europe." (Engineering Consultant 2).

### **7.3.2/ Single Site Establishments**

In this category some of the business characteristics tend to be the same as the larger firms, such as: the lack of firm linkage, minimal contact with educational institutes and small influence of government policy. However, the reasons behind these attributes tend to be different from those of the multi

site firms, as do the other operational characteristics (markets, staff, IT, location).

One of the main distinguishing features of this category of firms is the input into the production process by the individuals, which for these single site firms is far more fundamental. This is obviously and especially true where the people interviewed were the sole founders of their own establishments. For the majority of these, the influences upon their decisions were not totally dependent upon economic determinants, and because of the relative small size of the firm and focus upon one person, the characteristics of the firms could be directly attributed to certain social interactions and causal processes of the service class:

"The client base has been developed from a mixture of acquaintances and old colleagues. We never advertise, as this doesn't bring in the type of people we want to deal with. Over the years the business has developed like a hub and spoke effect, with an initial small group of friends and then, through introductions, this has branched out. A lot of business has come up on a personal basis, contacts made at dinners or social occasions, and this tends to feed into more business." (Management Consultant 2).

"The location of the business was not a result of sizing up the opposition, because there isn't any. In the area we are the only operation providing this type of marketing, so where we went didn't depend on keeping one step ahead. It was based on two things really: image and, as we live in Chester, it makes it easier to get home." (Marketing Consultant 1).

The firms in this category (single-site establishments) are those in which the service class were mostly involved, as through the control of these operations they were able to express and exert their cultural assets, and for many, they had

established their own operations out of a desire for independence. This was not only reflected in the functions of the firms, but also in the way they functioned:

"One of the most appealing aspects about the business is its flexibility. This applies both to the places where we work and the way I can organise my time. The only obvious restrictions are deadlines and working with other people." (Commercial Photographer 1).

"The ability to control your own time table is one of the greatest responsibilities, apart from organising the business, but it is one of the greatest assets. The freedom of being able to complete a job at any time of the day or night is not something a lot of people want, but it allows so many options for me to organise my own time, I couldn't operate any other way." (Advertising Agent 1).

The majority of those interviewed in this category, stated independence as being the greatest attraction for their involvement in a single site operation. They believed it allowed their personal input into the provision of the service, which the larger firms did not offer. They also stated, this kind of responsibility was not easily attainable in the area, because this type of position in a large decision making operation offering personal autonomy, was virtually non existent due to external control.

Linkages with other firms were very minor in all cases, either on a professional level or for accessing services such as: printing, software, maintenance, stationary. In the majority of cases, the standard professional service used on a regular basis was accountancy, and, in all circumstances, the reason for the choice of firm was dependent upon personal contacts.



"I've known my accountant for at least 10 years, but he has only actually been working for me since the business started (three years). So as a personal friend he was the obvious choice". (Estate Agent 1).

"The accountant we use was introduced to me via a friend, who has used him for years, and I would always rely upon this type of personal recommendation. I think for many people it is the only way to conduct business and it gives a certain amount of security." (Computer Consultant 2).

Generally, the type of linkage or knock-on effects which might improve the circulation of the area's economy were absent from most operations. This relates to the way the businesses function, where the capital input is at a minimum and the value of the service is based upon time and knowledge (cognitive base).

"For certain contracts we may use freelance operators, but these tend to be located outside the area when we take on business further afield. Our requirements for office space and general support are minimal, and we don't really buy much in the area. This is because we are selling our time and this does not generate additional business. The only contribution to the area we make is the money we spend living here." (Management Consultant 1).

"Our sub-contracting is limited to a few firms who are able to provide the type of service we don't have the equipment for. This mainly involves the use of specialist lenses, or producing larger prints. At least 5% of our turnover goes to these operations and they are all based in Manchester....We have an Accountant and solicitor based in Chester and Ormskirk, they have always been with the firm." (Commercial Photographer 2).

None of the interviewees in this category indicated their firm had any definite links with educational institutions, apart from one off projects and some of the larger operations which

were involved in recruiting from local institutions (schools and colleges). Those with no contact, believed making links with educational institutions did not justify the resources:

"They have very little to offer, either in terms of advise or work. We've tried to approach the University on a number of occasions with proposals for work, but the rates they offered were not acceptable on a consultancy basis." (Computer Consultant 2).

"On one occasion we used the University for a micro photography project involving some industrial pictures for ----- (deleted). They were great and very helpful, but we had no idea they were there, or what was on offer, because there are no links and there is no way of finding out unless you know someone who works there."  
(Commercial Photographer 2).

Apart from the Computer Consultants (1 & 2), the use of IT within this group of firms was minimal. In the majority of cases the investment in any form of hardware did not justify the expense or the time involved in getting to know the software. However, some also felt it was not feasible, as the software was not available for the specialised operations the businesses conducted.

"We don't have PC's, which could be used for survey forms, but I prefer to dictate the information as it's more personal and other agents do the same...IT is available in various forms, the 'Surveyors Report Outline' gives a set format, but it doesn't give the impression of a personal service. Until IT can be more flexible and the costs come down, it isn't value for money and we'll stick with our card index." (Estate Agent 1).

"This business is all about face to face, but we have a Commodore based system which is IBM compatible and ----- (deleted) in Warrington deal with any special

reports we produce. But computer based solutions are no substitute for individual thinking, and any problem needs to be thought through. We're not big enough for IT to take effect, with a quarter of a million turn over and five full timers it's not feasible." (Management Consultant 2).

Only one of the interviewees (Computer Consultant 2) stated that the firm had been supported by government funds, but this was directly related to a training facility they established to help keep the business stable. The only reason they had branched into this line of work was because they were informed by another firm in Deeside that support was available, and that this firm would be able to obtain the funds for a percentage of the award.

The other firms had never received government support, felt there was no legislation which benefitted their operations and that it was impossible as a service operation to access any benefits. Therefore, they were all tied to the banks and the loans or overdrafts they used to support their businesses.

"I looked into all the different grants and awards, local authority and central government, but there's nothing for an established business. Even though this is a development area, it's only for manufacturing and we've had all the leaflets and they're no help....Never needed help from the DTI because we're established and the personal service they run just gets in the way, costs too much and just lines the pockets of their consultants." (Estate Agent 1).

The two most frequently mentioned pieces of legislation were the Financial Services Act 1988 and the Data Protection Act 1989. These both involved inflicting tighter controls on the businesses, in terms of paper work and the areas in which they could operate. For example, the financial consultants had to

change their whole approach on record keeping for inspection and the way they operated with regards investment companies:

"Pre act I got a lot of business from accountants and solicitors, but now these are investment advisors and I can still send people to them but they can't send them to me. Also, the act said we had to choose between independence or being tied to a large investor. For most, including myself, independence was too expensive and so I became linked with ----- (deleted)..... Before the act a computer service would have been necessary, but now I've got to keep a hard copy of every thing for three years, so what's the point ?" (Financial Consultant 1).

The feeling amongst the majority of the interviewees was that central government simply did not understand the operations of small businesses and offered no support. On the contrary, the legislation it imposed only served to help either the larger firms or manufacturing operations. This left them with no option other than to utilise their own resources and depend upon the banks, who also had no idea of the flexibility these operations required.

#### 7.4/ Conclusion

One of the main points to emerge from this chapter is that employment does not provide the basis for class analysis. In the initial sections on social profiles, the assets and relations of the interviewees are shown to be the only definitive way of understanding class structure and formation (Savage et. al. 1992).

In relation to the influence of the service class, the chapter reveals the distinct differences between their causal powers and those of the managerial class. This is especially highlighted by the structural constraints upon the managerial class, which disable their potential to create positive developments within the area.

Comparing the cultural and property assets of the two social groups, the service class exert far more influence over their environment. However, this type of influence tends to be negative in terms of the wider regeneration of the area. On a social level, they tend to perpetuate the social divisions which are a root cause of the areas inability to develop its full potential. This is achieved by physical and social divisions being reproduced by the service class, which enforces the barriers to development on an area wide basis.

The managerial class are shown in their role as having restricted ability, within their social and economic environments, to influence key structures effecting regeneration. The bureaucracy and structure of the organisations for which they work are externally controlled, which totally

stifles any dynamic input into the economy or social fabric of the area. This is predominantly an influence of the structural tensions within the area, manifested in the spatial divisions of labour and the lack of capital control, which operate on a wider scale and have structured the marginal economy of Merseyside. Therefore, the kind of autonomy which the operations need, to positively interact with the area, are not available because of wider spatio-economic structures. This creates and restricts the ability of the managerial class to effect any positive change, both in an economic and social sense.

The causal powers and structural restrictions of the service class and managerial class, which at the same time strengthen the inequalities within the area and prohibit regeneration, are compounded by the operational characteristics of the firms.

The managerial class operating within the branch and regional service economy of the area can not restructure wider corporate policy to influence regeneration. This is reflected by their inability to generate greater inter-industry links or foster dynamic relations with educational institutions to provide an innovative research base. As agents, their input into the operational characteristics of the firms is constrained by much larger structures and their social relations, as members of the managerial class, inhibit their causal powers to influence their environment to the same extent as the service class.

The operational characteristics of the firms primarily controlled by members of the service class also reveal an inability to contribute to the area's regeneration, whilst their

market areas indicate a wider export base than the multi site establishment firms, their input into the local economy was relatively minimal. They require little capital input and linkage is virtually non existent, both with other firms and educational institutions. For the majority, any form of economic links that had been developed were based outside the area, and this form of sub-contracting acts as a business leak from Merseyside.

The business patterns of the larger firms outlined in Chapters Five and Six, were confirmed by the interviews with the managerial class, especially the increased use of part time and menial staff. This tends to exacerbate the labour market problem of the area, utilising the low paid workforce as a disposable resource, whilst there is no obvious access for these people to the positions of responsibility. Under this criticism the service class faired better, as access to property assets and cultural assets appeared more attainable for people from lower classes. However, this difference is relatively minor.

The final main criticism concerning the social relations of all the classes from which representatives were interviewed, is related to the dominance of the white male. These various classes do not provide any form of opportunity for racial integration, and the majority of work for women is based upon part time labour or deleted labour<sup>5</sup> in the home (Savage et al 1992). The service class, once again, showed minor signs that it

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<sup>5</sup> Deleted labour is the input of female or male labour into the production process via, predominantly, the domestic environment, which becomes ignored (deleted) in the final product.

provided more opportunity for these groups than the managerial class, but only for those who conformed to male dominated structures, and this is certainly no basis for any form of regeneration.



## Chapter 8

### Research Conclusions

#### 8.1/ Introduction

By considering the claim that producer services can indeed play a part in the regeneration of Merseyside, this thesis has also examined the debate between post-industrial and deindustrial theories<sup>1</sup>. These two issues are inextricably linked within this study of Merseyside and, because of the theoretical stand point taken, previous neoclassical assumptions on the role of producer services are also questioned, both on their own terms and through the rigour of social theory:

"The main concern of social theory is the same as that of the social sciences in general: the illumination of concrete processes of social life". (Giddens 1984, Introduction xvii).

The above paragraph encapsulates the fundamental basis of the thesis. However, within this extremely condensed interpretation lies a vast array of arguments concerning the processes of urban development within a specific area.

The main question posed by this study is : "What role do Producer Services play in the regeneration of Merseyside?" But

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<sup>1</sup> Post-industrialist and deindustrialist theories are not necessarily apposing views and can be considered two separate economic processes. But where they overlap in an area, one can be construed as dominant.

when opposing perspectives<sup>2</sup> and a range of social issues are considered<sup>3</sup>, answering the question unravels many interdependent complex social and economic issues.

This conclusion will explain how the thesis has attempted to understand these issues in relation to the varied activity of producer service operations on Merseyside. In addition, a synopsis is provided of the results obtained from the three stage methodology which, are examined alongside the theoretical perspectives taken to highlight the practical application of the entire exercise.

The concluding section of this chapter performs two tasks. Firstly, it scrutinises the methodological rigour of the approaches adopted, and secondly, it poses possible solutions for problems encountered and identifies possibilities for further research.

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<sup>2</sup> The main opposing standpoints considered are between post-industrial and deindustrial theory, but contrary interpretations between Marxism and neoclassical economic studies are also questioned.

<sup>3</sup> These cover issues of; the division of labour, class analysis and social closure.

## 8.2/ Theoretical and Empirical Conclusions

One of the initial debates encountered relating to the role of producer services, was the distinction between deindustrialisation and post-industrialisation. As the term post-industrial suggests, supporters of this particular perspective tend to focus on new forms of economic production<sup>4</sup> and the changing dominant sectoral shifts<sup>5</sup>. (Bell 1974, Singlemann 1978, Stanback et al 1981, Gershuny and Miles 1983, Stabler and Howe 1988).

Post-industrial theorists assume capitalism has changed its production systems and the once mass consumption patterns are also equally in flux. They acknowledge the sectoral shifts that have taken place, and offer various reasons for changes in economic development and the growth of the service industries<sup>6</sup>. However, even though they recognise new forms of economic development, such as the self-service economy (Gershuny and Miles 1983), there is a tendency to ignore the social relations of production and the underlying logic of capitalism<sup>7</sup>.

The movement away from an old industrial base, which has occurred in advanced economies (Martin and Rawthorn 1986), can

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<sup>4</sup> Self-service economy, flexible production processes, leisure industries.

<sup>5</sup> Employment and productivity shifts from the manufacturing sector into the services.

<sup>6</sup> These theories of post-industrial development are fully explained in Chapter 1.

<sup>7</sup> This concept is fully explained in relation to the service economy by Walker (1985), in which he highlights the accumulation and concentration of capital.

lead economic theories to loose sight of the key elements of the mode of production<sup>8</sup>. This is the main criticism of post-industrial theory, which, even though it clearly outlines the changes taking place (Gershuny 1976), it does not question the continuing dynamic of capitalism and the social implications of a service orientated society.

These criticisms do not mean work carried out under the post-industrial banner is wasted, as it has contributed a vast bulk of extremely important empirical analyses. These studies have mapped out fundamental changes in economic development including: changes in production processes, product markets and employment trends (Browning and Singlemann 1975, Stanback and Noyelle 1982, Gershuny and Miles 1983).

The best use of this work is to redirect its emphasis and build upon existing studies by utilising its empirical data as part of a more critical appraisal of economic development. Its direction should be orientated towards a deindustrialisation perspective (Massey and Meegan 1982, Martin and Rawthorn 1986, Scott and Storper 1988, Massey and Allen 1988, Urry 1987).

The deindustrialisation approach utilises the same or similar empirical analyses, yet is more receptive to the social relationships within capitalism and its inherent logic. Theorists adopting this perspective have been far more critical of the recent developments in advanced economies.

The bases of these two perspectives are best summed up in one of the key texts examining economic restructuring:

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<sup>8</sup> Division of labour, accumulation of capital and exploitation of surplus labour value.

"After all, according to post-industrial theorists, a decline in manufacturing was to be expected as one of the long term consequences of post war socio-economic change in advanced industrial societies....This predicted transformation from an industrial society to a service based post-industrial one is assumed to be an inevitable consequence of rising income levels which generate increasing demand for and consumption of services, and of rising productivity levels in industry itself, made possible by technological advance, which permits workers to be released into service jobs. (However) The long economic boom of 1945-72 has since been replaced by an extended period of relative economic stagnation and recession in the major capitalist countries, and particularly Britain. Under these conditions of slow economic growth, the job losses in British manufacturing over the past two decades have been associated not so much with rising productivity, due to technological progress, as with fluctuating productivity growth and falling output in manufacturing. Nor has the labour expelled from industry been reabsorbed by the service sector...The shift in employment structure towards services has therefore, taken place in a somewhat different context: post-industrialisation has been overshadowed by de-industrialisation" (Martin and Rawthorn 1986, Introduction xvi).

Realisation that service industries do not provide a panacea for the loss of employment from manufacturing is extremely important (Marshall et al 1987) and was not fully appreciated by post-industrial theorists. Those advocating a deindustrialisation theory recognise the shift to, and importance of, service industries, but take a far more realistic view of their role in economic development.

During the 1980's the study of the service industries, and especially producer services, tended to be predominantly influenced by the post-industrial approach. However, certain authors, adopting a Marxist perspective (Walker 1985) or applying social theory (Urry 1987), addressed this bias and extended the deindustrialisation argument into the realms of service theory. These key texts indicated a movement away from

a strict neoclassical analysis of service industries, which had previously dominated primary research.

Neoclassical research concentrated upon issues of supply and demand, whilst only hinting at more critical issues concerning the social division of labour:

"Wood is concerned to show the interconnections in the economy between manufacturing and service industries and how the growth of producer-related service employment is linked to what is happening to production within the manufacturing sector. He emphasizes the transfer of jobs from manufacturing to services, and from what he calls the corporate to the competitive sector of the economy, as firms externalize parts of service production. In effect, he is highlighting a shift in the (social) division of labour. Daniels chooses to emphasize a rather different aspect of producer services. He also draws attention to the processes of externalization, the contracting out of services previously provided inhouse by firms. His focus, however, is squarely on what types of demand exist for producer services and the geography of the firms which organise the supply." (Massey and Allen 1988, page 87).

The analysis of service industries advocated by Walker (1985) and Urry (1987) is more in tune with a deindustrialisation perspective, because it focuses on key elements of capitalism which, even though they operate through different labour markets and products, are the same in a service orientated economy as in one dominated by manufacturing (see Chapter 2).

The processes that have remained the same are integral to the basic logic of capitalism, and it is only through a perspective which can accommodate both social and economic operations of this system, that a complete analysis of any section of urban development can be approached.

Marxism provides the basis for this perspective, but it must be applied through a flexible approach utilising some of the more contemporary concepts of social theory. Walker (1985, page 43) summarises this perspective in his analysis of the changing capitalist division of labour:

"I take a rather functionalist view here, as a necessary simplification. I do not mean to imply that the modern economy is a simple determinate effect of the logic of capital playing itself out; only that its development is structured by the relations of capitalism, which do have a logic. That is, I take what today is called a realist or structuration view, or what used to be called a dialectical view, of method and historical process."

There is a distinct lack of literature which tackles the study of service industries from a 'critical' perspective<sup>9</sup>, and the range of studies utilising a Marxist perspective incorporating aspects of social theory are extremely limited (Urry 1987).

As a result, this thesis has developed a multi disciplinary approach which questions the role of producer services in urban regeneration from all perspectives, building upon existing neoclassical economic analysis of producer services by incorporating ideas of agency and class within an analysis of a particular place.

Therefore, this thesis addresses issues of supply and demand and, questions the underlying exploitive relationships and inequalities which underpin these economic characteristics. These relations are vital in the reproduction of capitalism and

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<sup>9</sup> In this sense critical relates to social inquiry which tries to assess the reproduction of structures inherent within capitalist societies.

their repercussions cannot be ignored, as their social effects are manifested in the extremes of the social division of labour.

It has been postulated that the phenomenon of post-industrialisation and de-industrialism are forces acting simultaneously on the British space economy (Marshall 1987). However, this thesis has shown deindustrialisation to be far more important with relation to an area such as Merseyside; not only because of its underlying effects, but because the perspective is (more) open to examining the continuing relations of capital which exist irrespective of the dominant economic sector.

This approach has guided the different levels of analysis within this study, including the adoption of a realist methodology to study the contextualised operations of producer services on Merseyside. This has involved basic economic analysis, as performed in existing studies (Beyers et al 1986), and interpretive analysis of agency and structure within the firms and social classes from which producer service workers are drawn. It provides an assessment of the firms basic ability to generate growth, dependent upon the cognitive base of key personnel, and the effect collectives, such as the service class, have had on the economic and social fabric of Merseyside.

The methodology was developed on three levels: initially, a basic quantitative technique was adopted to test the economic performance of producer service firms in the area, secondly, an advanced statistical technique was employed to ascertain the key determining operational characteristics of various firm types, in co-ordination with the classification developed in Chapter



Two, and thirdly, qualitative investigations were used to assess the effective powers of agents within firm structures and the causal powers of social classes on Merseyside.

### 8.2.1/ First level analysis:

#### Economic Assessment of Producer Services on Merseyside

The first level analysis of the thesis was designed to analyse the basic economic characteristics of the producer service sector on Merseyside. The approach was designed to compliment previous analyses of producer service firms conducted in other parts of the world<sup>10</sup>, and assess some basic assumptions<sup>11</sup> on the ability of producer services to generate economic growth (Marshall 1982, Daniels 1985, Goe 1990, Hansen 1990).

These assumptions are integral to the post-industrial belief that a service based economy has the ability to create new growth and development, which is independent of an area's industrial (manufacturing) base:

"It is suggested that the demand by manufacturing industry is not necessarily the most important determinant of variations in business service supply. Indeed...the spatial pattern of service purchases by manufacturing industry reflects the locational differences in the distribution of service activities." (Marshall 1982, page 1344).

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<sup>10</sup> The study is comparable, at this level of analysis, with Cuadrado (1986) and Pederson (1986), but it is especially designed to compliment the work of Beyers et al (1986) in Seattle.

<sup>11</sup> The basic assumptions concerning the role of producer services in a metropolitan economy are listed in the penultimate section of chapter one.

Set against the back drop of Merseyside's economic history (Chapter 3), which has previously been dominated by service industry employment, the principal growth characteristics of producer service firms were examined.

The results of this first level of analysis revealed two main issues: firstly, the activities of producer service firms on Merseyside are dependent upon more complex determinants than just manufacturing demand, and secondly, the overall impact of their activities, set against the regeneration needs of the area, are not beneficial.

The first conclusion is 'old news', but the second can be construed as either contradicting previous assumptions or posing an alternative interpretation.

The study reveals that the multi-site establishments within the area have very little contact with the surrounding local economy, apart from using flexible labour markets<sup>12</sup>. These firms are subject to external control and rely upon internal support services. In many ways the multi site establishments still function in the area as a "branch plant economy".

The postal survey revealed virtually no inward investment from outside the area and the internal relocations, based upon a desire for an increased quality of environment and improved premises, only served to highlight the contrast between the decaying urban areas and the few last bastions of economic activity.

The employment structures of the firms reflect the problems

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<sup>12</sup> This the firms use a great deal of part time and shift labour, predominantly female, to cope with fluctuations in demand.

their selective development brings. This is manifested in an expanding social division of labour (within an already polarised labour force), and a reinforcement of unequal gender structures. The only growth and realistic vacancies of any proportion occurred at the lower end of the employment scale, where labour costs compete with technical innovation.

The business characteristics of the firms; their multiplier effects and economic linkage, reveal negative growth implications. The majority of specialised services sought by these firms are acquired outside the Merseyside area, whilst menial operations are consistently provided from within; reinforcing the structural deficiencies of the area's economic base.

The export base of the firms revealed a highly restricted geographic pattern and the quantity of services (turnover) exported outside the area was minimal. The firms do not act as a key supply side of the Merseyside economy and do not appear to operate independently of its economy.

The hypothesis that information technology can, through increased demand processes, boost levels of employment did not apply to the firms studied. In the majority of cases the use of IT meant increased productivity with a reduction in the labour force and a simplifying of tasks. The use of IT increased the division of labour and allowed more flexible work regimes to come into practise, mainly based upon part-time labour.

All the above conclusions are fully detailed in Chapter Five and answer the questions outlined at the end of Chapter One, and they are in direct contrast to previous work concerning

the operational characteristics of producer services (Beyers et al 1986, Pederson 1986, Bailey et al 1987, Gillespie and Green 1987, Kirn 1987, Van Dinteren 1987, Harrington and Lombard 1988).

But this study also confirmed some previous findings, for example: the concentration and influence of agglomeration and urban economies (Daniels 1985), the high levels of demand within the service sector for producer services, the use of expert knowledge (Beyers et al 1986), a potential for export, the use of flexible production operations (Goe 1990) and a lack of public sector aid designed to support this sector's growth (Marshall 1984).

#### 8.2.2/ Second level analysis:

##### Classification and Factor Analysis

The classification approach developed in Chapter Two is examined through the use of factor analysis (Chapter 6). The former developed a working hypothesis for the thesis which addresses two key issues: firstly, the role of the individual within firm structures, and secondly, the determining characteristics of firms' operations.

The classification indicates there is no way to define discrete groups of firms, as characteristics from different firms overlap and are not unique to any one specific group. For example: banks offer retail and business services, accountants undertake public and private work and services designed for inhouse use can perform a sub-contracted function.

As a result, the classification combines two pivotal criteria of producer service operations, which structure the functional characteristics of the firms. The first is taken from the PSWP (1986) classification. This is based upon the distinction between firms which are predominantly information or goods related, but is put into more 'traditional terms'; white collar and blue collar. The distinction is made in this way, because it relates the firms to either manual or non-manual operations as well as goods or information related functions. In the case of the latter the end product of the firm is predominantly a 'cerebral package' and the use value is essentially an extension of the cognitive base of the key labour involved<sup>13</sup>. In the case of the former, the primary service involves the transferal of goods or the actual physical presence of an employee to manually carry out the production<sup>14</sup>.

The second criterion used for classification is based upon the distinction between area offices of multi-site establishments<sup>15</sup> and independent single-site operations. Due to the structural conditions of Merseyside's economy, the former tend to be externally controlled, and have limited contact with the surrounding local economy in comparison to single site establishments.

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<sup>13</sup> This may in fact be the use of a barrister or an account or a consultant, and the information may be imparted in a tangible (report or disk) or non tangible form (verbal).

<sup>14</sup> This may involve cleaning, security, haulage or maintenance.

<sup>15</sup> These can either be branch operations or regional offices, but in the case of Merseyside they are predominantly externally controlled.

These two criteria are the basis of the classification matrix, from which firm types can be theoretically extracted for analyses (Chapter 2, Figure 2.1). Within the matrix there is no exact position for any one firm, but, general areas where firms can be hypothetically located.

This approach was adopted for two main reasons: firstly, to move away from a simple dichotomous list of characteristics which rigidly, and falsely, adhere to discrete categories for firm types, and secondly, using the matrix it is possible to conceptualise the relationship between the role of agents<sup>16</sup> and the respective firm structures (Chapter 2). In other words, assessing their (the agents) ability to control the functions of capital, which is a reflection of their class assets<sup>17</sup>. Therefore, it is possible to understand how the social relations of the agents (class grouping) do or do not effect the operational characteristics (e.g. export characteristics) of the firms, and whether or not the firm can function without the dominant economic characteristics of an area being their primary determinant.

This approach is partially an extension of a basic idea put forward by Beyers et al (1986), which simply related the idea of educational attainment to the level of out of state exports. In this case the underlying causal relationship was not explained

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<sup>16</sup> These are key personal within the firm, with responsibility for the operations on the particular site in question.

<sup>17</sup> The class assets determine how they came to be in their present employment, dependent upon contingent conditions, and tend to focus upon culture (educational), organisational (management status) and property assets.

and the phenomenon was seen as a correlation exercise. This thesis, however, explains this relationship and relates the phenomenon to a classificatory framework containing the use value of the product and firm structures.

The most important caveat to this methodology is that the model is only applicable to marginal economies such as Merseyside, which have a high dependency on externally controlled, often international, service firms. Under these conditions, which are a result of historical determinants (Chapter 3), there are virtually no nationally based producer service establishments in the area with autonomous power over their own operations.

The approach contextualises the subject material, as it has many facets of a marginal economy and the producer service sector built into it. In this way it is possible to understand which firms are likely to be the most dynamic, because the activities<sup>18</sup> of this group of firms are based upon the ability of the founder to use his/her social relations as a dominant operational characteristic of the firm. This is in contrast to firms which are primarily restricted by wider structural constraints and the ability of the agent to influence business operations is limited.

This particular understanding of producer services provides the second level of analysis for the thesis and the hypothesis was born out by the results of the extensive advanced statistical analysis (Chapter 6). As shown, this technique

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<sup>18</sup> Export levels, employment strategies, locational decisions and inter industry linkage.

relies upon the use of both common factor and principal component analysis to group the key variables from the questionnaire and ascertain which of the groupings (factors) explain the greatest variation amongst the other factors. These factors determine the differences in the other variables and have the strongest influence over both common and total variation<sup>19</sup>.

For the statistical analysis the respondent firms were divided into groups reflecting the extremes of the classification matrix and its overlapping central area. A detailed interpretation of the results is given in Chapter Six and the output from the various analyses are enclosed in the appendices.

The factor analysis shows the hypothesis and the matrix to be reliable indicators of the operations of producer services in a marginal economy such as Merseyside, and provides a unique insight into understanding the role of social relations within firm structures.

As the analysis revealed, it is the larger multi-site and blue collar operations which are more directly influenced by economic determinants and, therefore, susceptible to wider external controls. In contrast, the smaller, white collar (professional) operations are far more robust and autonomous in their operations, and tend to be more directly influenced by the social relations of the founder. Hence, they are more immune to

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<sup>19</sup> Total and common variation are fully explained in chapter six and its appendices, but essentially relate to the causal variation (common) or the total variation which includes unique attributes of individual characteristics.



structural constraints and the marginal position of the Merseyside economy.

Of the range of firms surveyed, the white collar (information related) operations are the most likely to provide a dynamic growth sector for the area. However, the first level analysis revealed this is not the case (Chapter 5) and the third and final level analysis (Chapter 7) reveals the contradictions between the social relations of people in this sector and the needs of Merseyside's regeneration strategy.

### 8.2.3/ Third level analysis:

#### Social relations and Class Analysis

The final level of analysis conducted was based upon class analysis of key personnel from the white collar (information related) producer service sector. This particular subgroup was selected because of its supposed ability to operate as a dynamic growth sector without total dependence on economic determinants.

The results of the qualitative interview stage are detailed in Chapter Seven by concentrating on how agency can reproduce class structures and how causal powers of social collectives influence place.

This final level analysis was designed to draw upon qualitative empirical data to test assumptions made as to how an agent controls the functions of capital within a firm structure, and to assess the influence classes<sup>20</sup> have on the

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<sup>20</sup> The main two social classes under question, service class and management class are both drawn from the middle classes.

social and economic fabric an area.

One of the more interesting developments of this approach was the discovery of several class groups operating within the producer service sector, rather than one homogenous 'service class' (Abercrombie and Urry 1983, Urry 1988). The two collectives that were revealed, the service class and the management class, displayed how structural constraints have a different effect on different social groups.

The main process of interpreting the qualitative results was derived from previous class analysis (Wright 1985, Dahrendorf 1969, Bottomore 1964, Giddens 1979, Thrift and Williams 1987, Goldthorpe 1982), but was mainly influenced by the work of Urry (Abercrombie and Urry 1983, Urry 1988)<sup>21</sup> and Savage et al (1992), who have developed arguments beyond the Marx/ Weber class debate. This perspective still relies upon the idea of exploitive relationships (central to Marx's theory of class, Thrift and Williams 1987), but has become flexible enough to incorporate ideas of class assets and career paths, which allow greater stratification and understanding of, what has been termed, the 'middle class(es)'. (Abercrombie and Urry 1983).

Based on these ideas it was possible to segregate the people interviewed into different social collectives (Chapter 4 and 7). The assets of these groups were examined, along with the possible causal powers and concrete effects of these classes on Merseyside.

The analysis revealed two main classes were operative

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<sup>21</sup> Personal advice was also offered by John Urry during discussions on the methodology of the thesis.

within the producer service sector in the area: the service class and the management class (Chapter 7). Examination of these groups showed they reflected key characteristics, which supported earlier assumptions made on the role of individuals within different firm structures (Chapter 6).

The career path and social relations of the management class are structured in such a way to conform to a 'Fordist' interpretation of social collectives (Harvey 1989). They exhibit company loyalty, a defined career structure and patterns of mass consumption. Beyond these general characteristics, they are prone to bureaucratic constraints within company structures and do not have the ability to influence firm operations above external/ economic factors.

The social relations of the management class are bound up with their career paths and assets, which reflect a conservative lifestyle, and their political affiliations are in defence of the status quo, rather than individual freedom.

The management class are associated with the more traditional relationships of production (bureaucratic structures), and on Merseyside, because of its economic history<sup>22</sup>, they provide one of the core elements of its social fabric.

This class exhibits strong social relations which perpetuate the dominance of the white male, traditionally viewed as the classic middle class group (Giddens 1978, Abercrombie and Urry 1983). The process of social closure within this group is

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<sup>22</sup> The economic history of Merseyside has created a high level of dependency upon branch establishments in both manufacturing and the service sector (Gould and Hodgkiss 1982).

one of the more extreme amongst the middle classes, and it has a strong tendency to rely upon (deleted) female labour<sup>23</sup>.

The social relations which constitute the management class on Merseyside have a negative impact on the area's potential for regeneration. This is because they are subservient to the production process, and therefore perpetuate its marginal economic position and cannot effect economic growth because of wider structural constraints.

In addition to this direct relationship to the production process, their wider social relations also serve to reinforce the inequalities of the area. This is reflected in their residential locations, which enhances physical as well as social closure, and their views of the area and its problems.

They attempt to convert their organisational and property assets into cultural assets by having an affinity for (affluent) areas, which are not related to Merseyside. These associations include visits to the theatre in Manchester or the retail establishments in Chester, and whilst these people may acknowledge Merseyside does provide similar facilities, they do not support them. However, their residential locations reveal their inability to convert their organisational assets into property or cultural assets equal to that of the service class, as they have an overwhelming tendency to reside in middle class suburbia.

The management class tend to condone the actions of central government to initiate urban regeneration, whilst they clearly

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<sup>23</sup> This is a term developed by Savage et al (1992) , which is for example, the unacknowledged support of female partners which executive managers will rely upon.

try to disassociate themselves from any form of urban deprivation. They support key physical regeneration, as undertaken by the Merseyside Development Corporation, in the form of: marinas, tourist attractions and high security 'safe' executive developments, all of which are generally manifested in some form of post-modern/ heritage project (Garside 1989).

The service class constitute the other main group of people involved within the producer service sector on Merseyside, and whilst they display different traits to the management class, they are equally at fault in perpetuating the inequalities of the area.

In contrast to the management class, the service class display far more ability to control the general characteristics of their firm operations. This results from the type of service being offered, which generally constitutes the cultural assets of the service class, focusing upon their educational and cognitive base, as apposed to their organisational assets. However, the majority of these activities occur within small, if not independent establishments. It is only in areas which exhibit large numbers of central control teams for multi-site establishments, where service class operatives will be employed within large scale operations, which does not apply to Merseyside.

The fundamental differences between the service and the management class is that the former has a greater tendency to derive its members from outside its own class boundaries and is less constrained by gender type. Therefore, it provides opportunities for people on Merseyside, other than from the

middle classes, to establish these particular class assets. Also, this class has a far more flexible career structure than the management class and in certain cases it is totally undefined by employment (Chapter 7).

However, the majority of those interviewed who could be construed as members of the service class, were from middle class backgrounds and the apparent opportunities open to other social groups are extremely dependent upon the accumulation of cultural assets, especially in the form of professional qualifications. This situation does not relate to the disadvantaged groups of the area, who through structural constraints cannot attain these requirements (see for example Gifford 1989).

Additionally, through causal powers and property assets, the service class focus their resources into areas which reinforce the disparities of the area. This is manifested by the residential location of the service class in (semi-) rural areas, which in certain cases are outside the region.

The members of the service class possess far more cultural assets than the management class, and have a greater ability to convert these into property assets. This has resulted in their residential preferences for discrete and rural establishments which allows them to enhance their cultural assets by investing in 'heritage capital'.

In addition to their causal powers to manipulate and effect their own environment, the operations of their firms committed little to the regeneration of the area. They utilise very little

capital<sup>24</sup>, have minimal linkage with other operations and generally exploit, and therefore perpetuate, the assets of the area which are a feature of its marginal economy. These are: an abundance of menial labour to supply auxiliary services, relatively inexpensive business premises, easy access from outside the area and a relatively low cost of living.

These 'advantages' of a marginal economy are some of the key reasons the service class operate comfortably within the area, whilst they disassociated themselves from it. Many openly admitted there is no real reason for their presence in the area, apart from family or other personal commitments. They do not generate any substantial growth multipliers of the kind recorded in other parts of the world (Beyers et al 1986) and the net effect of their presence only serves to magnify the inequalities (social and economic) of a deindustrialised, depressed area.

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<sup>24</sup> This means there is very little investment in or commitment to the area and very few knock-on effects in terms of actually buying capital or its maintenance.

### 8.3/ Strengths, Weaknesses, Policy Implications and Future Research Proposals

The primary strength of this thesis has been its multi-disciplinary critique of the phenomena under investigation (producer services and human capital). This was based on a range of different disciplinary inputs into the conceptual framework of the thesis; including Geography, Economics and Sociology, to provide a wide-ranging but integrated approach.

During the initial stages of research design the main platform for analysis was to be constructed from a 'traditional' neo-classical supply and demand study of selected service industries on Merseyside (Daniels 1986). However, it became obvious that this approach was deficient and would not allow the necessary holistic interpretation of the activities of producer services within the social and economic fabric of Merseyside.

The intention was not to assign 'supply and demand' analysis to the scrap heap, but to admit that it does not offer a critical element which contextualises issues such as human capital within the capitalist mode of production. The need was to combine more traditional approaches (examining locational factors, export markets and linkage networks) with an understanding of the social division of labour, class analysis and a very fine grained interpretation of how individuals (agents) reproduce structures of which they are inherently a part (Giddens 1984).

The approach adopted a critical analysis of the economic determinants of the producer service sector on Merseyside, a



geographic appraisal of how these operations relate to Merseyside's position within the (spatial) division of labour and a critical assessment of the influence (causal powers) that the social groups (classes) from which producer service personnel are drawn have on the development of the area. On Merseyside and in relation to other areas within the spatial division of labour, this development is uneven (unequal).

The aim of this wide ranging approach was not simply to contradict previous research into producer services, but to broaden the debate and enhance the understanding of their role within metropolitan areas. Obviously, adopting a Marxist approach predisposes the research to a critical view of capitalist development, but it was unforeseen that the empirical results would call into question all of the previous assumptions on the positive role producer services play within developed economies (Chapter 1). It is argued, therefore, that the thesis provides a valuable and original insight into a whole range of issues connected with producer services, some of which have been previously ignored.

Ironically, possibly one of the strongest criticisms that could be levelled at this thesis is a counter product of its greatest strength, over ambition. In an attempt to broaden the debate on producer services this research has broached a vast range of subject material, some of which has evolved from highly contested and complex debates throughout the social sciences (agency/structure, class, Marxism - Chapter 2). As a result the analysis of complex issues has had to be oversimplified and at certain points aspects of integrated theories have had to be

'taken for granted'.

In addition to the broad theoretical generalisations that have been made, an elaborate methodology had to be constructed to test the various hypotheses. The detail of this analysis could have been reduced if the theoretical scope had been narrowed.

Apart from this general level of self criticism, there were several major and minor problems encountered during the research. Some of these issues were successfully tackled, others could have been overcome if additional resources had been available (time, cooperation and money). Some, however, were inherent in the subject material. Of the difficulties that arose, there are three issues which have particularly wide repercussions. These are part of larger ongoing debates and will be dealt with here first before the minor problems are listed below.

One of the first problems encountered was the lack of consensus on what actually constitutes a producer service (Marshall et al 1987). This meant that there was no real definition or classificatory framework to guide the initial stages of the research. Therefore, a great deal of time was invested in developing a classificatory approach prior to conducting any primary research.

Even though producer services are a sub-group of the service industries, they are still very much a heterogeneous group and some might say a "chaotic conception" (Walker 1985, Sayer 1984). The only common features of the firms classified within this group are their propensity to supply the bulk of

their output to other businesses rather than domestic consumers and for their output to be recognised as a 'service'. However, many firms supply both domestic and business users, depending on demand, seasonal variation, etc. and there is still no consensus on what actually constitutes a 'service' (Walker 1985, Urry 1987).

The continuing difficulty of service classification is reflected in this thesis, as it clearly demonstrates the varied nature of firms which can be classified as producer services. Within official frameworks (S.I.C) there is very little scope for constructing a customised classification schema, other than using the smallest divisions as building blocks for larger alternative groupings. But, within the realms of primary research and the theories of academic study the permutations are virtually limitless (Chapter 1).

The classification framework adopted for this research moved away from traditional dichotomous associations and yet did incorporate some basic principles found in the more innovative work of Walker (1985) and Urry (1987). Even though these authors do not fully agree on certain specific issues of 'service' activity<sup>25</sup>, they both question not only what is being produced, but how it is being produced; the question of labour. They both advocate an understanding of service operations based upon a complex (social) division of labour, which previous classifications and analyses have ignored (Gershuny and Miles

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<sup>25</sup> Walker makes a strong case for the continued production of surplus value in a service economy (page 81), whilst Urry sides with Mandel (1975) in stressing the non-productive side of service labour which does not create surplus value.

1983). However, as they are dealing with the whole range of service activities, their classifications incorporate a range of other criteria (ownership and function) which, for this research dealing specifically with private producer services, are not as important.

As an initial starting point the classification of 'producer services' was taken from previous research (Daniels 1986, 1987) in the knowledge that this group is, in itself, a "chaotic conception". A classification matrix was then developed, based upon the Marxian approaches of Walker (1985) and Urry (1987), incorporating their ideas of spatial and social divisions of labour, which, for the purpose of this research, were translated into the concepts of, the functions of a marginalised economic area and the distinction between 'collective' mental and manual labour. The latter distinction was derived from the work of Harvey (1982, 1985) and Urry (1987)<sup>26</sup>, which makes the distinction between those dominant in the functions of capital (control, reproduction and reconceptualisation) and those providing just surplus labour value, rather than the division between ownership and non-ownership of capital.

This classification was used to dissect a group of producer service firms into categories with greater and lesser potential to control the functions of capital. This allowed a more profound insight into their role within the Merseyside area,

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<sup>26</sup> The distinction between mental and manual labour as part of the division of labour was originally developed as a Marxian concept, but within the service economy it has taken on a more important role (Urry 1987, Harvey 1982).

than would have been achieved by simply classifying them by their output product (service).

The empirical results of the research based upon the classification revealed not only the strengths of the approach in illuminating those groups of producer service firms dominant within the Merseyside area, but also the lack of coherence offered by the term 'producer services'. The empirical research, however, had to be confined to a very narrow band of service activities and it is difficult to predict how this classificatory approach would apply to a whole range of manufacturing and service based industries. But, it is hoped future research into economic and social development will be able to build upon these ideas, rather than being restricted to meaningless product classificatory frameworks.

The second major problem which needs to be addressed is the question of "locality". This research has stressed very strongly that Merseyside is a relatively unique place, with a very distinctive social and economic history (Chapter 3). Therefore, it may be possible for the results to be seen as place specific and as having no implications for other locations. If this were the case, then the conclusions drawn from the research would not "travel" well and could not be applied elsewhere. But, this would be a very simplistic view of the research, as it has many facets and makes several observations, some of which are specific to Merseyside and some of which relate to other areas.

Understanding the division of labour between the different firm types and how this relates to their ability to control the functions of capital, in conjunction with the area as a

marginalised economic location, is a process which has direct implications for other places within the British space economy. Also, Merseyside is not totally unique with regard to the external forces acting upon it which have contributed to its marginalised position. International and global economic restructuring, effecting the decline of its port industries and the rise in prominence of specific labour markets (part-time female), are processes which are equally at work in many other parts of the capitalist economy as they are on Merseyside.

The general processes and effects of economic restructuring, changing labour markets and increasing social polarisation, are applicable to many other areas, and the conclusions concerning these processes and effects can be related to the wider restructuring and inner logic of capitalism.

The same conclusion can also be drawn from the class analysis within the research, which questions the causal powers and class formation of several social groups ('managerial' and 'service' class). These processes are very generalised and are applicable to other areas without being specific to just Merseyside.

However, the important aspect of the "locality" problem is to understand how these processes are manifested on Merseyside through localised influences, and the processes which are perhaps unique to the area. These are reflected in very specific phenomena, which are a product of political and cultural, as well as economic and social processes, such as the distribution of housing patterns, local political action, demographic

problems and the imageability of the area.

Within this research the "locality effect" of the area has had a direct input into the empirical analysis, especially in the section involving an assessment of personal attitudes and perceptions of people who live and work within the area (Chapter 7). However, even though the study acknowledges these unique forces particular to the area and clearly represents Merseyside as a locality (Chapter 3), it does not attempt to isolate these very localised characteristics or compare them with situations in other areas. So, on a very detailed level, the conclusions from the analysis conducted will, possibly, not be transportable to other areas. But it is important to perceive the research as operating on several different levels and that this lack of mobility for some conclusions, whilst being inevitable, is also only one facet of a multitude of different interpretations.

The third major difficulty which perhaps requires some detailed reflection is the problem of class definition. This occupies a major section of both the theoretical and empirical analysis and relies upon quite innovative procedures of class definition. The research attempts to find a middle ground between Weberian stratification and the dichotomous Marxian division of capitalists and proletariat, by basing its class criteria upon more than just ownership of the means of production and more than just occupational status.

The alternative criteria used were based upon three different types of capital ownership (cultural assets, organisational assets and property assets) and an analysis of career structures. This was done because, in many cases, people

in positions of responsibility within business services do not actually own the means of production, but are in control of the functions of capital. Also, it is very important to understand the life profiles of individuals, especially their career development, rather than taking snap shot judgements on their immediate occupation or qualifications.

The greatest difficulty in establishing such a base for class definition and analysis, is translating these criteria into a workable framework in which individuals can be assessed. This transition caused the most difficulty in this section of the research and is perhaps open to many different interpretations (as so much class analysis is).

Based upon the above criteria, the majority of people interviewed were divided into 'service' or 'management' class groups. However, as very few people display a clear association with any one class type, certain qualitative judgements, based upon personal contact, had to be made to discern their social relationships.

It was also assumed that, as the people under investigation were part of the business service sector, their function was dependent upon actually linking into and controlling the functions of wider production processes, rather than just supplying an end product to be subsumed within a larger operation or operating independently, as with the traditional 'petit bourgeoisie'.

At the time of analysis certain people included in the study may have displayed occupational characteristics particular to traditional interpretations of the 'petit bourgeoisie' or



simply members of the 'middle class(es)'. But, based upon their career structures, assets owned and a need to segregate the cumbersome classification of the 'middle class', the groups of people interviewed were segregated to give a clearer indication of the people who had a greater or lesser ability to control the functions of capital (service class) and possibly a greater causal group power to effect the development of Merseyside.

As stated in the research, one of the key problems with class analysis is the boundary problem. Where does one class start and another end? This was also a problem with this analysis and there are no definitive answers. But hopefully the reader will be able to understand the type of approach adopted and how the interpretation was performed, even if he or she is not in full agreement with the final conclusions.

Finally, there are seven minor points which also require some form of retrospective critique, but do not warrant such an in-depth analysis as those discussed above.

1/ The range of theoretical work for the service industries was reasonably limited<sup>27</sup>, but for producer services there was a particularly strong focus on just neo-classical economic analysis. Therefore, the development of the theoretical side of the thesis had to be adapted from the wider social sciences. This opens the research to criticisms of eclecticism or partial theoretical explanation, but in answer to these:

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<sup>27</sup> In comparison to other areas of human/economic geography, such as state theory, industrial location, political analysis, service theory was relatively less well developed in the mid 1980's.

"If ideas are important and illuminating, what matters much more than their origin is to be able to sharpen them so as to demonstrate their usefulness, even if within a framework which might be quite different from which helped engender them." and "A counter argument, to people who object to theoretical developments on the grounds of eclecticism, is that they tend to hide behind established tradition, using it as a cover for intellectual sloth." (Giddens 1984, Introduction xxii).

2/ One of the main logistical problems encountered in the research was the lack of any coherent data base covering the population of firms within the area. This had to be constructed from a number of different sources, all of which had their individual problems.

The Annual Census of Employment (1984) was the original data source used, but this proved so inaccurate, because of wrong addresses and fictional firms, it was discarded. Ultimately, the list was compiled from professional directories, the Chamber of Commerce data base and the Yellow Pages. Even though all of these contain a certain amount of error and the exercise was extremely time consuming there was no alternative.

3/ The problem of gathering accurate and reliable information on firms within the area, could have been lessened if the study was not as wide ranging. If a particular group or sub-set of producer service firms had been selected for analysis, then information on individual firms could have been far more detailed simply as a result of the smaller number of firms involved.

4/ With hindsight, the methodology involved an excessive range of analyses. This resulted in a certain amount of duplication in the results which, in one respect provides

qualification at different stages, but it could be considered extravagant. A two stage methodology, with more in-depth qualitative analysis in conjunction with a single extensive quantitative study, may have proved as illuminating.

5/ In general, the response rate to the questionnaire was within acceptable limits, but within this overall rate there were identifiable groups of non-respondents. The blue collar service sectors proved to be the least cooperative, with response rates below acceptable limits.

This could have been rectified if the research had concentrated upon a smaller sample of firms, which would have allowed time for follow-up surveys. Moreover, the whole response rate could have been boosted if the survey and research had been endorsed by a notable public sector organisation (MIDO or Liverpool City Council). Unfortunately, for a number of reasons, such support was not forthcoming despite a series of attempts to enlist the support of the local authority.

6/ The study focused on small, independent operations and the role of key personnel within them. Consequently, this presented a bias in the work, which tended to ignore the policies of externally-controlled firms in relation to Merseyside. Again, with hindsight, this bias could have been rectified by examining corporate strategies in more detail and specifically targeting personnel in HQ's outside the area.

7/ The restricted nature of previous theoretical research in this subject area resulted in praxis difficulties, as there was very little relevant research from which to draw comparisons. Many of the methods used were a result of 'trial

and error', and some of the original procedures adopted were deemed inappropriate. Several advanced statistical techniques were employed to analyse the data (multiple regression and cluster analysis), but these were shown to be inadequate after consultation with professional statisticians.

### 8.3.1/ Policy Implications and Future Research Proposals

Regional policy was first introduced in 1934 in an attempt to halt the increasing levels of unemployment in the depressed industrial areas of Great Britain. Its primary aim was to influence the inter-regional movement of mobile manufacturing industry through the provision of factory space, industrial estates and financial assistance. This approach culminated in the establishment of Development Areas (later, Assisted Areas), which marked a change in the direction of regional policy from a mobile to an indigenous firm growth incentive. However, from its inception until the 1960's, no provision was made for regional policy to take account of any service industry problems, and, it was not until 1973 that any direct financial assistance was available for service firms.

From 1965 until 1984 regional policy directed at services comprised of two strategies: controls on office development, through Office Development Permits and the Location of Office Bureau (disbanded in 1979); and financial assistance for mobile service operations (Service Industry Removal Grants<sup>28</sup>). After a series of changes to budget levels and eligible grant areas, the OSIS (renamed SIRG) was eventually discontinued in 1984 following a major review of regional policy.

In combination with these regional policy measures, Central

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<sup>28</sup> This scheme was introduced in 1973 and provided employee transfer grants, and grants for rent relief or the purchase of premises. Later in the 1970's a job creation grant was also introduced under the scheme and in 1979 the whole initiative was renamed the Office and Service Industries Scheme (OSIS).

Government was also operating a policy of 'office decentralisation' to Assisted Areas. This involved a commitment to relocate and establish key civil service operations throughout the regions, including Defence to Glasgow, Home Office to Merseyside and the Laboratory of the Government Chemist to West Cumberland.

The PSWP (1986) has revealed these to be fairly ineffective policies, as the concentration of producer services in the south east continued throughout the 1980's. Whilst on Merseyside, producer service activity continued to decline until 1987 and did not recover until the late 1980's (Chapter 3). But it must be noted that none of these policies were directed at just producer services, and as with economic policies developed in Seattle:

"...it is the rare program indeed that places the service industries at the focal point. Those that do target services do so not because the sponsoring organisation wishes to increase service exporting, but rather as a pragmatic response to the growing dependence of their economy on the service sector and a realization that service industries offer great opportunity for employment growth." (Beyers et al 1986, page 194).

In Great Britain during the mid 1980's there was a slight shift in regional policy, which confirmed its similarity with areas such as Seattle. The Department of Trade and Industry introduced the Regional Development Grant (II), which was designed to give greater support for the service sector and, under constraints of expenditure cutbacks, it focused its limited resources on job creation incentives. However RDG II only lasted 4 years, as it was discontinued in 1988 due to

claims of over expenditure and misuse of funds.

The only existing regional policy available to services or manufacturing is Regional Selective Assistance. But this is geared towards those services that create or preserve large scale employment and those that have export projects beyond the local economy. The PSWP (1986) perceive this scheme as confirmation that the DTI do not consider local services as a fundamental part of regional economic development.

In addition to regional policy, there are also many other levels of intervention into economic development, from both public and private institutions. At the supra-national level institutions such as the European Commission provide direct financial assistance into regional economies through Regional Development Grants, Social Fund and the European Investment Bank. At the national level, there are a plethora of direct and indirect economic development incentives from the majority of Central Government departments<sup>29</sup>, as well as other national organisations such as the Prince's Trust and Business in the Community. Whilst, at the local/regional level there is an equally inordinate number of development agencies, local authority initiatives, enterprise agencies, advice centres, innovation centres and partnership organisations, all geared to encouraging or preserving economic activity.

However, as the PSWP (1986) revealed, at all levels, economic development initiatives are consistently aimed at supporting manufacturing industries and those that are also

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<sup>29</sup> Department of the Environment, Department of Trade and Industry, Department of Employment, Department of Education.

applicable to services, offer restrictive or no assistance for producer services. The PSWP (1986) conducted a trawl of all policies which could be considered 'service-friendly' and noted that out of over 130 schemes only four were directly related to producer services<sup>30</sup>. But even these were specifically targeted at the computer services field and, due to the demise of the Manpower Services Commission, not all are now operative.

Since 1988 (Action for Cities) Central Government has focused its economic policies on urban regeneration, which has involved key flagship projects and private sector leverage. This has diverted finance away from its traditional programmes, including regional policy and the Urban Programme (now terminated) and offers even less opportunity for producer service support.

As the surveyed firms in this research revealed, the use of Central or Local Government incentives on Merseyside was virtually non-existent throughout the 1980's, which considering the area was victim to every minister's development whim<sup>31</sup>, is a clear indication that, not only are schemes available to producer services rare, but those that do exist are underutilised.

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<sup>30</sup> DTI - Support for software products and producers of distance learning videos;  
MSC - (Manpower Services Commission) COSIT: computer training;  
EC - Transnational consultancy;  
ECGB (Export Credit Guarantee Department) - Aid to service exporters.

<sup>31</sup> Urban Development Corporation, Assisted Area (RDG and RSA), Enterprise Zone, Urban Programme, Partnership Area, Task Force, City Action Team, Urban Development Grant, Urban Regeneration Grant, City Grant and the full range of DTI and Department of Employment enterprise/employment initiatives.



The Merseyside firms that attempted to use public assistance highlighted very typical user problems when trying to access development initiatives. The main criticism was the level of bureaucracy involved in trying to use either grant-aid schemes, such as RDG or UP, or business development initiatives, such as the DTI's Enterprise Initiative. In addition, most complained that development policies were geared to finance manufacturers or to subsidise employees, which they did not qualify for or want. With regard to direct financial assistance, the firms that had made enquiries or tried to obtain financial aid described the policy incentives as a failure, primarily because it was an incredibly slow process and payments were only eligible for investments already made. Therefore, apart from relying upon their own resources, the main funding support came from the banking sector which offered little flexibility.

The policy analysis of this research and others (Beyers et al 1986, PSWP 1986) reveals the distinct lack of incentives which cater especially for the producer service sector. Indirectly, some consultancies have benefitted from being chosen as DTI consultants within the Enterprise Initiative, but it was not designed to help them. Both blue and white collar producer services indicated they are discriminated against by manufacturing biased policies and the schemes available to them are limited in scope.

The implications of these findings are twofold: firstly, a direct response would be to try and develop a package of incentives tailor-made for the producer service sector. Considering the range and diversity of services involved, this

may prove an impossible task for any one Central Government Department and would therefore have to be controlled by a hybrid organisation. Its remit would have to cover all sizes and types of business and would have to provide direct financial assistance as well as managed workshop space, factory size development for warehousing operations, serviced industrial areas for transport distribution operations, serviced office accommodation, business advice (exporting, management, marketing, law, eligibility for loans, etc.), capital allowances, innovation grants, venture capital, transport subsidies, local regional and international development networks<sup>32</sup> and most of all, a direct input from the private sector to operationalise these facilities, rather than the civil service.

The type of operation described above does not exist at present, but integrated institutions are becoming the vogue in government policy, the latest being the Urban Regeneration Agency. The URA combines packages from the DTI and DOE and has a chief executive made up from the private sector, it incorporates the English Estates development agency and will supposedly provide a one stop shop for business development. There is no guarantee it will solve the problems of service industry policy, but it will provide new alternatives for

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<sup>32</sup> These networks would link-in public and private organisations at the local level, such as higher education, chambers of commerce, enterprise agencies, Training Enterprise Councils, local authority initiatives and the business community, and would also provide a door way for those wishing to export outside of the area into, national or international markets, by linking European Commission operations with development agencies such as INWARD, and offering trade delegation and promotional facilities.

economic activities seeking assistance.

The second major policy implication of this research is that, if producer service growth is to be encouraged, it is imperative to integrate the sector's development into the local economy and labour market, so that it does not continue to exacerbate the problems of uneven development.

The most effective way of developing a producer service sector on Merseyside which will provide indigenous growth benefits with sustainable development would be to establish an integrated economic development policy. This would need to be orchestrated at a regional level, possibly through a regional development agency, and would need to integrate the various components of a regional economy (services and manufacturing), including existing institutions involved in the regeneration process ('institutional thickness', see Amin and Thrift 1993). At the same time it would also need to take a far more active role in controlling the process of development (inward investment, locational decisions, etc) and the use of labour resources, ensuring that training programmes and resource investment in human capital are maximised for future sustainable development.

However, this should not be merely limited to Merseyside or solely to economic development. The regional operations would need to be organised under some form of a national programme. If this is possible, which is unlikely at present, each political party has its own ideas which cover a broad spectrum of perspectives: from the Conservative Party's dependence on the very weak district councils, to the total devolution of power

put forward by the Social Democratic Party. However, of the main studies that have analysed national strategic planning, the Labour Party's "Alternative Regional Strategy" (Prescott 1982) coincides most closely with acceptable and realistic independent studies (Royal Town Planning Institute 1986, Regional Studies Association 1983), and poses a short and long term stability, operable within a European perspective.

Therefore the wider issue of urban regeneration needs to be tackled to develop an integrated package, including social (education, health, training) economic, environmental and physical (infrastructure) problems. At the moment there are many proposed developments for Merseyside, including, for example; a Mersey Barrage<sup>33</sup> (Stoney 1990), extensive dock rejuvenation (M.T.F 1989) and possible airport developments. But the area's administrative structure is extremely fragmented and its future is very uncertain. Currently the main policy actors are: the Merseyside Development Corporation, the Mersey Partnership, Merseyside Task Force (DOE), Local Authorities (including acquisition of EC funds) and the various City Challenge Partnerships.

The majority of these have a limited life span and do not touch upon the question of long term strategic governance for the area which, if any form of sustainable regeneration is to be attempted, needs to be tackled in a far less ad hoc manner.

### Future Research

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<sup>33</sup> At the time of writing the government had just withdrawn its support for the barrage scheme, but the Merseyside Barrage Company were still in operation.

The future research questions thrown up from this study are numerous and the central problem is to be selective about the main issues. Initially, it would be very illuminating to conduct a similar analysis in other areas, especially a comparison between other marginalised areas and key service centres, which would provide direct comparisons and a possibility to extend the scope of the methodology. This would ideally involve a study of traditional producer service firms (goods related/blue collar), which were not adequately covered in this research and yet could provide vital employment opportunities for large sections of the labour force.

Within Merseyside, there are two potentially future beneficial research areas. First, a greater understanding of the area's economic functions is needed at a regional level. This means the rest of the North West and especially Manchester, because at present these two metropolitan areas are more in competition than cooperation and it would be to the region's benefit if the resources of these areas could be developed together, and secondly, it would be beneficial if an in-depth study was conducted into the middle classes within the area. This would require an ethnographic analysis of the service and management class, to reveal the detailed effects these social collectives have on the area, focusing specifically on career development in relation to the area and the development of social networks (residential, business, leisure, education, political).

The thesis has also highlighted the need to examine other

social structures related to producer services, apart from those explained by the relations of production. These structures, particularly race and gender, often affect the most disadvantaged groups in society which are in desperate need of regeneration.

There are also other interesting lines of research concerning, for example, the area's 'informal economy' or external corporate strategies towards the area, which could provide a crucial basis for future strategic economic planning. But the single most important issue to have arisen in Merseyside during the 1980's and 1990's is the issue of public sector regeneration initiatives. This is particularly related to the area's extremely depressed situation in comparison with the rest of Europe<sup>34</sup>.

Merseyside has been host to a vast amount of public sector regeneration initiatives but research into these initiatives has been extremely limited<sup>35</sup>. The need to understand the impact of all these policies, in relation to the outstanding problems of the area, is crucial if future coordinated plans for the development of the area are to be made.

The thesis has attempted to answer some of the more specific questions on the development of Merseyside, but it has

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<sup>34</sup> At the time of writing Merseyside's position within the EC was under review to establish it as the first Objective 1 area within Britain. This rating is based upon indicators which would place the area on an equal footing, for receiving structural funds, with the poorest areas of Italy and Greece, considered third world status.

<sup>35</sup> At the time of writing, the most extensive survey of public sector initiatives ever carried out in the area, was about to be completed for the DOE (Robson et al forthcoming).

also provided an insight into the wider aspects of urban regeneration. The problems surrounding regeneration on Merseyside are enormous and this study has argued that they have been reinforced, rather than alleviated, by the role of producer services.

## **Appendices For Chapter Five**

Appendix 5i.....	Questionnaire
Appendix 5ii.....	Cover Letter for Questionnaire
Appendix 5iii.....	General Relocation Factors for Firms
Appendix 5iv.....	Detailed Relocation Factors for Firms
Appendix 5v.....	Factors of Non Relocation
Appendix 5vi.....	Detailed Employee Structure of Firms
Appendix 5vii.....	Change in Employment Categories, 1981-1989
Appendix 5viii.....	Sectoral Distribution of Firm Business
Appendix 5ix.....	Cross tabulation - Subcontracted Firms and Location
Appendix 5x.....	Cross tabulation - External Services and Location
Appendix 5xi.....	Cross tabulation - Founder Education and Firm Type



**Appendix 5i**

THE UNIVERSITY OF LIVERPOOL

DEPARTMENT OF GEOGRAPHY



CENTRE FOR URBAN STUDIES

SURVEY OF SERVICE FIRMS ON MERSEYSIDE

UNLESS OTHERWISE INDICATED, ALL QUESTIONS REFER TO THESE PREMISES ONLY. PLEASE WRITE OR TICK, AS APPROPRIATE, IN THE SPACE PROVIDED.

1/ GENERAL INFORMATION

1.1 Name and status of the person completing the questionnaire:

Name: \_\_\_\_\_ Status: \_\_\_\_\_

1.2(a) Name of firm: \_\_\_\_\_

(b) Address: \_\_\_\_\_

Post Code: \_\_\_\_\_

(c) Please state the principle service offered by this firm:

1.3 Date of establishment: Month: \_\_\_\_\_ Year: \_\_\_\_\_

1.4 Telephone number: \_\_\_\_\_

1.5 Is it a single office firm? YES  NO  If NO please go to question 1.7

1.6 If YES is the firm (a) Fully independent?

(b) Owned partially by another firm?

(c) Fully owned by another firm?

1.7 What is the status of this office? (Please indicate geographical location, by stating region).

(a) Branch office; (i) if so where is head office? \_\_\_\_\_

(b) Regional office; If so where is (i) head office? \_\_\_\_\_

(ii) branch office(s)? \_\_\_\_\_

(c) Head office with other branches; (i) if so where are branches located? \_\_\_\_\_

(d) Other status (please specify) \_\_\_\_\_

2/ LOCATION AND PREMISES

2.1(a) Has the firm relocated since 1981?

NO  (Go to section 2.6) YES

(b) If YES, when did the firm move into these premises? Year \_\_\_\_\_ Month \_\_\_\_\_

2.2 Please indicate previous address: Street \_\_\_\_\_

City/Town \_\_\_\_\_

Region \_\_\_\_\_

2.3 Please indicate the cause for your relocation, tick more than one box if applicable.

a) relocation of entire firm  d) result of merger or acquisition

b) new branch of firm  e) rationalisation of premises used

c) relocation of branch  f) other, please specify \_\_\_\_\_

2.4 Please indicate using the table below, the three most important factors and the three least important factors in your decision to move from your previous premises to your present location (Rank 1-3 as most important and 4-6 as least important).

<u>Factors</u>	
___	Inadequate space for expansion
___	Rising operational costs(ie rents)
___	Employee recruitment problems
___	Client access problems
___	Poor communication links
___	Wage differentials
___	Quality of environment
___	Inadequate parking
___	Lack of financial support
___	Reputation
___	Employee journey to work
___	Lack of business opportunity
___	Others, please specify and rank
___	_____
___	_____
___	_____

2.5 Please indicate on the table below, the three most important factors and the three least important factors in your location decision with reference to a) choice of area; and b) choice of premises (Rank 1-3 as most important and 4-6 as least important).

<u>(a)</u> <u>Choice of area</u>	<u>Factors</u>	<u>(b)</u> <u>Choice of premises</u>
___	Quality of environment	___
___	Client access	___
___	Suitability of premises	___
___	Marketing and Sales	___
___	Employee recruitment	___
___	Operational costs	___
___	Personal contacts	___
___	Communication links	___
___	Wage differentials	___
___	Reputation	___
___	Local Government incentives	___
___	Central Government incentives	___
___	Other, please specify and rank	___
___	_____	___
___	_____	___

PLEASE GO TO SECTION 3

2.6 If this firm has operated from these premises since 1981, please indicate the three most and the three least influential factors that have encouraged you to remain here, with reference to a) area and b) premises (Rank 1-3 as the most influential and 4-6 as least influential).

(a) <u>area</u>	<u>Factors</u>	(b) <u>premises</u>
___	Development assistance	___
___	Client access	___
___	Communication links	___
___	Quality of environment	___
___	Employee journey to work	___
___	Employee recruitment	___
___	Marketing and sales	___
___	Suitability of premises	___
___	Operational costs	___
___	Wage differentials	___
___	Reputation	___
___	Personal contacts	___
___	Local Government incentives	___
___	Central Government incentives	___
___	Others, please specify and rank	___
___	_____	___
___	_____	___

PLEASE GO TO SECTION 3

**3/ EMPLOYMENT**

3.1 How many employees presently work at or from these premises ?

	Full-time		Part-time	
	Male	Female	Male	Female
Directors/Managers				
Administrative				
Professional				
Technical				
Sales				
Marketing				
Secretarial/Clerical				
Government training scheme				
Other				

3.2 Could you please indicate on the table below the numbers of employees in 1981 ( or from date of establishment if after 1981). If this proves difficult, simply indicate any change of employment structure since 1981 by using the signs shown in brackets ( increase + decrease - static 0 ).

	Full-time		Part-time	
	Male	Female	Male	Female
Directors/Managers				
Administrative				
Professional				
Technical				
Sales				
Marketing				
Secretarial/Clerical				
Government training scheme				
Other				

3.3 Does this firm provide training for its employees ? NO  YES

If YES, what form does this training take ?

	INHOUSE	EXTERNAL
Directors/Managers		
Administrative		
Professional		
Technical		
Sales		
Marketing		
Secretarial/Clerical		
Government training scheme		
Other		

#### 4/ TRENDS IN BUSINESS

4.1 Please indicate the trend in the business conducted from these premises between 1981 and 1989.

	Increased	Static	Decreased
Turnover (£ per annum).			
Number of services on offer.			
Number of clients.			
Number of establishments controlled by this firm.			
Sub-contracted work.			

4.2 Please indicate the present destination of the services this firm provides, by the percentage of total revenue generated for the three industrial sectors shown below.

	1981	Present
Primary (agriculture)		
Secondary (manufacturing)		
Tertiary (services)		
	100%	

of total revenue generated, in the table below and underline the specific destination indicated to the right of the table, eg. Liverpool, Eire.

	1981	Present	
Within Merseyside			Wirral Knowsley Sefton Liverpool St Helens
Within British Isles			North North West Scotland Wales Yorkshire&Humberside South West South East E.Anglia E.Midlands W.Midlands N. Ireland Eire
Outside British Isles			Please write destination _____ _____ _____
		100%	

**IF YOU DO NOT EXPORT OUTSIDE THE MERSEYSIDE AREA\*, PLEASE GO TO SECTION 4.5**

\* (ie. Wirral, Knowsley, Sefton, Liverpool, St Helens)

**QUESTIONS 4.4-4.7 TICK MORE THAN ONE BOX IF APPLICABLE**

4.4(i) Please indicate below, the primary motives for extending export markets outside Merseyside.

- |                                       |                          |   |                          |
|---------------------------------------|--------------------------|---|--------------------------|
| a) Inadequate size of local market    | <input type="checkbox"/> | e) Demand from outside Merseyside           | <input type="checkbox"/> |
| b) Firms/founders' discretion         | <input type="checkbox"/> | f) Expanding business as turnover increases | <input type="checkbox"/> |
| c) Head office requirement            | <input type="checkbox"/> | g) Deregulation of external markets         | <input type="checkbox"/> |
| d) Following behaviour of competitors | <input type="checkbox"/> | h) Other, please state _____                |                          |

(ii) Please indicate how the firm has attracted clients from outside the Merseyside area.

- |                                       |                          |                               |                          |
|---------------------------------------|--------------------------|-------------------------------|--------------------------|
| a) Personal contacts (friends/family) | <input type="checkbox"/> | e) Reputation (word of mouth) | <input type="checkbox"/> |
| b) Advertising/Marketing              | <input type="checkbox"/> | f) Sub-contracts              | <input type="checkbox"/> |
| c) Clients moving out of area         | <input type="checkbox"/> | g) Other please state _____   |                          |
| d) Government contracts               | <input type="checkbox"/> |                               |                          |

4.5 Please indicate any factors discouraging the development of a market area beyond Merseyside.

- |                                |                          |                               |                          |
|--------------------------------|--------------------------|-------------------------------|--------------------------|
| a) Unable to obtain permits    | <input type="checkbox"/> | d) Lack of information/advice | <input type="checkbox"/> |
| b) Regulated entry into market | <input type="checkbox"/> | e) Other, please state _____  |                          |
| c) Financial constraints       | <input type="checkbox"/> |                               |                          |

4.6 (i) Does this firm call upon external service firms to help directly with the production/provision of its services? ie sub-contract work out or receive professional advice. NO  go to 4.7 YES

(ii) If YES, please specify the most common firms used, ie lawyers, accountants, advertising etc (since 1981), and the area/region where these are located.

Type of firm	Location

(iii) How were these firms chosen?

- a) Professional lists
- b) Yellow Pages
- c) Personal contacts
- d) Reputation
- e) Professional advice
- f) Other, please state

(iv) Reasons for these contacts?

- a) Necessary as part of trading
- b) Service not available locally
- c) External industrial links
- d) Competitive reasons
- e) Intrafirm contacts
- f) Other, please state

4.7 (i) Does this firm call upon other service firms to help run its own internal affairs? ie lawyers, advertising, catering, security etc. NO  go to section 5 YES

(ii) If YES, please specify the most common firms used since 1981, and their location (area/region).

<u>Type of firm</u>	<u>Location</u>

(iii) How were these firms chosen?

- a) Professional lists
- b) Yellow pages
- c) Personal contacts
- d) Reputation
- e) Professional advice
- f) Other, please state

(iv) Reasons for these contacts?

- a) Necessary as part of trading
- b) Service not available locally
- c) External industrial links
- d) Competitive reasons
- e) Intrafirm contacts
- f) Other, please state

**5/ DETAILS OF FOUNDER/MANAGING DIRECTOR/SENIOR PARTNER**

The questions in this section will be directed at the 'founder', but can be answered by a senior member of staff on behalf of the 'founder' or about themselves if necessary.

5.1 Please specify the area/region where the 'founder' was educated.

- a) University (first degree). \_\_\_\_\_
- b) University (second degree). \_\_\_\_\_
- c) College higher education. \_\_\_\_\_
- d) Professional institutions. \_\_\_\_\_
- e) Polytechnic. \_\_\_\_\_
- f) Other, please state. \_\_\_\_\_

5.2 Please indicate qualification(s) held by the 'founder'.

- a) Bachelors degree
- b) Masters degree
- c) Doctorate
- d) Professional qualification
- e) Less than Bachelors degree
- f) Other, please state \_\_\_\_\_

5.3 Please indicate the location of the 'founders' current place of residence.

- (i) On Merseyside  Please specify area (eg. Formby). \_\_\_\_\_
- (ii) Outside Merseyside  Please specify town/area. \_\_\_\_\_

5.4 Please tick the previous position/employer of 'founder'.

- a) Same industry as an employee
- b) Same occupation within different industry
- c) Other intermediate service industry
- d) Retail
- e) Education
- f) Manufacturing
- g) Government
- h) No previous employment
- i) Other, please state \_\_\_\_\_

5.5 Reasons for establishing business.

- a) Independence
- b) Dissatisfaction with former employment
- c) To fill niche in market
- d) Professional advice
- e) Personal contacts
- f) Other, please state \_\_\_\_\_

5.6 Sources of funding at time of establishment.

- a) Government funding  Please specify scheme \_\_\_\_\_
- b) Bank/Venture capital
- c) Own source/ Family funds
- d) Private investment
- e) Other, please state \_\_\_\_\_

5.7 Sources of funding over the past five years.

- a) Government funding  Please specify scheme \_\_\_\_\_
- b) Bank/Venture capital
- c) Own source/ Family funds
- d) Private Investment
- e) Other, please state \_\_\_\_\_

**6/ CONTACT WITH EDUCATIONAL INSTITUTES**

6.1

(i) Has this firm had any contacts of any kind with educational institutions ?

NO  Please go to section 7 YES

(ii) If YES, please specify the institutions

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6.2 Under what circumstances have these contacts been used ?

- a) Research and development
  - b) Training for employees
  - c) Placement centres
  - d) Sandwich courses
  - e) Use library/Consultancy
  - f) Continuing education
  - g) Other, please state
- \_\_\_\_\_

**7/ USE OF INFORMATION TECHNOLOGY.**

7.1 Please indicate what type(s) of information technology are used within this office. ANSWERS TO 7.1

PLEASE TICK MORE THAN ONE BOX IF APPROPRIATE.

- a) Personal computer/s
  - b) Word processor/s
  - c) Mainframe (access)
  - d) Modems direct to clients
  - e) Facsimile
  - f) Telex
  - g) Local area networks
  - h) Value added networks
  - i) Other, please state
- \_\_\_\_\_

7.2 Please indicate, by ticking one of the below, your estimate of the effect of the technology in this office on employee productivity since 1981.

- a) None
- b) Decrease
- c) Increase

7.3 Please indicate the effect this technology has had since 1981 on the number of people working within this firm.

	Decrease	Static	Increase
(i) Directors/Managers			
Administrative			
Professional			
Technical			
Sales			
Marketing			
Secretarial/Clerical			
Government training scheme			
Other			
(ii)			
Male full-time			
Male part-time			
Female full-time			
Female part-time			

7.4 Do you envisage a future increase in the use of information technology in this firm.

NO  Please go to section 8 YES

7.5 If YES, please indicate below, what effects you anticipate an increase in the use of information technology will have on the number of people working within this firm over the next five years.

	Decrease	Static	Increase
(i) Directors/Managers			
Administrative			
Professional			
Technical			
Sales			
Marketing			
Secretarial			
Government training scheme			
Other			
(ii)			
Male full-time			
Male part-time			
Female full-time			
Female part-time			

**THANK YOU FOR COMPLETING THE QUESTIONNAIRE.**  
**WE LOOK FORWARD TO RECEIVING YOUR RESPONSE.**



Appendix 5ii

P. Garside  
Department of Geography  
The University of Liverpool  
Roxby Building  
PO Box 147  
Liverpool  
L69 3BX

25.9.89

Ref: PG/QR

Dear Sir/Madam,

**Survey of Service Firms on Merseyside.**

During the 1980's, service industries supplying organisations have been the principle growth sector in the British economy. It is now recognised that certain services, notably those which support production, are vital to the effective regeneration of the economies of areas such as Merseyside.

I am therefore inviting service firms on Merseyside to complete a questionnaire (enclosed) which will help us understand the current contribution of these services to the regional economy, their potential for the future and the limitations in existing provision which require attention.

I realise that this is yet another demand on your valuable time, but I hope that you will recognise the more general benefit to the business community on Merseyside derived from detailed studies of this kind. The information compiled on individual firms will be completely confidential and it will not be possible to identify establishments or organisations in the analysis of the results.

If you have any questions about the survey or the enclosed questionnaire, which should be returned to P. Garside (Liverpool University geography department), I can be contacted on 051-794-2851.

Yours faithfully,

P. Garside.

Enc (1).

Appendix 5iii

General Relocation Factors

Factors	Percentage of firms	
	<u>Yes</u>	<u>No</u>
Move entire firm	55.5	44.5
Set up new branch	3	97
Relocation of branch	11.5	88.5
Merger and acquisition	7.5	92.5
Rationalisation	11	89
Other (Lease expired)	48.5	51.5

Relocation Factors1/ Most influential reasons for leaving previous premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
INADEQUATE SPACE	1	126	24.0	63.0	63.0
RISING COSTS	2	17	3.2	8.5	71.5
LACK CLIENT ACCESS	4	12	2.3	6.0	77.5
POOR ENVIRONMENT	7	16	3.1	8.0	85.5
LACK NEW OPPORTUNITY	12	7	1.3	3.5	89.0
EXPIRED LEASE	13	22	4.2	11.0	100.0
	0	324	61.8	Missing	
		-----	-----		
Total		524	100.0	100.0	

Valid cases      200              Missing cases      324

2/ Second most influential reasons for leaving previous premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
INADEQUATE SPACE	1	24	4.6	12.0	12.0
RISING COSTS	2	20	3.8	10.0	22.0
RECRUITMENT PROBLEMS	3	13	2.5	6.5	28.5
LACK CLIENT ACCESS	4	50	9.5	25.0	53.5
POOR COMMUNICATIONS	5	6	1.1	3.0	56.5
WAGE DIFFERENTIALS	6	1	.2	.5	57.0
POOR ENVIRONMENT	7	46	8.8	23.0	80.0
INADEQUATE PARKING	8	11	2.1	5.5	85.5
REPUTATION	10	13	2.5	6.5	92.0
JOURNEY TO WORK	11	1	.2	.5	92.5
LACK NEW OPPORTUNITY	12	2	.4	1.0	93.5
EXPIRED LEASE	13	13	2.5	6.5	100.0
	0	324	61.8	Missing	
		-----	-----		
Total		524	100.0	100.0	

Valid cases      200              Missing cases      324

3/ Third most influential reasons for leaving previous area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
INADEQUATE SPACE	1	5	1.0	2.5	2.5
RISING COSTS	2	12	2.3	6.0	8.5
RECRUITMENT PROBLEMS	3	2	.4	1.0	9.5
LACK CLIENT ACCESS	4	20	3.8	10.0	19.5
POOR COMMUNICATIONS	5	11	2.1	5.5	25.0
WAGE DIFFERENTIALS	6	2	.4	1.0	26.0
POOR ENVIRONMENT	7	27	5.2	13.5	39.5
INADEQUATE PARKING	8	39	7.4	19.5	59.0
NO FINANCIAL SUPPORT	9	5	1.0	2.5	61.5
REPUTATION	10	20	3.8	10.0	71.5
JOURNEY TO WORK	11	2	.4	1.0	72.5
LACK NEW OPPORTUNITY	12	24	4.6	12.0	84.5
EXPIRED LEASE	13	22	4.2	11.0	95.5
PURCHASE PREMISES	14	9	1.7	4.5	100.0
	0	324	61.8	Missing	
		-----	-----		
Total		524	100.0	100.0	

Valid cases      200              Missing cases      324

4/ Least influential reasons for leaving previous area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
INADEQUATE SPACE	1	16	3.1	8.0	8.0
RISING COSTS	2	18	3.4	9.0	17.0
RECRUITMENT PROBLEMS	3	40	7.6	20.0	37.0
LACK CLIENT ACCESS	4	7	1.3	3.5	40.5
POOR COMMUNICATIONS	5	15	2.9	7.5	48.0
WAGE DIFFERENTIALS	6	16	3.1	8.0	56.0
POOR ENVIRONMENT	7	5	1.0	2.5	58.5
INADEQUATE PARKING	8	25	4.8	12.5	71.0
NO FINANCIAL SUPPORT	9	15	2.9	7.5	78.5
REPUTATION	10	13	2.5	6.5	85.0
JOURNEY TO WORK	11	10	1.9	5.0	90.0
LACK NEW OPPORTUNITY	12	20	3.8	10.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

5/ Second least influential reasons for leaving previous premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
INADEQUATE SPACE	1	1	.2	.5	.5
RISING COSTS	2	8	1.5	4.0	4.5
RECRUITMENT PROBLEMS	3	10	1.9	5.0	9.5
LACK CLIENT ACCESS	4	4	.8	2.0	11.5
POOR COMMUNICATIONS	5	17	3.2	8.5	20.0
WAGE DIFFERENTIALS	6	39	7.4	19.5	39.5
POOR ENVIRONMENT	7	8	1.5	4.0	43.5
INADEQUATE PARKING	8	21	4.0	10.5	54.0
NO FINANCIAL SUPPORT	9	30	5.7	15.0	69.0
REPUTATION	10	22	4.2	11.0	80.0
JOURNEY TO WORK	11	22	4.2	11.0	91.0
LACK NEW OPPORTUNITY	12	14	2.7	7.0	98.0
EXPIRED LEASE	13	4	.8	2.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

6/ Third least influential reasons for leaving previous premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
RISING COSTS	2	10	1.9	5.0	5.0
RECRUITMENT PROBLEMS	3	21	4.0	10.5	15.5
LACK CLIENT ACCESS	4	2	.4	1.0	16.5
POOR COMMUNICATIONS	5	6	1.1	3.0	19.5
WAGE DIFFERENTIALS	6	20	3.8	10.0	29.5
POOR ENVIRONMENT	7	8	1.5	4.0	33.5
INADEQUATE PARKING	8	8	1.5	4.0	37.5
NO FINANCIAL SUPPORT	9	10	1.9	5.0	42.5
REPUTATION	10	13	2.5	6.5	49.0
JOURNEY TO WORK	11	49	9.4	24.5	73.5
LACK NEW OPPORTUNITY	12	46	8.8	23.0	96.5
EXPIRED LEASE	13	5	1.0	2.5	99.0
PURCHASE PREMISES	14	2	.4	1.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

7/ Most influential factors in choice of new area for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	72	13.7	36.0	36.0
CLIENT ACCESS	2	57	10.9	28.5	64.5
PREMISES SUITABILITY	3	32	6.1	16.0	80.5
MARKETING AND SALES	4	9	1.7	4.5	85.0
OPERATIONAL COSTS	6	9	1.7	4.5	89.5
PERSONAL CONTACTS	7	4	.8	2.0	91.5
REPUTATION	10	7	1.3	3.5	95.0
EXPANSION	13	10	1.9	5.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

8/ Second most influential factors in choice of new area for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	8	1.5	4.0	4.0
CLIENT ACCESS	2	41	7.8	20.5	24.5
PREMISES SUITABILITY	3	79	15.1	39.5	64.0
MARKETING AND SALES	4	11	2.1	5.5	69.5
EMPLOYEE RECRUITMENT	5	4	.8	2.0	71.5
OPERATIONAL COSTS	6	22	4.2	11.0	82.5
PERSONAL CONTACTS	7	11	2.1	5.5	88.0
COMMUNICATIONS	8	9	1.7	4.5	92.5
REPUTATION	10	4	.8	2.0	94.5
LOCAL GOVERNMENT	11	3	.6	1.5	96.0
EXPANSION	13	4	.8	2.0	98.0
EXPIRED LEASE	14	4	.8	2.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

9/ Third most influential factors in choice of new area for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	3	.6	1.5	1.5
CLIENT ACCESS	2	9	1.7	4.5	6.0
PREMISES SUITABILITY	3	41	7.8	20.5	26.5
MARKETING AND SALES	4	8	1.5	4.0	30.5
EMPLOYEE RECRUITMENT	5	6	1.1	3.0	33.5
OPERATIONAL COSTS	6	32	6.1	16.0	49.5
PERSONAL CONTACTS	7	25	4.8	12.5	62.0
COMMUNICATIONS	8	36	6.9	18.0	80.0
WAGE DIFFERENTIALS	9	4	.8	2.0	82.0
REPUTATION	10	27	5.2	13.5	95.5
LOCAL GOVERNMENT	11	2	.4	1.0	96.5
CENTRAL GOVERNMENT	12	3	.6	1.5	98.0
EXPANSION	13	2	.4	1.0	99.0
EXPIRED LEASE	14	2	.4	1.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

10/ The least important factors in choice of new area for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	22	4.2	11.0	11.0
CLIENT ACCESS	2	9	1.7	4.5	15.5
PREMISES SUITABILITY	3	2	.4	1.0	16.5
MARKETING AND SALES	4	17	3.2	8.5	25.0
EMPLOYEE RECRUITMENT	5	28	5.3	14.0	39.0
PERSONAL CONTACTS	7	8	1.5	4.0	43.0
COMMUNICATIONS	8	14	2.7	7.0	50.0
WAGE DIFFERENTIALS	9	84	16.0	42.0	92.0
REPUTATION	10	14	2.7	7.0	99.0
LOCAL GOVERNMENT	11	2	.4	1.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	

Valid cases 200 Missing cases 324

11/ The second least important factors in choice of new area for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	2	.4	1.0	1.0
MARKETING AND SALES	4	9	1.7	4.5	5.5
EMPLOYEE RECRUITMENT	5	22	4.2	11.0	16.5
OPERATIONAL COSTS	6	2	.4	1.0	17.5
PERSONAL CONTACTS	7	13	2.5	6.5	24.0
COMMUNICATIONS	8	7	1.3	3.5	27.5
WAGE DIFFERENTIALS	9	10	1.9	5.0	32.5
REPUTATION	10	8	1.5	4.0	36.5
LOCAL GOVERNMENT	11	123	23.5	61.5	98.0
CENTRAL GOVERNMENT	12	4	.8	2.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	

Valid cases 200 Missing cases 324

12/ The third least important factors in choice of new area for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	2	.4	1.0	1.0
CLIENT ACCESS	2	4	.8	2.0	3.0
MARKETING AND SALES	4	2	.4	1.0	4.0
EMPLOYEE RECRUITMENT	5	7	1.3	3.5	7.5
PERSONAL CONTACTS	7	10	1.9	5.0	12.5
COMMUNICATIONS	8	7	1.3	3.5	16.0
WAGE DIFFERENTIALS	9	15	2.9	7.5	23.5
REPUTATION	10	18	3.4	9.0	32.5
CENTRAL GOVERNMENT	12	133	25.4	66.5	99.0
EXPANSION	13	2	.4	1.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	

Valid cases 200 Missing cases 324

13/ The most important factors in choice of new premises for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	66	12.6	33.0	33.0
CLIENT ACCESS	2	47	9.0	23.5	56.5
PREMISES SUITABILITY	3	53	10.1	26.5	83.0
MARKETING AND SALES	4	7	1.3	3.5	86.5
OPERATIONAL COSTS	6	14	2.7	7.0	93.5
PERSONAL CONTACTS	7	6	1.1	3.0	96.5
REPUTATION	10	2	.4	1.0	97.5
LOCAL GOVERNMENT	11	3	.6	1.5	99.0
EXPANSION	13	2	.4	1.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

14/ The second most important factors in choice of new premises for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	8	1.5	4.0	4.0
CLIENT ACCESS	2	49	9.4	24.5	28.5
PREMISES SUITABILITY	3	74	14.1	37.0	65.5
MARKETING AND SALES	4	3	.6	1.5	67.0
EMPLOYEE RECRUITMENT	5	4	.8	2.0	69.0
OPERATIONAL COSTS	6	31	5.9	15.5	84.5
PERSONAL CONTACTS	7	14	2.7	7.0	91.5
COMMUNICATIONS	8	6	1.1	3.0	94.5
CENTRAL GOVERNMENT	12	5	1.0	2.5	97.0
EXPANSION	13	6	1.1	3.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

15/ The third most important factors in choice of new premises for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	9	1.7	4.5	4.5
CLIENT ACCESS	2	8	1.5	4.0	8.5
PREMISES SUITABILITY	3	58	11.1	29.0	37.5
MARKETING AND SALES	4	8	1.5	4.0	41.5
EMPLOYEE RECRUITMENT	5	4	.8	2.0	43.5
OPERATIONAL COSTS	6	37	7.1	18.5	62.0
PERSONAL CONTACTS	7	9	1.7	4.5	66.5
COMMUNICATIONS	8	22	4.2	11.0	77.5
REPUTATION	10	29	5.5	14.5	92.0
LOCAL GOVERNMENT	11	8	1.5	4.0	96.0
EXPANSION	13	6	1.1	3.0	99.0
EXPIRED LEASE	14	2	.4	1.0	100.0
	0	324	61.8	Missing	
Total		524	100.0	100.0	
Valid cases	200	Missing cases	324		

16/ The least influential factors in choice of new premises for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
ENVIRONMENT QUALITY	1	28	5.3	14.0	14.0
CLIENT ACCESS	2	8	1.5	4.0	18.0
MARKETING AND SALES	4	12	2.3	6.0	24.0
EMPLOYEE RECRUITMENT	5	27	5.2	13.5	37.5
PERSONAL CONTACTS	7	6	1.1	3.0	40.5
COMMUNICATIONS	8	13	2.5	6.5	47.0
WAGE DIFFERENTIALS	9	80	15.3	40.0	87.0
REPUTATION	10	20	3.8	10.0	97.0
LOCAL GOVERNMENT	11	2	.4	1.0	98.0
CENTRAL GOVERNMENT	12	4	.8	2.0	100.0
	0	324	61.8	Missing	
	Total	524	100.0	100.0	

Valid cases 200      Missing cases 324

17/ The second influential factors in choice of new premises for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
CLIENT ACCESS	2	7	1.3	3.5	3.5
MARKETING AND SALES	4	13	2.5	6.5	10.0
EMPLOYEE RECRUITMENT	5	2	.4	1.0	11.0
OPERATIONAL COSTS	6	12	2.3	6.0	17.0
PERSONAL CONTACTS	7	10	1.9	5.0	22.0
COMMUNICATIONS	8	9	1.7	4.5	26.5
WAGE DIFFERENTIALS	9	8	1.5	4.0	30.5
REPUTATION	10	6	1.1	3.0	33.5
LOCAL GOVERNMENT	11	131	25.0	65.5	99.0
CENTRAL GOVERNMENT	12	2	.4	1.0	100.0
	0	324	61.8	Missing	
	Total	524	100.0	100.0	

Valid cases 200      Missing cases 324

18/ The third least influential factors in choice of new premises for relocation

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
CLIENT ACCESS	2	4	.8	2.0	2.0
PREMISES SUITABILITY	3	2	.4	1.0	3.0
MARKETING AND SALES	4	6	1.1	3.0	6.0
EMPLOYEE RECRUITMENT	5	10	1.9	5.0	11.0
COMMUNICATIONS	8	2	.4	1.0	12.0
WAGE DIFFERENTIALS	9	13	2.5	6.5	18.5
REPUTATION	10	20	3.8	10.0	28.5
LOCAL GOVERNMENT	11	6	1.1	3.0	31.5
CENTRAL GOVERNMENT	12	137	26.1	68.5	100.0
	0	324	61.8	Missing	
	Total	524	100.0	100.0	

Valid cases 200      Missing cases 324



Appendix 5v Factors Influencing the Non Relocation of Firms

1/ The most influential factors encouraging firms to remain in the same area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	10	1.9	3.1	3.1
CLIENT ACCESS	2	176	33.6	54.3	57.4
COMMUNICATIONS	3	29	5.5	9.0	66.4
ENVIRONMENT QUALITY	4	21	4.0	6.5	72.8
JOURNEY TO WORK	5	5	1.0	1.5	74.4
EMPLOYEE RECRUITMENT	6	6	1.1	1.9	76.2
MARKETING AND SALES	7	16	3.1	4.9	81.2
PREMISES SUITABILITY	8	19	3.6	5.9	87.0
OPERATIONAL COSTS	9	9	1.7	2.8	89.8
REPUTATION	11	12	2.3	3.7	93.5
PERSONAL CONTACTS	12	11	2.1	3.4	96.9
LOYALTY	15	8	1.5	2.5	99.4
CONVENIENCE	16	2	.4	.6	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

2/ The second most influential factors encouraging firms to remain in the same area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
CLIENT ACCESS	2	29	5.5	9.0	9.0
COMMUNICATIONS	3	86	16.4	26.5	35.5
ENVIRONMENT QUALITY	4	43	8.2	13.3	48.8
JOURNEY TO WORK	5	36	6.9	11.1	59.9
EMPLOYEE RECRUITMENT	6	4	.8	1.2	61.1
MARKETING AND SALES	7	21	4.0	6.5	67.6
PREMISES SUITABILITY	8	51	9.7	15.7	83.3
OPERATIONAL COSTS	9	22	4.2	6.8	90.1
WAGE DIFFERENTIALS	10	3	.6	.9	91.0
REPUTATION	11	13	2.5	4.0	95.1
PERSONAL CONTACTS	12	12	2.3	3.7	98.8
LOYALTY	15	4	.8	1.2	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

3/ The third most influential factors encouraging firms to remain in the same area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	2	.4	.6	.6
CLIENT ACCESS	2	21	4.0	6.5	7.1
COMMUNICATIONS	3	14	2.7	4.3	11.4
ENVIRONMENT QUALITY	4	20	3.8	6.2	17.6
JOURNEY TO WORK	5	20	3.8	6.2	23.8
EMPLOYEE RECRUITMENT	6	10	1.9	3.1	26.9
MARKETING AND SALES	7	29	5.5	9.0	35.8
PREMISES SUITABILITY	8	58	11.1	17.9	53.7
OPERATIONAL COSTS	9	50	9.5	15.4	69.1
WAGE DIFFERENTIALS	10	4	.8	1.2	70.4
REPUTATION	11	38	7.3	11.7	82.1
PERSONAL CONTACTS	12	42	8.0	13.0	95.1
LOCAL GOVERNMENT	13	2	.4	.6	95.7
CENTRAL GOVERNMENT	14	2	.4	.6	96.3
LOYALTY	15	8	1.5	2.5	98.8
CONVENIENCE	16	4	.8	1.2	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

4/ The least influential factors encouraging firms to remain in the same area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	237	45.2	73.1	73.1
CLIENT ACCESS	2	7	1.3	2.2	75.3
COMMUNICATIONS	3	6	1.1	1.9	77.2
ENVIRONMENT QUALITY	4	14	2.7	4.3	81.5
JOURNEY TO WORK	5	10	1.9	3.1	84.6
EMPLOYEE RECRUITMENT	6	6	1.1	1.9	86.4
MARKETING AND SALES	7	2	.4	.6	87.0
PREMISES SUITABILITY	8	2	.4	.6	87.7
WAGE DIFFERENTIALS	10	18	3.4	5.6	93.2
REPUTATION	11	8	1.5	2.5	95.7
PERSONAL CONTACTS	12	7	1.3	2.2	97.8
LOCAL GOVERNMENT	13	3	.6	.9	98.8
CENTRAL GOVERNMENT	14	4	.8	1.2	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

5/ The second least influential factors encouraging firms to remain in the same area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	1	.2	.3	.3
ENVIRONMENT QUALITY	4	2	.4	.6	.9
JOURNEY TO WORK	5	6	1.1	1.9	2.8
EMPLOYEE RECRUITMENT	6	16	3.1	4.9	7.7
MARKETING AND SALES	7	6	1.1	1.9	9.6
PREMISES SUITABILITY	8	8	1.5	2.5	12.0
OPERATIONAL COSTS	9	7	1.3	2.2	14.2
WAGE DIFFERENTIALS	10	5	1.0	1.5	15.7
REPUTATION	11	10	1.9	3.1	18.8
LOCAL GOVERNMENT	13	257	49.0	79.3	98.1
CENTRAL GOVERNMENT	14	6	1.1	1.9	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

6/ The third least influential factors encouraging firms to remain in the same area

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	3	.6	.9	.9
CLIENT ACCESS	2	5	1.0	1.5	2.5
ENVIRONMENT QUALITY	4	6	1.1	1.9	4.3
EMPLOYEE RECRUITMENT	6	4	.8	1.2	5.6
OPERATIONAL COSTS	9	10	1.9	3.1	8.6
WAGE DIFFERENTIALS	10	7	1.3	2.2	10.8
REPUTATION	11	4	.8	1.2	12.0
PERSONAL CONTACTS	12	8	1.5	2.5	14.5
LOCAL GOVERNMENT	13	18	3.4	5.6	20.1
CENTRAL GOVERNMENT	14	259	49.4	79.9	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

7/ The most influential factors encouraging firms to remain in the same premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	14	2.7	4.3	4.3
CLIENT ACCESS	2	139	26.5	42.9	47.2
COMMUNICATIONS	3	39	7.4	12.0	59.3
ENVIRONMENT QUALITY	4	22	4.2	6.8	66.0
JOURNEY TO WORK	5	7	1.3	2.2	68.2
EMPLOYEE RECRUITMENT	6	8	1.5	2.5	70.7
MARKETING AND SALES	7	11	2.1	3.4	74.1
PREMISES SUITABILITY	8	50	9.5	15.4	89.5
OPERATIONAL COSTS	9	10	1.9	3.1	92.6
REPUTATION	11	8	1.5	2.5	95.1
PERSONAL CONTACTS	12	6	1.1	1.9	96.9
LOYALTY	15	8	1.5	2.5	99.4
CONVENIENCE	16	2	.4	.6	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

8/ The second most influential factors encouraging firms to remain in the same premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
CLIENT ACCESS	2	25	4.8	7.7	7.7
COMMUNICATIONS	3	56	10.7	17.3	25.0
ENVIRONMENT QUALITY	4	38	7.3	11.7	36.7
JOURNEY TO WORK	5	34	6.5	10.5	47.2
EMPLOYEE RECRUITMENT	6	7	1.3	2.2	49.4
MARKETING AND SALES	7	21	4.0	6.5	55.9
PREMISES SUITABILITY	8	84	16.0	25.9	81.8
OPERATIONAL COSTS	9	35	6.7	10.8	92.6
WAGE DIFFERENTIALS	10	3	.6	.9	93.5
REPUTATION	11	13	2.5	4.0	97.5
PERSONAL CONTACTS	12	4	.8	1.2	98.8
LOYALTY	15	2	.4	.6	99.4
CONVENIENCE	16	2	.4	.6	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

9/ The third most influential factors encouraging firms to remain in the same premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
CLIENT ACCESS	2	29	5.5	9.0	9.0
COMMUNICATIONS	3	20	3.8	6.2	15.1
ENVIRONMENT QUALITY	4	13	2.5	4.0	19.1
JOURNEY TO WORK	5	20	3.8	6.2	25.3
EMPLOYEE RECRUITMENT	6	2	.4	.6	25.9
MARKETING AND SALES	7	15	2.9	4.6	30.6
PREMISES SUITABILITY	8	95	18.1	29.3	59.9
OPERATIONAL COSTS	9	58	11.1	17.9	77.8
WAGE DIFFERENTIALS	10	5	1.0	1.5	79.3
REPUTATION	11	31	5.9	9.6	88.9
PERSONAL CONTACTS	12	20	3.8	6.2	95.1
CENTRAL GOVERNMENT	14	2	.4	.6	95.7
LOYALTY	15	12	2.3	3.7	99.4
CONVENIENCE	16	2	.4	.6	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

10/ The least influential factors encouraging firms to remain in the same premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	239	45.6	73.8	73.8
CLIENT ACCESS	2	8	1.5	2.5	76.2
COMMUNICATIONS	3	4	.8	1.2	77.5
ENVIRONMENT QUALITY	4	17	3.2	5.2	82.7
JOURNEY TO WORK	5	6	1.1	1.9	84.6
EMPLOYEE RECRUITMENT	6	8	1.5	2.5	87.0
MARKETING AND SALES	7	5	1.0	1.5	88.6
PREMISES SUITABILITY	8	7	1.3	2.2	90.7
OPERATIONAL COSTS	9	10	1.9	3.1	93.8
WAGE DIFFERENTIALS	10	13	2.5	4.0	97.8
LOCAL GOVERNMENT	13	3	.6	.9	98.8
CENTRAL GOVERNMENT	14	4	.8	1.2	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

11/ The second least influential factors encouraging firms to remain in the same premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	4	.8	1.2	1.2
CLIENT ACCESS	2	2	.4	.6	1.9
ENVIRONMENT QUALITY	4	4	.8	1.2	3.1
JOURNEY TO WORK	5	6	1.1	1.9	4.9
EMPLOYEE RECRUITMENT	6	12	2.3	3.7	8.6
MARKETING AND SALES	7	12	2.3	3.7	12.3
PREMISES SUITABILITY	8	4	.8	1.2	13.6
OPERATIONAL COSTS	9	9	1.7	2.8	16.4
WAGE DIFFERENTIALS	10	6	1.1	1.9	18.2
REPUTATION	11	2	.4	.6	18.8
PERSONAL CONTACTS	12	2	.4	.6	19.4
LOCAL GOVERNMENT	13	258	49.2	79.6	99.1
CENTRAL GOVERNMENT	14	3	.6	.9	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

12/ The third least influential factors encouraging firms to remain in the same premises

Value Label	Value	No. Firms	Percent	Valid Percent	Cum Percent
DEVELOPMENT AID	1	3	.6	.9	.9
CLIENT ACCESS	2	6	1.1	1.9	2.8
COMMUNICATIONS	3	11	2.1	3.4	6.2
OPERATIONAL COSTS	9	2	.4	.6	6.8
WAGE DIFFERENTIALS	10	9	1.7	2.8	9.6
REPUTATION	11	6	1.1	1.9	11.4
PERSONAL CONTACTS	12	12	2.3	3.7	15.1
LOCAL GOVERNMENT	13	16	3.1	4.9	20.1
CENTRAL GOVERNMENT	14	259	49.4	79.9	100.0
	0	200	38.2	Missing	
Total		524	100.0	100.0	

Valid cases 324 Missing cases 200

Employee Structures of Firms  
(The Frequency of Firms Employing  
Specific Numbers in All Employment Categories)

Male Managers Full Time	Employees	Firms	Percent	Valid Percent	Cum Percent
	1	237	45.2	48.1	48.1
	2	163	31.1	33.1	81.1
	3	61	11.6	12.4	93.5
	4	17	3.2	3.4	97.0
	5	7	1.3	1.4	98.4
	6	3	.6	.6	99.0
	7	2	.4	.4	99.4
	9	1	.2	.2	99.6
	11	1	.2	.2	99.8
	13	1	.2	.2	100.0
	0	31	5.9	Missing	
	Total	524	100.0	100.0	
Valid cases	493	Missing cases	31		
Female Managers Full Time	Employees	Firms	Percent	Valid Percent	Cum Percent
	1	91	17.4	84.3	84.3
	2	12	2.3	11.1	95.4
	3	5	1.0	4.6	100.0
	0	416	79.4	Missing	
	Total	524	100.0	100.0	
Valid cases	108	Missing cases	416		
Male Managers Part Time	Employees	Firms	Percent	Valid Percent	Cum Percent
	1	16	3.1	94.1	94.1
	2	1	.2	5.9	100.0
	0	507	96.8	Missing	
	Total	524	100.0	100.0	
Valid cases	17	Missing cases	507		
Female Managers Part Time	Employees	Firms	Percent	Valid Percent	Cum Percent
	1	20	3.8	87.0	87.0
	3	3	.6	13.0	100.0
	0	501	95.6	Missing	
	Total	524	100.0	100.0	
Valid cases	23	Missing cases	501		
Male Administrative Full Time	Employees	Firms	Percent	Valid Percent	Cum Percent
	1	54	10.3	46.2	46.2
	2	35	6.7	29.9	76.1
	3	13	2.5	11.1	87.2
	4	7	1.3	6.0	93.2
	5	3	.6	2.6	95.7
	8	1	.2	.9	96.6
	9	2	.4	1.7	98.3
	13	1	.2	.9	99.1
	19	1	.2	.9	100.0
	0	407	77.7	Missing	
	Total	524	100.0	100.0	
Valid cases	117	Missing cases	407		

**Female Administrative Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		88	16.8	43.6	43.6
2		58	11.1	28.7	72.3
3		25	4.8	12.4	84.7
4		15	2.9	7.4	92.1
5		7	1.3	3.5	95.5
6		2	.4	1.0	96.5
9		3	.6	1.5	98.0
10		1	.2	.5	98.5
11		1	.2	.5	99.0
15		2	.4	1.0	100.0
0		322	61.5	Missing	
Total		524	100.0	100.0	
Valid cases	202	Missing cases	322		

**Male Administrative Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		8	1.5	88.9	88.9
5		1	.2	11.1	100.0
0		515	98.3	Missing	
Total		524	100.0	100.0	
Valid cases	9	Missing cases	515		

**Female Administrative Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		41	7.8	63.1	63.1
2		13	2.5	20.0	83.1
3		5	1.0	7.7	90.8
4		3	.6	4.6	95.4
5		3	.6	4.6	100.0
0		459	87.6	Missing	
Total		524	100.0	100.0	
Valid cases	65	Missing cases	459		

**Male Professional Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		55	10.5	28.2	28.2
2		58	11.1	29.7	57.9
3		13	2.5	6.7	64.6
4		14	2.7	7.2	71.8
5		10	1.9	5.1	76.9
6		18	3.4	9.2	86.2
7		11	2.1	5.6	91.8
8		3	.6	1.5	93.3
9		3	.6	1.5	94.9
10		2	.4	1.0	95.9
11		1	.2	.5	96.4
12		4	.8	2.1	98.5
13		1	.2	.5	99.0
14		1	.2	.5	99.5
17		1	.2	.5	100.0
0		329	62.8	Missing	
Total		524	100.0	100.0	
Valid cases	195	Missing cases	329		

**Female Professional Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	38		7.3	40.4	40.4
2	24		4.6	25.5	66.0
3	12		2.3	12.8	78.7
4	8		1.5	8.5	87.2
5	6		1.1	6.4	93.6
9	6		1.1	6.4	100.0
0	430		82.1	Missing	
<b>Total</b>	<b>524</b>		<b>100.0</b>	<b>100.0</b>	

Valid cases 94 Missing cases 430

**Male Professional Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	14		2.7	87.5	87.5
4	2		.4	12.5	100.0
0	508		96.9	Missing	
<b>Total</b>	<b>524</b>		<b>100.0</b>	<b>100.0</b>	

Valid cases 16 Missing cases 508

**Female Professional Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	15		2.9	68.2	68.2
2	1		.2	4.5	72.7
3	6		1.1	27.3	100.0
0	502		95.8	Missing	
<b>Total</b>	<b>524</b>		<b>100.0</b>	<b>100.0</b>	

Valid cases 22 Missing cases 502

**Male Technical Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	36		6.9	21.1	21.1
2	54		10.3	31.6	52.6
3	31		5.9	18.1	70.8
4	9		1.7	5.3	76.0
5	16		3.1	9.4	85.4
6	12		2.3	7.0	92.4
7	5		1.0	2.9	95.3
8	3		.6	1.8	97.1
9	2		.4	1.2	98.2
10	1		.2	.6	98.8
11	1		.2	.6	99.4
13	1		.2	.6	100.0
0	353		67.4	Missing	
<b>Total</b>	<b>524</b>		<b>100.0</b>	<b>100.0</b>	

Valid cases 171 Missing cases 353

**Female Technical Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	22		4.2	44.9	44.9
2	13		2.5	26.5	71.4
3	1		.2	2.0	73.5
4	4		.8	8.2	81.6
5	1		.2	2.0	83.7
6	2		.4	4.1	87.8
7	2		.4	4.1	91.8
8	2		.4	4.1	95.9
12	2		.4	4.1	100.0
0	475		90.6	Missing	
<b>Total</b>	<b>524</b>		<b>100.0</b>	<b>100.0</b>	

Valid cases 49 Missing cases 475

**Male Technical Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		4	.8	40.0	40.0
2		6	1.1	60.0	100.0
0		514	98.1	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 10      Missing cases 514

**Female Technical Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		13	2.5	44.8	44.8
2		14	2.7	48.3	93.1
4		2	.4	6.9	100.0
0		495	94.5	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 29      Missing cases 495

**Male Sales Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		49	9.4	38.9	38.9
2		35	6.7	27.8	66.7
3		23	4.4	18.3	84.9
4		9	1.7	7.1	92.1
5		6	1.1	4.8	96.8
7		1	.2	.8	97.6
10		2	.4	1.6	99.2
20		1	.2	.8	100.0
0		398	76.0	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 126      Missing cases 398

**Female Sales Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		21	4.0	30.9	30.9
2		16	3.1	23.5	54.4
3		14	2.7	20.6	75.0
4		8	1.5	11.8	86.8
5		6	1.1	8.8	95.6
6		2	.4	2.9	98.5
12		1	.2	1.5	100.0
0		456	87.0	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 68      Missing cases 456

**Males Sales Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
2		2	.4	50.0	50.0
5		1	.2	25.0	75.0
8		1	.2	25.0	100.0
0		520	99.2	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 4      Missing cases 520



**Female Sales Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		9	1.7	36.0	36.0
2		5	1.0	20.0	56.0
3		7	1.3	28.0	84.0
5		2	.4	8.0	92.0
6		1	.2	4.0	96.0
15		1	.2	4.0	100.0
0		499	95.2	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 25 Missing cases 499

**Male Marketing Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		28	5.3	65.1	65.1
2		9	1.7	20.9	86.0
3		5	1.0	11.6	97.7
5		1	.2	2.3	100.0
0		481	91.8	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 43 Missing cases 481

**Female Marketing Full Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		11	2.1	57.9	57.9
2		2	.4	10.5	68.4
3		4	.8	21.1	89.5
9		2	.4	10.5	100.0
0		505	96.4	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 19 Missing cases 505

**Male Marketing Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		2	.4	100.0	100.0
0		522	99.6	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 2 Missing cases 522

**Female Marketing Part Time**

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		2	.4	50.0	50.0
3		2	.4	50.0	100.0
0		520	99.2	Missing	
<b>Total</b>		<b>524</b>	<b>100.0</b>	<b>100.0</b>	

Valid cases 4 Missing cases 520

Male Secretarial Full Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		20	3.8	26.3	26.3
2		20	3.8	26.3	52.6
3		6	1.1	7.9	60.5
4		12	2.3	15.8	76.3
5		2	.4	2.6	78.9
6		6	1.1	7.9	86.8
8		3	.6	3.9	90.8
10		1	.2	1.3	92.1
12		1	.2	1.3	93.4
16		1	.2	1.3	94.7
23		2	.4	2.6	97.4
30		1	.2	1.3	98.7
41		1	.2	1.3	100.0
0		448	85.5	Missing	
Total		524	100.0	100.0	

Valid cases 76 Missing cases 448

Female Secretarial Full Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		102	19.5	34.9	34.9
2		65	12.4	22.3	57.2
3		48	9.2	16.4	73.6
4		25	4.8	8.6	82.2
5		12	2.3	4.1	86.3
6		6	1.1	2.1	88.4
7		1	.2	.3	88.7
8		4	.8	1.4	90.1
9		5	1.0	1.7	91.8
10		4	.8	1.4	93.2
12		4	.8	1.4	94.5
13		1	.2	.3	94.9
14		1	.2	.3	95.2
15		1	.2	.3	95.5
16		2	.4	.7	96.2
18		4	.8	1.4	97.6
23		2	.4	.7	98.3
24		1	.2	.3	98.6
34		1	.2	.3	99.0
38		1	.2	.3	99.3
47		1	.2	.3	99.7
49		1	.2	.3	100.0
0		232	44.3	Missing	
Total		524	100.0	100.0	

Valid cases 292 Missing cases 232

Male Secretarial Part Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		2	.4	50.0	50.0
4		2	.4	50.0	100.0
0		520	99.2	Missing	
Total		524	100.0	100.0	

Valid cases 4 Missing cases 520

Female Secretarial Part Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		84	16.0	51.9	51.9
2		40	7.6	24.7	76.5
3		17	3.2	10.5	87.0
4		12	2.3	7.4	94.4
5		3	.6	1.9	96.3
7		1	.2	.6	96.9
8		4	.8	2.5	99.4
10		1	.2	.6	100.0
0		362	69.1	Missing	
Total		524	100.0	100.0	

Valid cases 162 Missing cases 362

Male Government Full Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		43	8.2	62.3	62.3
2		21	4.0	30.4	92.8
3		3	.6	4.3	97.1
6		1	.2	1.4	98.6
10		1	.2	1.4	100.0
0		455	86.8	Missing	
Total		524	100.0	100.0	

Valid cases 69 Missing cases 455

Female Government Full Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		44	8.4	80.0	80.0
2		9	1.7	16.4	96.4
7		2	.4	3.6	100.0
0		469	89.5	Missing	
Total		524	100.0	100.0	

Valid cases 55 Missing cases 469

Male Government Part Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		2	.4	50.0	50.0
6		2	.4	50.0	100.0
0		520	99.2	Missing	
Total		524	100.0	100.0	

Valid cases 4 Missing cases 520

Female Government Part Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		2	.4	100.0	100.0
0		522	99.6	Missing	
Total		524	100.0	100.0	

Valid cases 2 Missing cases 522

Male Other Full Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1		21	4.0	17.2	17.2
2		21	4.0	17.2	34.4
3		5	1.0	4.1	38.5
4		2	.4	1.6	40.2
5		12	2.3	9.8	50.0
6		3	.6	2.5	52.5
7		13	2.5	10.7	63.1
8		2	.4	1.6	64.8
9		4	.8	3.3	68.0
10		4	.8	3.3	71.3
11		4	.8	3.3	74.6
12		3	.6	2.5	77.0
14		3	.6	2.5	79.5
15		7	1.3	5.7	85.2
16		3	.6	2.5	87.7
18		1	.2	.8	88.5
19		2	.4	1.6	90.2
20		1	.2	.8	91.0
21		1	.2	.8	91.8
24		1	.2	.8	92.6
27		2	.4	1.6	94.3
30		1	.2	.8	95.1
34		1	.2	.8	95.9
36		2	.4	1.6	97.5
45		1	.2	.8	98.4
53		1	.2	.8	99.2
55		1	.2	.8	100.0
0		402	76.7	Missing	
Total		524	100.0	100.0	

Valid cases 122 Missing cases 402

Female Other Full Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	11		2.1	57.9	57.9
2	5		1.0	26.3	84.2
5	1		.2	5.3	89.5
6	1		.2	5.3	94.7
12	1		.2	5.3	100.0
0	505		96.4	Missing	
-----					
Total	524		100.0	100.0	

Valid cases 19 Missing cases 505

Male Other Part Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	19		3.6	54.3	54.3
2	8		1.5	22.9	77.1
4	2		.4	5.7	82.9
5	1		.2	2.9	85.7
9	1		.2	2.9	88.6
10	2		.4	5.7	94.3
12	1		.2	2.9	97.1
15	1		.2	2.9	100.0
0	489		93.3	Missing	
-----					
Total	524		100.0	100.0	

Valid cases 35 Missing cases 489

Female Other Part Time

	Employees	Firms	Percent	Valid Percent	Cum Percent
1	39		7.4	73.6	73.6
2	7		1.3	13.2	86.8
3	1		.2	1.9	88.7
5	2		.4	3.8	92.5
8	1		.2	1.9	94.3
9	2		.4	3.8	98.1
30	1		.2	1.9	100.0
0	471		89.9	Missing	
-----					
Total	524		100.0	100.0	

Valid cases 53 Missing cases 471

Change in Employment Categories, 1981-1989**Change in Male Managers Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	128	24.4	25.9	25.9
	Decrease	55	10.5	11.1	37.0
	Static	311	59.4	63.0	100.0
	0	30	5.7	Missing	
	Total	524	100.0	100.0	
Valid cases	494	Missing cases	30		

**Change in Female Managers Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	39	7.4	30.0	30.0
	Decrease	12	2.3	9.2	39.2
	Static	79	15.1	60.8	100.0
	0	394	75.2	Missing	
	Total	524	100.0	100.0	
Valid cases	130	Missing cases	394		

**Change in Male Administrative Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	90	17.2	60.0	60.0
	Decrease	33	6.3	22.0	82.0
	Static	27	5.2	18.0	100.0
	0	374	71.4	Missing	
	Total	524	100.0	100.0	
Valid cases	150	Missing cases	374		

**Change in Female Administrative Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	120	22.9	56.1	56.1
	Decrease	14	2.7	6.5	62.6
	Static	80	15.3	37.4	100.0
	0	310	59.2	Missing	
	Total	524	100.0	100.0	
Valid cases	214	Missing cases	310		

**Change in Male Professional Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	118	22.5	59.6	59.6
	Decrease	29	5.5	14.6	74.2
	Static	51	9.7	25.8	100.0
	0	326	62.2	Missing	
	Total	524	100.0	100.0	
Valid cases	198	Missing cases	326		

**Change in Female Professional Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	53	10.1	59.6	59.6
	Static	36	6.9	40.4	100.0
	0	435	83.0	Missing	
	Total	524	100.0	100.0	
Valid cases	89	Missing cases	435		

**Change in Male Secretarial Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	36	6.9	45.6	45.6
	Decrease	14	2.7	17.7	63.3
	Static	29	5.5	36.7	100.0
	0	445	84.9	Missing	
	Total	524	100.0	100.0	
Valid cases	79	Missing cases	445		

**Change in Female Secretarial Full Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	170	32.4	57.4	57.4
	Decrease	36	6.9	12.2	69.6
	Static	90	17.2	30.4	100.0
	0	228	43.5	Missing	
	Total	524	100.0	100.0	
Valid cases	296	Missing cases	228		

**Change in Female Secretarial Part Time**

	Change	No. Firms	Percent	Valid Percent	Cum Percent
	Increase	104	19.8	60.1	60.1
	Decrease	8	1.5	4.6	64.7
	Static	61	11.6	35.3	100.0
	0	351	67.0	Missing	
	Total	524	100.0	100.0	
Valid cases	173	Missing cases	351		

Sectorial Analysis of Firm Business, 1981 and 1989

Business Conducted With Primary Sector 1981	% of Firm Export	Firms	Percent	Valid Percent	Cum Percent
1		5	1.0	7.1	7.1
3		6	1.1	8.6	15.7
5		15	2.9	21.4	37.1
10		24	4.6	34.3	71.4
11		2	.4	2.9	74.3
15		7	1.3	10.0	84.3
20		3	.6	4.3	88.6
25		2	.4	2.9	91.4
30		1	.2	1.4	92.9
40		2	.4	2.9	95.7
60		1	.2	1.4	97.1
80		2	.4	2.9	100.0
0		454	86.6	Missing	
Total		524	100.0	100.0	
Valid cases	70	Missing cases	454		

Business Conducted With Primary Sector 1989	% of Firm Export	Firms	Percent	Valid Percent	Cum Percent
1		9	1.7	12.3	12.3
3		2	.4	2.7	15.1
5		15	2.9	20.5	35.6
10		36	6.9	49.3	84.9
15		6	1.1	8.2	93.2
20		1	.2	1.4	94.5
30		1	.2	1.4	95.9
40		1	.2	1.4	97.3
50		2	.4	2.7	100.0
0		451	86.1	Missing	
Total		524	100.0	100.0	
Valid cases	73	Missing cases	451		

Business Conducted With Secondary Sector 1981	% of Firm Export	Firms	Percent	Valid Percent	Cum Percent
5		9	1.7	2.5	2.5
10		18	3.4	5.0	7.5
15		7	1.3	2.0	9.5
20		21	4.0	5.9	15.4
25		10	1.9	2.8	18.2
29		2	.4	.6	18.7
30		24	4.6	6.7	25.4
40		67	12.8	18.7	44.1
45		7	1.3	2.0	46.1
50		46	8.8	12.8	58.9
55		3	.6	.8	59.8
58		1	.2	.3	60.1
59		2	.4	.6	60.6
60		51	9.7	14.2	74.9
70		25	4.8	7.0	81.8
75		5	1.0	1.4	83.2
80		26	5.0	7.3	90.5
90		18	3.4	5.0	95.5
95		2	.4	.6	96.1
100		14	2.7	3.9	100.0
0		166	31.7	Missing	
Total		524	100.0	100.0	
Valid cases	358	Missing cases	166		

Business Conducted With Secondary Sector 1989	% of Firm	Export Firms	Percent	Valid Percent	Cum Percent
	2	1	.2	.3	.3
	5	10	1.9	2.8	3.1
	10	15	2.9	4.2	7.2
	15	6	1.1	1.7	8.9
	20	45	8.6	12.5	21.4
	25	4	.8	1.1	22.5
	30	50	9.5	13.9	36.4
	35	3	.6	.8	37.2
	39	3	.6	.8	38.1
	40	50	9.5	13.9	51.9
	42	1	.2	.3	52.2
	45	7	1.3	1.9	54.2
	50	61	11.6	16.9	71.1
	60	26	5.0	7.2	78.3
	65	3	.6	.8	79.2
	70	20	3.8	5.6	84.7
	75	5	1.0	1.4	86.1
	80	23	4.4	6.4	92.5
	90	11	2.1	3.1	95.6
	95	2	.4	.6	96.1
	100	14	2.7	3.9	100.0
	0	164	31.3	Missing	
		-----	-----	-----	
	Total	524	100.0	100.0	
Valid cases	360	Missing cases	164		

Business Conducted With Tertiary Sector 1981	% of Firm	Export Firms	Percent	Valid Percent	Cum Percent
	5	2	.4	.4	.4
	10	20	3.8	4.0	4.3
	15	1	.2	.2	4.5
	20	28	5.3	5.5	10.1
	25	5	1.0	1.0	11.1
	30	27	5.2	5.3	16.4
	39	3	.6	.6	17.0
	40	44	8.4	8.7	25.7
	41	2	.4	.4	26.1
	42	1	.2	.2	26.3
	45	10	1.9	2.0	28.3
	50	48	9.2	9.5	37.7
	55	4	.8	.8	38.5
	60	65	12.4	12.8	51.4
	70	23	4.4	4.5	55.9
	75	4	.8	.8	56.7
	80	21	4.0	4.2	60.9
	82	2	.4	.4	61.3
	85	11	2.1	2.2	63.4
	87	4	.8	.8	64.2
	90	6	1.1	1.2	65.4
	95	9	1.7	1.8	67.2
	100	166	31.7	32.8	100.0
	0	18	3.4	Missing	
		-----	-----	-----	
	Total	524	100.0	100.0	
Valid cases	506	Missing cases	18		



Business Conducted With Tertiary Sector 1989	% of Firm Export Firms	Firms	Percent	Valid Percent	Cum Percent
5	2	.4	.4	.4	
10	14	2.7	2.8	3.2	
20	25	4.8	4.9	8.1	
25	4	.8	.8	8.9	
30	20	3.8	3.9	12.8	
35	4	.8	.8	13.6	
40	30	5.7	5.9	19.5	
45	7	1.3	1.4	20.9	
47	2	.4	.4	21.3	
50	59	11.3	11.6	32.9	
55	6	1.1	1.2	34.1	
58	1	.2	.2	34.3	
60	51	9.7	10.1	44.4	
65	4	.8	.8	45.2	
70	37	7.1	7.3	52.5	
75	5	1.0	1.0	53.5	
80	44	8.4	8.7	62.1	
85	6	1.1	1.2	63.3	
90	11	2.1	2.2	65.5	
94	4	.8	.8	66.3	
95	6	1.1	1.2	67.5	
98	1	.2	.2	67.7	
100	164	31.3	32.3	100.0	
0	17	3.2	Missing		
Total		524	100.0	100.0	
Valid cases	507	Missing cases	17		

## Appendix Six

## Crosstabulation of subcontracted firms and their location

Type of firm	Mersey-side	NE	NW	Over-Seas	SE	SW	UK	Wales	WM	Row Total
Accounts	43		11							56
Advertise	13		7		2				4	26
Architect	5		1							6
Artists	1	1	1							3
Brokers	1									1
Build.Ser	2									2
Bus. Con	7				5				2	14
Chandler	1									1
Computer	2		5					2		9
Container	1			1						2
Courier	5									5
Delivery	2									2
Designer			1		1					2
Devel.Ser						2				2
Ecologist					1					1
Engineer	9		4		2					15
Env. Con			1							1
Equip.Hire	1									1
Estate.Ag	1									1
Finance	1		2							3
Fitters	1									1
Graphic.D	1									1
Haulage	12		1				4		2	19
Install	3									3
Insurance	2		3				4			9
Joinery			1							1
Lawyers	33		2		2					37
Magmt.Con	1		4							5
MarineCon	1				1					2
Marketing	2									2
METEL	1									1
Music.Con			2							2
Printers	7		1							8
Promo.Ser					1					1
Quan.Svyr	10		2							12
Sm.Fm.Con	1									1
Surveyor	6		3							9
Tax Con	1									1
TypeSettr	2									2
Column Total	179 66.8	1 .4	52 19.4	1 .4	15 5.6	2 .7	8 3.0	2 .7	8 3.0	268 100.0

Crosstabulation of external firms used for  
business operations with their locations

Type of Firm	Regional Location								Row Total
	EM	ME	NE	NW	SE	SW	WA	WM	
Accountants	1	87	1	44	3				136 56.9
Advertising		4		6					10 4.2
Banking				2					2 .8
Bookkeeping		1							1 .4
Catering		6							6 2.5
Cleaners		3							3 1.3
Commercial Vehicles		1							1 .4
Consultants				2					2 .8
Haulage		6		1					7 2.9
Lawyers		34	1	15	6	2	2	2	62 25.9
Security		9							9 3.8
<b>Column Total</b>	1 .4	151 63.2	2 .8	70 29.3	9 3.8	2 .8	2 .8	2 .8	239 100.0

Crosstabulation of blue and white collar operations with location of educational institution where the founder was educated

Location of place where founder was educated	White Collar	Blue Collar	Row Total
EM	93	1	94 17.9
ME	112	86	198 37.8
NE	13	10	23 4.4
NW	63	20	83 15.8
OS		2	2 .4
SC	2	1	3 .6
SE	57	17	74 14.1
SW	4	16	20 3.8
WM	13	14	27 5.2
<b>Column Total</b>	357 68.1	167 31.9	524 100.0

Crosstabulation of blue and white collar operations with the type of educational institute where the founder was educated

Type of place where founder was educated	White Collar	Blue Collar	Row Total
University Higher Degree	3	6	9 1.7
University Bachelor's Degree	161	19	180 34.4
Professional Institution	92	24	116 22.1
Polytechnic	44	32	76 14.5
College of Higher Education	42	33	75 14.3
Other (school)	15	53	68 13.0
<b>Column Total</b>	357 68.1	167 31.9	524 100.0

# **Appendices For Chapter Six**

Appendix 6i.....Description of Factor Analysis and Research Design

Appendix 6ii.....Factor Analysis - Multi Site Establishments

Appendix 6iii.....Factor Analysis - Single Site Establishments

Appendix 6iv.....Factor Analysis - White Collar Establishments

Appendix 6v.....Factor Analysis - Blue Collar Establishments

Appendix 6vi.....Factor Analysis - White Collar Multi Site and Blue  
Collar Single Site

Appendix 6vii.....Factor Analysis - Blue Collar Multi Site Establishments

Appendix 6viii.....Factor Analysis - White Collar Single Site  
Establishments

*Description of Factor Analysis and Research Design*

1/ Factor analysis and research design

Out of the considerable choices of factor analysis with regard to initial matrix extraction of data from the overall data cube (Rummel 1970, page 192), this study will examine two dimensions from the three dimensional cube shown below (figure 6a). The two dimensions will incorporate entities and characteristics taken from one particular occasion and will give a cross section of the cube, as shown in figure 6b. This is comparable to the work of Cattell (1952) and Berry (1964) who pioneered this type of approach, and within factor analysis it is commonly known as R-analysis (the analysis of several characteristics for several entities, recorded on one occasion). However, this does not mean that the analysis will not take into account changes over time, as several of the variables (outlined below) question the effect certain changes in firm policy has had on productivity and staffing levels between 1981 and 1989. In addition the entities under investigation (producer service firms) have other characteristics (variables) which have changed over time; services on offer, number of clients, turnover and the effect of information technology.

These changes are accommodated in the analysis by means of coding and scaling the responses, yet they still constitute a form of R-analysis due to the fact they were only measured on one occasion. Other variables that are involved within the analysis are constrained to measurement of a characteristic at one specific occasion in the firms history, that being when the questionnaire was answered in 1989. These characteristics cover such variables as exact numbers employed, type of information technology used and geographical export markets.

The selection and inclusion of the entities and characteristics will be discussed at length later, but the actual measurement of the phenomena which directly relates to the interpretation of the data analysis results is of equal importance and will be mentioned here. The measurement of the characteristics (variables) is vital if the reader is to be able to follow the analysis and interpret the results for him or herself. This will become apparent when it is realised the analysis contains many different variables of size, age, quantity and importance. The recording of these characteristics must therefore be conceptualised in terms of the scale of the numbers attached to the phenomena, as many are measured on arbitrary scales. This type of coding can be broken down into four types.

Firstly, a nominal scale, the simplest of all, which utilises numbers to identify different set memberships which can be used to form distinct categories. From this scale nothing is implied by the numbers about the relationship between the phenomena, other than the respondents (entities) with the same number have the same response in common. In other words, these are dichotomous divisions as to whether the firm is in one of two categories, for example, is the firm a single office operation or not.

Secondly, an ordinal scale establishes a relationship between cases with different numbers, such that they can be ordered in terms of some form of ranking. With regards to the present study, this can be applied to the firm 'founders' education, from a higher second degree down to no formal qualifications at all. Another example of this is the type of information technology used by the office in question, whether they are in an advanced stage of development, utilising expert systems, whether they have taken tentative steps in adopting IT or whether they have

Figure 6a

Data Cube

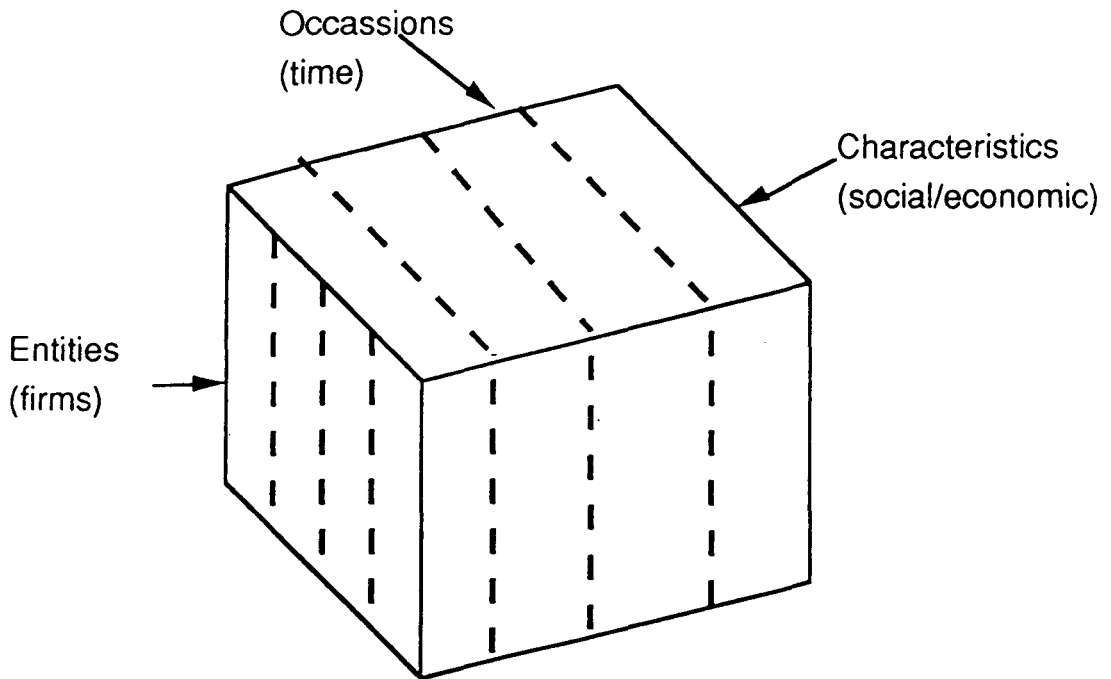
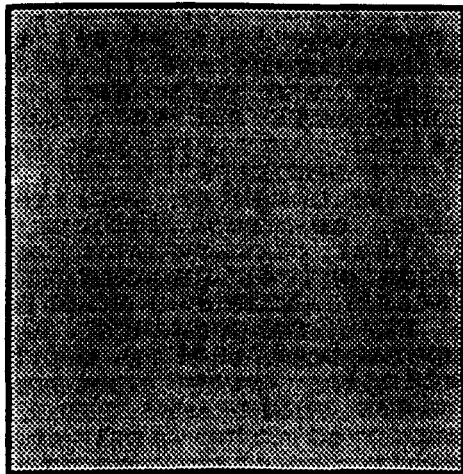


Figure 6b

Cross Section of Data Cube

Entities (firms)



Characteristics

(social and economic variables)

no involvement with any form of IT at all.

Thirdly, an interval scale, in addition to having the ranking property of the ordinal scale, also has a meaningful interval between these measurement rankings of the variable. This allows relative scale position and scale distance to convey information that is universally understandable. The most common use of this scale involves time periods or dates, and hence entities can be placed earlier or later relative to each other on a fixed time scale. An interval scale also assumes that there is an overall unit of measurement and that the position of a case on this scale indicates the number of such units that each case possesses. In this sense, the values that each case holds can be added or subtracted, thereby giving the precise interval between two cases. An example of this scale is the establishment date of the producer service firms that took part in the survey, as each can be ranked on a time scale and the distance (time) between each firm can be assessed.

Fourthly, a ratio scale, which takes the idea of the interval scale one stage further, in that it holds the same properties in addition to a meaningful zero value; not only can scale values be added and subtracted but they can also be multiplied and divided. This is why it is known as a ratio scale, as cases can be compared directly to each other based upon their proportions. This can be represented by the number of employees per firm and the ability to describe one firm as having twice as many or two thirds of the people working for it as compared to another firm.

All the variables used and the types of scale they are recorded on are shown in table 6.12, however there are a series of steps that need to be outlined concerning the preparation of the data before either factor analysis or multiple regression can be performed. These are primary precautions taken to eliminate all possible error and are an integral part of any research design which will aid duplication of the methods. These fundamental steps revolve around defining, selecting and measuring the phenomena in question (Rummel 1970).

The definition of the phenomenon (producer services) has already been dealt with at length in previous chapters (esp. Chapter Two) and the selection of the firms within this category in the Merseyside area has been a result of accessing every available data source, which not only gives the particular name and address of the firm, but also if possible a brief job description of the company for specific categorisation. These data sources have been cross referenced to give a comprehensive list of producer services within the area, and it is hoped a definitive one. Due to the numbers of firms involved the decision to take a sample or universal survey did not come into question as it was possible to send all the firms within the category a questionnaire.

This stage of the analysis design was extremely convenient as the universal survey removed problems of randomness, theoretical or hypothetical importance, catholicity, sufficiency and replication. Also knowing the immense capacity of the computer package (SPSSX) to be employed there were no restrictions on available resources, which in other circumstances may have limited this particular methodological approach.

Following the scaling procedure, which was a direct result of coding the respondents answers to the questionnaire, the operationalisation of the data was then examined. This particular stage screens the results available and determines their applicability to the type of analysis to be employed. The first stage of this, is to check the data to be included for arithmetical independence. If this is ignored, the choice of arithmetically related data may produce either general or orthogonal factors that are a function of the arithmetical operations on the data and not of the empirical data themselves.

In this particular study it is apparent that there



are several variables that would fall into this particular category. Firstly, the numbers employed in each particular position, whether male, female, part-time or full-time would be a direct influence on the employment totals for each firm. Under these conditions it is far simpler to use the employment totals, which will also double as an indicator for firm size. Secondly, the percentage of revenue generated from export markets cannot be fully included, as those firms which export one hundred percent of their services within Britain cannot have their markets broken down into a within and outside Merseyside market area, as these are both functions of the firms overall export. Therefore, to resolve the problem only the percentage exported within the Merseyside area will be used, as this will also indicate the firms dependence on the local area.

An additional screening stage of the data arises from the question of dichotomous results recorded on a nominal scale, of which there are several in the analysis (table 6.12). When this type of data is employed it must be examined for extreme frequencies, which occurs when a value on a variable, measured on an ordinal scale, has a frequency greatly exceeding that for the other. These are often referred to as unequal 'splits' or 'margins' (Cattell 1978) and the maximum allowable split for the dichotomy varies from study to study depending on the researchers' preference. However, it is a general rule-of-thumb that if the ratio exceeds 90-10 percent, then the variable is unsuitable. This is an obvious conclusion, for if all the cases tend to have the same score on a particular variable then it would provide little influence within the study with relation to the other variables.

The number of variables verses the number of cases problem is also pertinent to the operational design. The fundamental rule designates that the number of variables should never exceed the number of cases, as this will result in the number of factors to be extracted being constrained to the number of cases involved, thereby eradicating the influence of certain variables. This is especially relevant when the research interest is not just in describing the data set, but when inference about certain conditions is to be made. The exact number of variables to cases is an arbitrary figure, but a general rule-of-thumb is given as four to one, ie four cases to every one variable. (Cattell 1952). For all the analysis to be conducted this particular rule holds true, however, certain calculation do come close to this threshold, which may under certain conditions stretch the validity of the precise computations, but not the general reliability of description and inference.

Other considerations, with regard to the operationalisation of the data, that have to be taken into account, are the random error of a variable, which is its portion of uniqueness that is unreliable, and systematic error, which is any other error incorporated into the research that is not random. These errors are significantly reduced by the coding and scaling of the results, but to further minimise their influence the data will also be standardised.

The standardisation transformation subtracts the mean of the data for each variable from the original data and then divides it by the standard deviation for that particular variable. The effect of the transformation is to remove the difference in means and deviation between variables from their covariance. The data are reduced to common units of deviation around the mean, which in effect are standard score units. This allows the comparison, not only of data that have different units, such as years or percentage, but also data on different measured scales (nominal, ordinal, interval, ratio). However, this process does not remove the variation of cases with regard to particular variables and still allows variation from case to case with inter-entity factors.

## 2/ Principal component analysis

There are a number of possibilities concerning the choice of correlation matrix to be employed for the factor model (Rummel 1970, Goddard and Kirby 1976). These range from, the common product moment correlation matrix to utilising covariance matrix transformations, with other more obscure matrix including phi, phi-over-phi-max and tetrachoric for more specialised applications. All these transformations of the original data set provide subtle differences which can compensate for any discrepancies in the initial data matrix. The realms of their application are beyond this research, but they are a small indication of the intricate complexities of factor analysis.

For the purpose of the present research, considering the scale of the correlation matrix and the computing resources available (SPSSX), the correlation transformation of the original data set will use the product moment correlation. This is a standard feature with the SPSSX computer package and because of the matrix's common use it will allow comparison with the majority of other factor design models. In addition, any discrepancies that occurred in the original data set, with regard to error or covariation, will be compensated for as much as possible previous to correlation by standardising the values.

The purpose of using principal component analysis for factoring the correlation matrix is essentially to establish a parsimonious description of the data, which is produced under four key criteria:

1/ The first component (factor) always accounts for the greatest amount of variance in the original scatter of points.

2/ When the number of variables is greater than two, then the second component (factor) accounts for the greatest proportion of the residual variance (ie, that remaining after that accounted for by the first is removed).

3/ There are exactly the same number of components (factors) as original variables and the components are ordered in terms of the proportion of variance in the original data set accounted for by each of them.

4/ In cases where there are a considerable number of variables, the majority of variance is accounted for by a small number of components and a cut off point is decided upon for adequate explanation. This is the parsimonious description of the data.

To simplify the understanding of principal component analysis, a two variable model can be used where the principal component can be compared to a regression line. The only difference in this case being, that it is the sum of the squares of the perpendicular to the factor axis that is minimised and not that to the variable axis. This regression line accounts for the greatest amount of common variance between the two variables.

In this simple two variable model, if an additional component is placed orthogonal to the initial component, then this second line will explain the remaining variance not accounted for by the first. Ultimately, the first three properties, as described above, are met, whereby two variables have two factors (components) which describe one hundred percent of their variance. However, in this case the number of variables is insufficient for the parsimonious element of the model to apply.

It should be stressed that principal component analysis is essentially variance orientated and that it is at its most useful when there is a major dimension of variance in the data, which is believed to be a major discernible concept. In the case of the present research, the purpose of using principal component analysis is to show, that within the various groups selected, it will tend to be the social characteristics, taken from the survey, that describe the greatest percentage of variation amongst the data set, with relation to white collar, single site establishments. Whilst, in the case of the larger multi-site and especially blue collar

establishments, it will be certain economic characteristics that explain the largest percentage of variation amongst the data set.

### 3/ Common Factor Analysis (Principal Axis Factoring)

This particular form of factor analysis is used in conjunction with principal component analysis, because it allows interpretation of the underlying dimensions of the data set. This is because there are two main differences that divide the two techniques. However, before these are described, the reader must be aware that principal axis factoring is only one technique of the common factor model and the reasons for its choice will be dealt with later.

As Gorsuch (1974) explains, principal axis factoring, is one of many principal factor solutions, but the reason it can be defined as a common factor approach is that, it works on the basis of "extracting the principal factors from a matrix with communality estimates in the diagonal" (page 93). Once these are in place, then the procedure follows virtually the same steps as principal component analysis, with the results labelled as principal axes.

Communalities are the actual amount of variance explained by each of the components, or the amount of variance of a particular variable that is common to the other variables in a matrix. In other words, the communality of a variable, is that proportion of its variance which can be accounted for by the common factors. In terms of inserting their estimates into the principal diagonal of a correlation matrix, there are standard procedures for initial solutions, which will simply be accepted as part of the automatic computational process, to avoid the continuing debate on indeterminacy.

The second major difference of principal axis factoring to principal component analysis stems from the communality procedure, in that the initial stages are based on a totally different set of assumptions. It is assumed that the variation in a given variable is produced by a small number of underlying factors and by a variation unique to itself. This can be displayed by showing a break down of variance components of a 'variable' (figure 6c). From this model, it is the common and unique sections of the total variance that are crucial to the understanding of common factor analysis.

Using principal axis factoring the common variance parts of all the variables involved form a common vector space, and it is the object of this technique to define the dimensions of this common factor space. The resulting dimensions are known as 'common factors' and in this sense this technique can be said to be using a partial correlation approach for data analysis.

It is always assumed, when using common factor analysis, that the variance explained by the common factors will be less than one hundred percent, even if there are the same number of variables as there are factors. The reason for this, is because the technique only accounts for the causal connections between the common parts of the variables. The unique section of the total variance can be assumed to be the residual and be defined as, "that proportion of the variance excluding the variance attributed to the common factors." (Gorsuch 1974, page 26).

The shared causal connection of each variable can be expressed as its communality ( $h^2$ ) whilst its uniqueness ( $u^2$ ) is generally calculated by the subtraction of the communality from the figure one;  $u^2 = 1 - h^2$ . Also, it is the communality that is the proportion of variation of any particular variable that is accounted for by the common factors.

### 4/ Eigen vectors and eigen values

The factor techniques being employed are both principal factor methods and in general mathematics are known as, the solution of the characteristic roots and

vectors [eigen values and eigen vectors] (Fruchter 1954, page 96). The primary function of these phenomena is to algebraically solve the principal axis of a data matrix. Therefore, the principal factors become rescaled characteristic vectors and it is the characteristic roots of these vectors, commonly known as eigen values, that have several important properties.

Firstly, the characteristic root is equal to the sum of the squared loadings on the principal factor and is therefore, a direct index of how much variance is accounted for by each factor. Secondly, the roots are all positive and non-zero values, if there are as many factors as there are variables, and operate on a comparative scale. Finally, in the decision as to how many factors are to be chosen, for a sufficient explanation of variance amongst the variables, the roots provide a crucial guide-line, which will be explained in the section on the selection of factors.

The main purpose of eigen values and vectors, is that they provide a solution to the rotational transformation of the variable axes so that they lie co-linear with the extracted principal axes. The eigen value indicates the length of the axis, which is the common variance accounted for by that axis, and the eigen vector indicates the transformation coefficient of the variable that rotates the axis so it lies along the principal axis. The eigen values and vectors are the coefficients and scales by which the variable axes are transformed into the principal axes. This is shown in diagrammatic form in figure (6d). The coefficients  $a$  and  $b$  are not only the rotation angles by which the variable axes are transformed into the principal components, they are also the correlations or loadings of each variable on their respective principal axis. Therefore, there will be the same number of eigen values as there are variables. The first will account for the largest amount of variance in the standardised data matrix, whilst the second will account for the largest amount of variance in the residual matrix after the first eigen value has been extracted.

Eigen values are crucial to the understanding of factor analysis, especially in algebraic terms, and because of this the values are clearly shown in the final analysis of the surveyed firms. For the reader understanding their underlying importance, they indicate the proportion of variation being explained. But, to the novice they have a more immediate function, because they provide a useful yard-stick for selecting the number of factors which give a satisfactory explanation of variance.

## 5/ Selecting the 'correct' number of factors

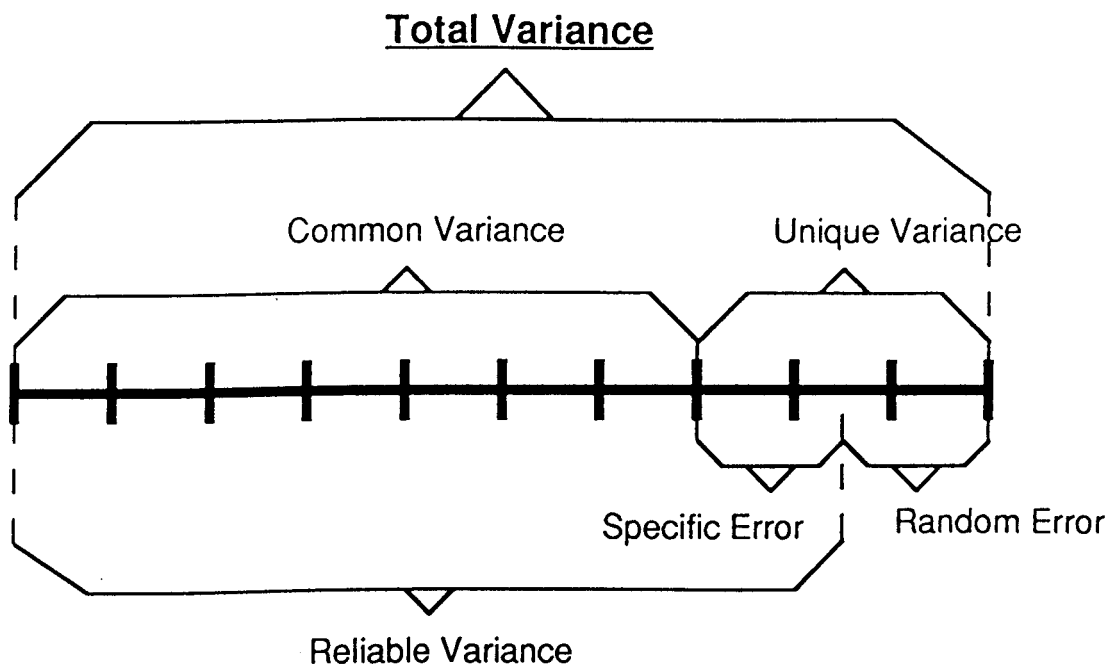
With both techniques of factor analysis, principal component and principal axis factoring, the initial factors extracted tend to explain a predominantly large amount of the total variance. As stated, the techniques will extract the same number of factors as there are variables, with the lower order factors explaining a very small percentage of the variance and for the purpose of most research they are discarded. The major problem with this approach is to decide upon which factors should be included in the final analysis and which should be discarded.

Ultimately, it is the interpretability of the factors that will guide whether or not they are included in the final analysis, depending upon their combined causal explanation of the total variance. The interpretation of the factors will directly relate to the qualitative analysis of the research, which in the majority is founded upon the researchers' own knowledge base. This will become apparent when the results from the factoring techniques are analysed and related to the qualitative section of the thesis; in keeping with the working hypothesis of the research.

If the above approach, for selecting factors, appears arbitrary and subjective (which it is), then there are

Figure 6c

Variation of a Given Variable



(Rummel 1970, page 103)

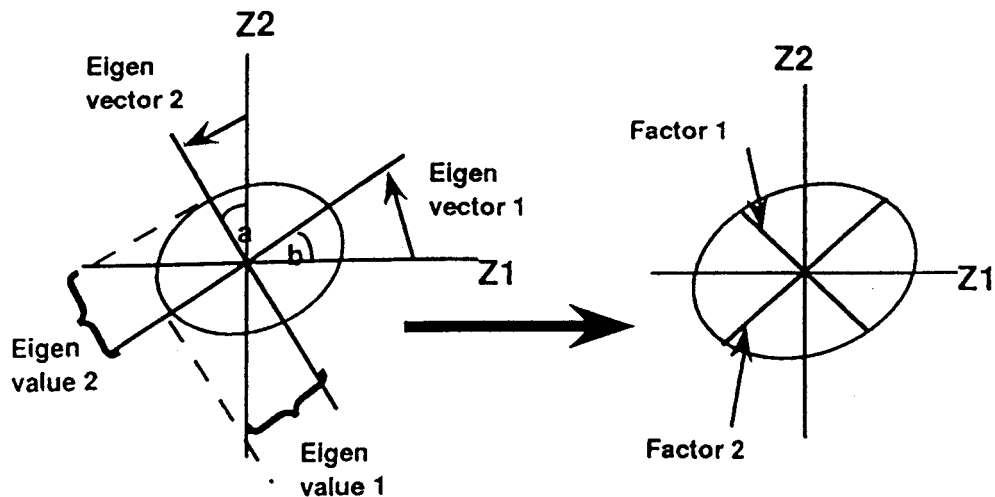
Figure 6d

Eigen Values and Vectors

Z1, Z2 = variable axes.

a, b = rotation angles (coefficients).

The ellipse is the correlation vector space between two variables.



(Goddard and Kirby 1976, page 21)

certain criteria that can be applied that are more statistical in nature. The researcher may use the eigen values as a guide to the number of factors to be selected. This is usually based on a satisfactory amount of explained variance, which is given by all eigen values greater than one. These eigen values relate only to those factors that account for more than their proportionate share of the original variance.

When performing factor analysis using SPSSX the selection of the number of factors to be used for rotational analysis, and for which final statistics are given, is based on the eigen value of one criteria. This is the default of the system and the researcher does have the choice of altering this operation, but for the purpose of this research (significance and interpretability) it has been left as standard.

It is appropriate, at this point, to mention an additional method used to select the 'correct' number of factors, which is semi-statistical and compatible with the eigen value criteria. This particular method is known as a 'scree diagram' and is also incorporated within the SPSSX package. Its purpose is to divide those factors that count for a significant amount of variance from those that provide little, by means of plotting the eigen values against the number of factors. Where the gradient of the plot nears the horizontal the factors tend to account for a relatively small proportion of the total variance, but where the gradient nears the vertical the factors are more distinct and account for significant proportions of variance.

An example of this method is shown in figure (6e) where out of ten possible factors, four are indicated as significant due to the steeper gradient. On the whole, this less than objective method coincides with the cut-off eigen value threshold and in many analysis is used as a backup for checking factor significance (Goddard 1968). Therefore, this method along with the eigen value criteria has been employed within the present research and for each factor analysis a 'scree diagram' is shown.

## **6/ Factor loadings and scores**

The official definition of a factor loading is, "a weight for each factor dimension measuring the variance contribution the factor makes to the data vector" (Rummel 1970, page 108). This concept uses the mathematical idea of scalar and vector values based on eigen values and vector, when considering the extraction of factors from a data matrix. However, in more simplistic terms, the loadings can be described as the correlation coefficients between each respective variable and factor.

This relationship also underlies the variance explained and the communality. The squared loadings of each variable on each factor is the proportion of variance of each variable accounted for by individual factors. The communality is the sum of the squared row loadings, which is the proportion of variation accounted for in each variable by all factors.

The loadings are generally presented in a factor matrix, listing the number of factors as columns and the variables as rows. The loadings have an additional quality, as the square of their values multiplied by one hundred is equivalent to the percentage of variation that a variable has with a particular factor. Observed differently, this percentage figure is the amount of variation of a variable that can be predicted or reproduced by knowing the values of a particular case (firm) on a factor.

By comparing the factor loadings for all factors, those particular variables contributing to independent factors can be defined and the more acute relationships between variables and factors can be described. Therefore, the loadings in their most simplest form, give a general indication of the pattern of relationships within the data. In the initial factor matrix, it is generally the first factor extracted that accounts for the largest

percentage of variance and it is the variables that display high loadings upon this factor that are deemed to have the greatest causal influence (within common factor analysis) amongst the variables in the data matrix.

In the case of principal component analysis, the variables with high loadings upon the extracted factors, especially the initial factors, can not be used to express a causal connection, but are foremost in explaining the variation of the data matrix. This differs from the principal axis method because, it is the total variance being calculated and not the common variance.

Finally, the loadings are the projections of each variable on the factor axes of the data. The loadings can be employed to give a spatial representation of the results, with each variable being displayed as a vector in the factor space. So that variables with higher loadings on one particular factor, are not only highly statistically correlated, they are also grouped in factor space. For example, if two factors have been extracted from a data matrix, the loadings will indicate which variables, by their high values (range between -1 and +1) are closely grouped to which factor and can therefore be described as co-ordinates in factor space. This is shown in figure (6f) with five variables and two factors, the loadings are shown in the table adjacent to the diagram displaying their spatial representation. Factor scores are a far more complex issue which involve a greater understanding of factor vectors and the official definition indicates that "the factor scores for 'n' cases on a factor are the elements of the factor vector" (Rummel 1970, page 108).

An alternative way of approaching these scores is to visualise the loadings as weights by which each cases' variable score must be multiplied to produced a summed coefficient, which is the factor score for each individual entity (firm). Therefore, individual cases, in this circumstance firms, have a single score on each of the factors.

Certain forms of research which only involve a limited number of cases and where the individual entities need to be scrutinized, will use the evaluation of factor scores. This allows cases, whether nations or people, to be ranked depending on their factor score. However, this is not the purpose of the present research, as to individually examine over five hundred firms would be an extravagant exercise and inconsistent with the working hypothesis. The purpose of the research is to scrutinise the variables themselves, by causal inference and variance explained in relation to groups of firms that are predetermined by the mode of inquiry.

The use of factor scores would be superfluous to this research and even though they are calculated as an integral part of the SPSSX programme, their results will not be included. Instead, the factor loadings will be utilised as an indicator for two reasons; explaining variance of particular variables as they correlate (load) with certain factors, and to outline the underlying causal relationship between variables (characteristics) of the firms.

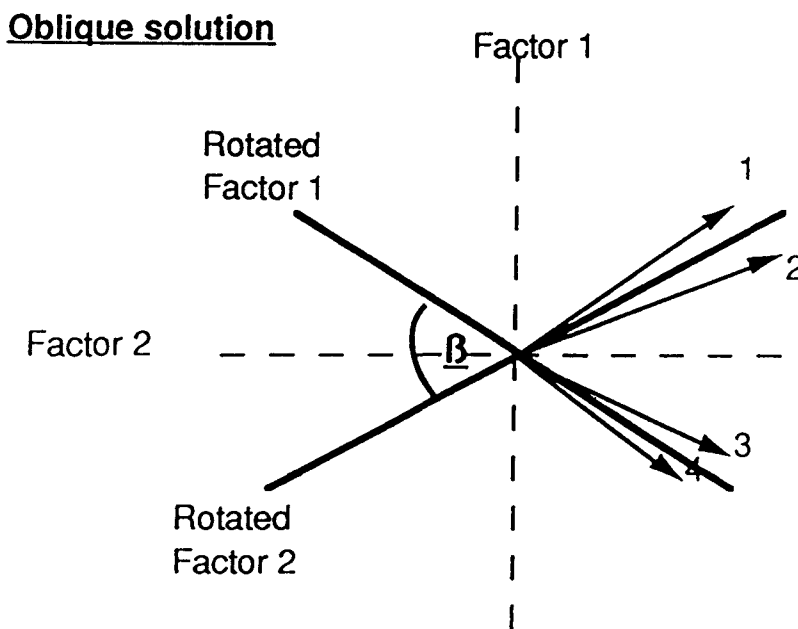
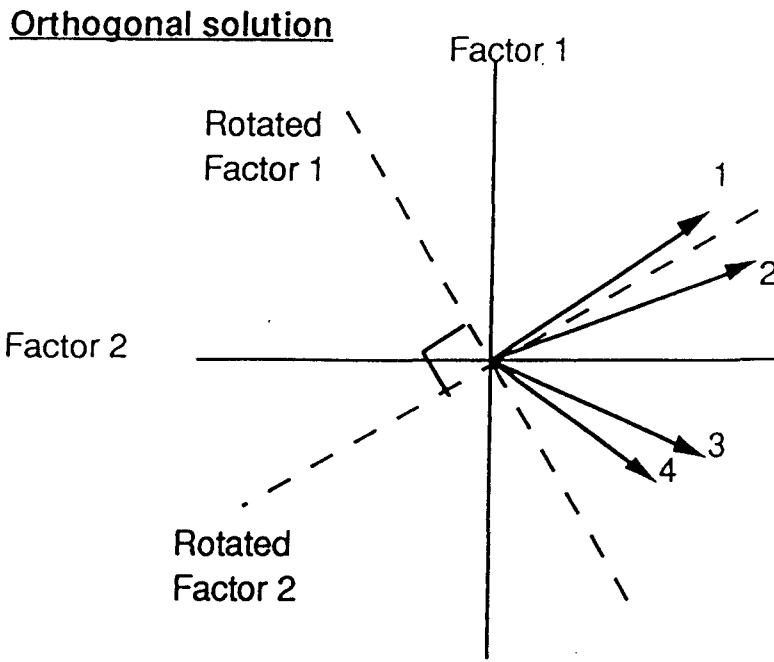
## 7/ Orthogonal and oblique rotation

"The initial extraction procedure often locates the first factor between independent clusters of interrelated variables." (Rummel 1970, page 373). Which means, due to the regression like approach the first factor is placed amongst the greatest cluster of variables, irrelevant of the way in which they are clustered. In the case of orthogonal rotation, the second factor is placed at right angles to the first and gives some indication of the clusters pattern by different signs of its loadings (bipolar factor). The question is, why do these need to be rotated ?

The original factor matrix delimitates the data in a highly original way and even though there are considered to be an infinite number of alternatives, the rotation

Figure 6h

The Difference Between Orthogonal and Oblique Rotation





technique is used to simplify the results of the original extraction. This is performed by separating the independent clusters, which essentially, were ignored, by the primary unrotated factors. This serves a dual function; one, to identify distinctive clusters of variables and second, to simplify the bipolar readings.

Orthogonal rotation means revolving the original factors around their origin, retaining their initial structure. The procedure used by SPSSX is 'Varimax', which is a reflection of the algebraic procedure to maximise the variance of the loadings on each factor. In an ideal situation this approach would provide dichotomous results, with very high or very low loadings. An, example, using four variables and two factors, of this procedure is shown in figure (6g) and will allow the reader to graphically conceptualise the operation.

As can be seen from figure (6g) the initial extraction avoids the clustered groups whilst trying to explain the greatest variance with factor one. Once rotation has taken place the factors align themselves with the particular clusters, which has the effect of changing the moderate loadings to either high or low.

Orthogonal rotation has been performed on all the initial extractions and results are shown in the appendices. These show how this technique can simplify the initial factor matrix, once the 'correct' number of factors has been chosen.

The fundamental principal underlying orthogonal rotation, is that the factors maintain their perpendicular structure, which algebraically means the factors are uncorrelated. The ninety degree angle indicates that the factors eliminate statistically independent variation. This is the feature which differentiates orthogonal and oblique rotation.

Oblique rotation allows correlation of the resultant factors as an alternative to imposed orthogonality. This function can also be represented graphically and figure 6h shows the difference in the positioning of the four factors when they are obliquely rotated. The angle  $\beta$  in the figure clearly indicates the independent movement of the factors as they align to their respective cluster of variables.

Oblique rotation is advocated on two grounds. Firstly, it generates more information than the orthogonal approach, as the clusters are better defined and there is less confusion as to the variables involved within each cluster. This is because, the central or nuclear members, which are marked by orthogonal rotation, are highlighted by their high loadings. Secondly, the allowed correlation of the factors is strongly advocated by those who pioneered the process (Thurstone 1947, Cattell 1952) because, it bares a closer resemblance to the 'real' world. It allows the inevitable relationships found within the social sciences to be represented, because of the interdependence and the causal connections between social, economic and political influences.

Finally, a key distinction between orthogonal and oblique rotation is that, in the second case the procedure produces two factor matrices with the final statistics. These are referred to as the 'structure' and 'pattern' matrix, which describe fundamentally different relationships between the variables and the extracted factors.

The structure matrix indicates the respective correlation coefficients between the factors and the observed values, whereas the pattern matrix displays the standard linear weights (or path coefficients). In the case where there is no correlation between the factors, due to natural independence, then there is no difference between the pattern and structure matrix. Under these circumstances the orthogonally rotated matrices will suffice, as they provide a simple structure with one matrix per analysis.

Figure 6e

Scree Diagram

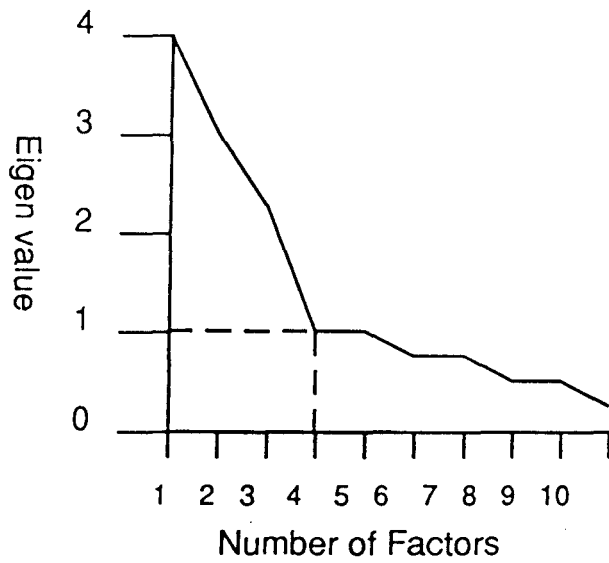


Figure 6f

Factor Loadings

	<u>Factor 1</u>	<u>Factor 2</u>
Variable 1	0.9	0.1
Variable 2	0.8	0.2
Variable 3	0.8	-0.2
Variable 4	-0.1	0.9
Variable 5	0.1	0.9

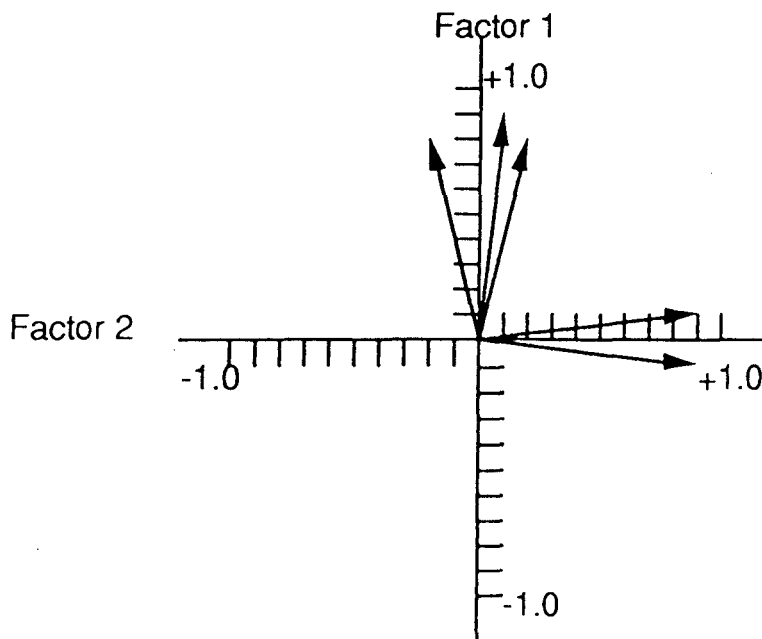
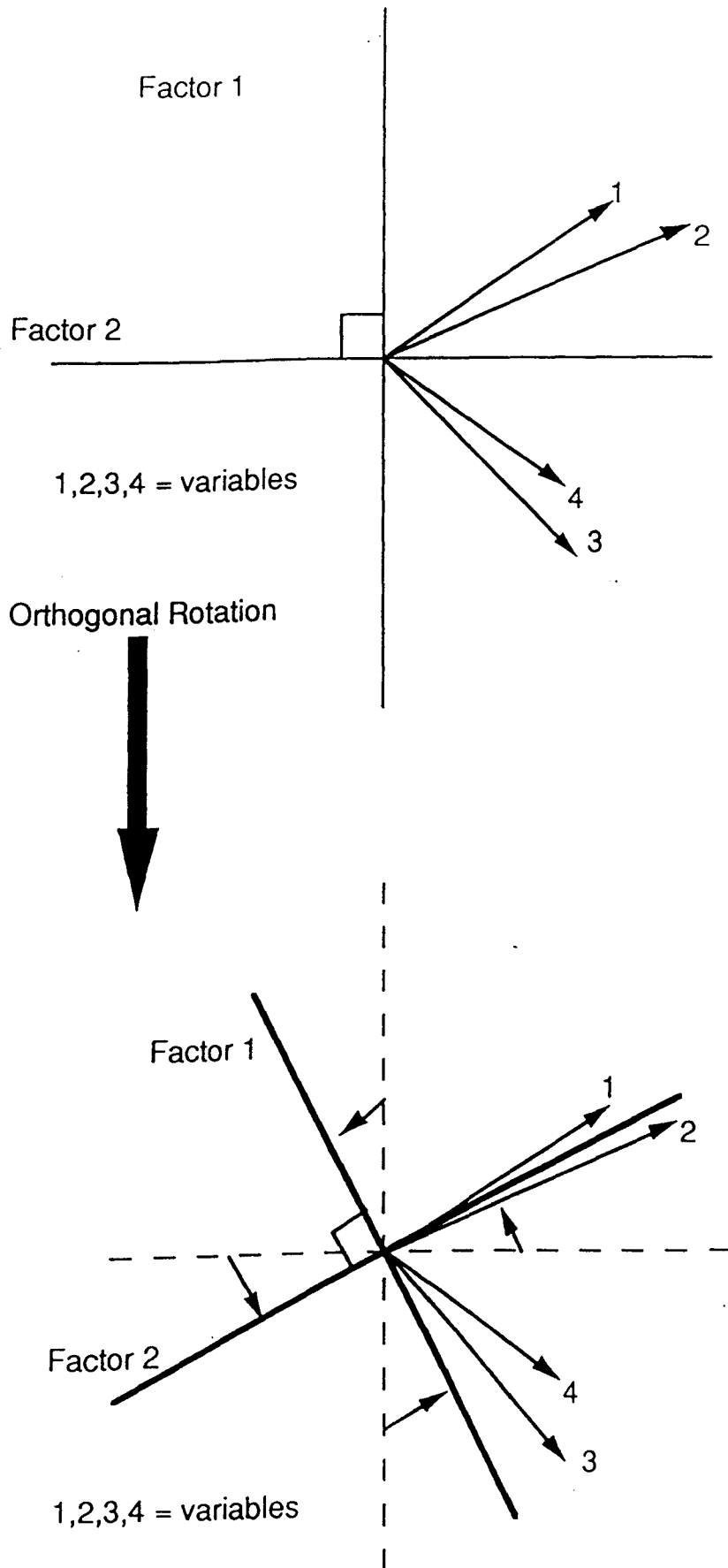


Figure 6g

Orthogonal Rotation



Appendix 6ii

Multi Site Establishments

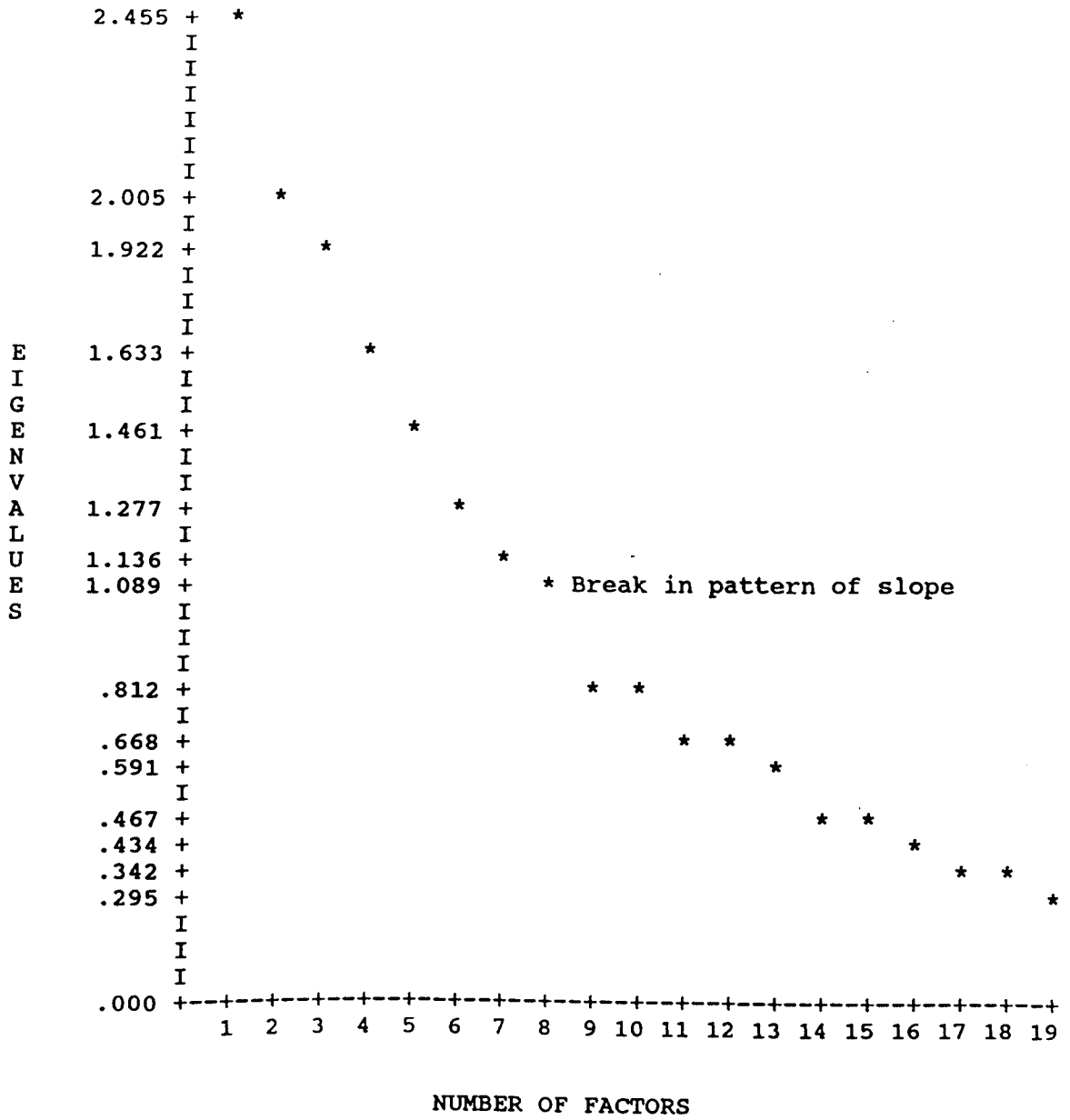
- 1/ Scree Diagram for Principal-Component and Principal Axis Factoring
- 2/ Final Statistics for Principal-Component Analysis
- 3/ Orthogonal Rotation for Principal Component Analysis
- 4/ Final Statistics for Principal Axis Factoring
- 5/ Orthogonal Rotation for Principal Axis Factoring

Factor Names

Variable Names

Technological Investment and Training	STTEC STEFF STTRA
Firm Performance	STTUR STNOC STNOS
Credentials	STQUA STFOU
Resource Attributes	STEDU STEXS
Founder's Background and Community Status	STPRE STTEST STEMP
Export	STEXP STWME
Social and Economic Status	STEXA STSOC STSTA
Residential Preference	STFOR STPRE STSTA

SCREE PLOT OF EIGEN VALUES EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS  
AND PRINCIPAL AXIS FACTORING FOR ALL MULTI SITE ESTABLISHMENTS



FINAL STATISTICS OF PRICIPAL-COMPONENT ANALYSIS  
FOR ALL MULTI SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.63110	*	1	2.45479	12.9	12.9
STWME	.73137	*	2	2.00504	10.6	23.5
STTEC	.66171	*	3	1.92209	10.1	33.6
STPRE	.62110	*	4	1.63294	8.6	42.2
STFOR	.76579	*	5	1.46080	7.7	49.9
STFOU	.78546	*	6	1.27748	6.7	56.6
STQUA	.78333	*	7	1.13623	6.0	62.6
STEXA	.66840	*	8	1.08896	5.7	68.3
STEXP	.77951	*				
STNOC	.72144	*				
STTUR	.77703	*				
STNOS	.42339	*				
STEST	.65327	*				
STTRA	.59618	*				
STEMP	.64811	*				
STSOC	.57032	*				
STEXS	.78531	*				
STEDU	.80769	*				
STSTA	.56782	*				

ORTHOGONAL ROTATION OF EIGHT FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR ALL MULTI SITE ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STTEC	.78202			
STEFF	.75346			
STTRA	.61610			
STTUR		.85203		
STNOC		.82881		
STNOS		.36182		
STQUA			.87496	
STFOU			.87313	
STEDU				.87954
STEXS				-.85796
STEST				
STEMP				
STPRE				
STEXP				
STWME				
STEXA				
STSOC				
STSTA				
STFOR				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	<u>FACTOR 8</u>
STTEC				
STEFF				
STTRA				
STTUR				
STNOC				
STNOS				
STQUA				
STFOU				
STEDU				
STEXS				
STEST	-.80253			
STEMP	.65675			
STPRE	.65587			.37644
STEXP		.86819		
STWME		.81724		
STEXA			.74890	
STSOC			-.64693	
STSTA			.54462	-.34791
STFOR				.87195

FINAL STATISTICS OF PRICIPAL AXIS FACTORING  
FOR ALL MULTI SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.44507	*	1	1.93497	10.2	10.2
STWME	.50184	*	2	1.57398	8.3	18.5
STTEC	.47525	*	3	1.45062	7.6	26.1
STPRE	.30628	*	4	1.18046	6.2	32.3
STFOR	.29720	*	5	.99070	5.2	37.5
STFOU	.60620	*	6	.72792	3.8	41.4
STQUA	.61831	*	7	.60709	3.2	44.6
STEXA	.52529	*	8	.45862	2.4	47.0
STEXP	.59587	*				
STNOC	.41726	*				
STTUR	.82212	*				
STNOS	.23441	*				
STEST	.48779	*				
STTRA	.44459	*				
STEMP	.37650	*				
STSOC	.22657	*				
STEXS	.53603	*				
STEDU	.75015	*				
STSTA	.25762	*				



ORTHOGONAL ROTATION OF EIGHT FACTORS EXTRACTED BY PRINCIPAL  
 AXIS FACTORING FOR ALL MULTI SITE ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STTUR	.88073			
STNOC	.61604			
STNOS	.47382			
STTEC		.66351		
STEFF		.62940		
STTRA		.52715		
STEDU			.84277	
STEXS			-.70499	
STQUA				.77443
STFOU				.76229
STEXP				
STWME				
STEST				
STEMP				
STPRE				
STEXA				
STSOC				
STSTA				
STFOR				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	<u>FACTOR 8</u>
STTUR				
STNOC				
STNOS				
STTEC				
STEFF				
STTRA				
STEDU				
STEXS				
STQUA				
STFOU				
STEXP	.75799			
STWME	.66010			
STEST		-.69211		
STEMP		.51507		
STPRE		.47732		.48255
STEXA			.66643	
STSOC			-.40133	
STSTA			.39915	-.43702
STFOR				.53891

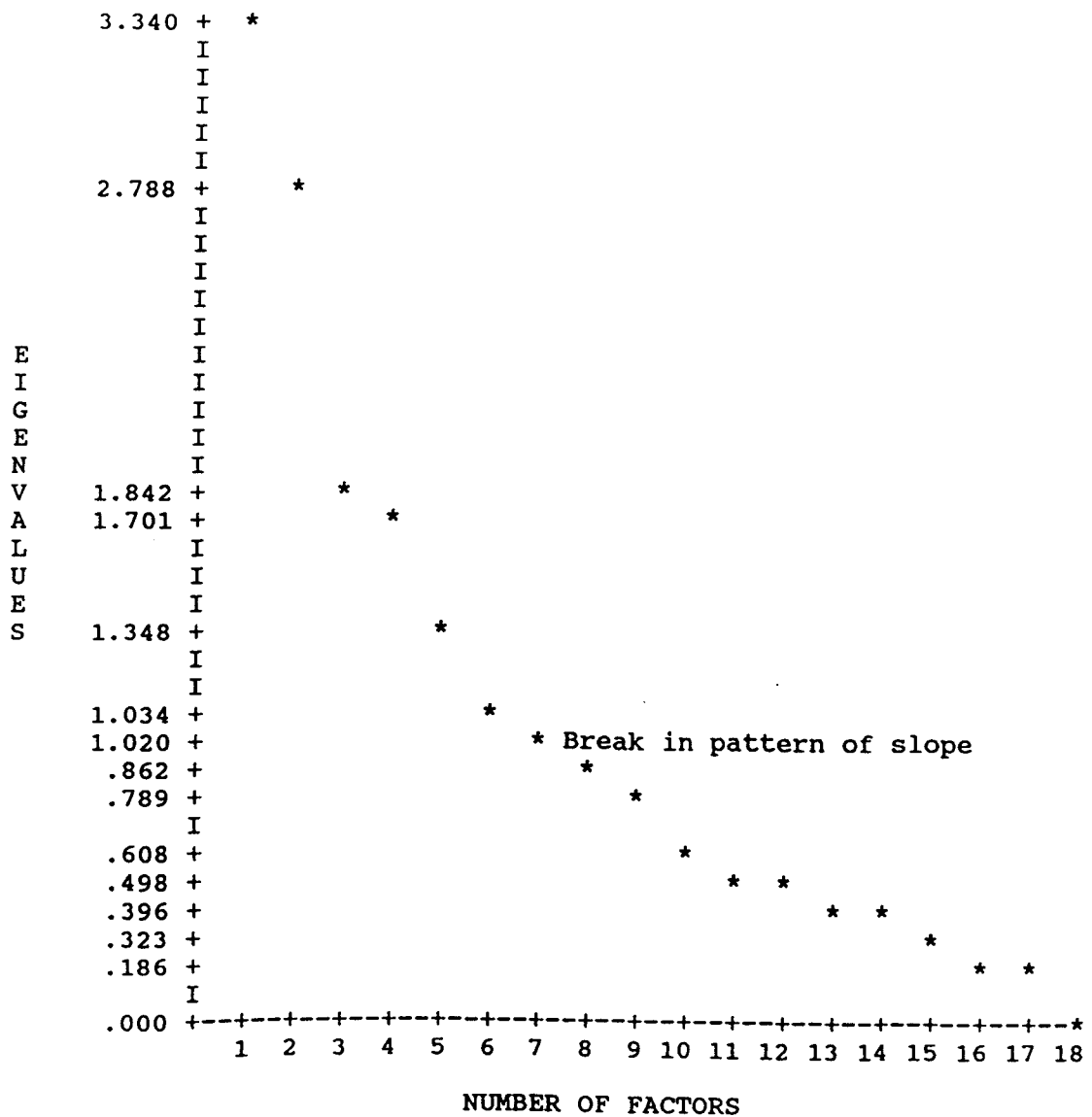
Appendix 6iii

**Single Site Establishments**

- 1/ Scree Diagram for Principal-Component and Principal Axis Factoring
- 2/ Final Statistics for Principal-Component Analysis
- 3/ Orthogonal Rotation for Principal Component Analysis
- 4/ Final Statistics for Principal Axis Factoring
- 5/ Orthogonal Rotation for Principal Axis Factoring

<u>Factor Names</u>	<u>Variable Names</u>
Socio-Spatial Divisions of Labour	STQUA STFOU STFOR STSOC
Firm Performance	STTUR STNOC STNOS
Export and Training	STWME STEXP STTRA
Resource Attributes	STEDU STEXS
Community Status	STEST STEMP
Technological Investment	STEFF STTEC
Auxiliary Supporting Expertise	STPRE STEXA

SCREE PLOT OF EIGEN VALUES EXTRACTED FOR PRINCIPAL-COMPONENT ANALYSIS AND PRINCIPAL AXIS FACTORING FOR SINGLE SITE ESTABLISHMENTS



FINAL STATISTICS FOR PRINCIPAL-COMPONENT ANALYSIS FOR  
SINGLE SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
		*				
STEFF	.64814	*	1	3.34039	18.6	18.6
STWME	.78254	*	2	2.78809	15.5	34.0
STTEC	.88778	*	3	1.84239	10.2	44.3
STPRE	.69988	*	4	1.70052	9.4	53.7
STFOR	.72679	*	5	1.34799	7.5	61.2
STFOU	.80077	*	6	1.03397	5.7	67.0
STQUA	.83145	*	7	1.02000	5.7	72.6
STEXA	.49310	*				
STEXP	.72433	*				
STNOC	.74958	*				
STTUR	.83269	*				
STNOS	.69044	*				
STEST	.70906	*				
STTRA	.58413	*				
STEMP	.75726	*				
STSOC	.62642	*				
STEXS	.75792	*				
STEDU	.77109	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR SINGLE SITE ESTABLISHMENTS  
(VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.90579			
STFOU	.88758			
STFOR	.79299			
STSOC	.76588			
STTUR		.86593		
STNOC		.85261		
STNOS		.77662		
STWME			.85496	
STEXP			.84425	
STTRA			.35858	
STEDU				-.84742
STEXS				.84045
STEMP				
STEST				
STTEC				
STEFF				
STPRE				
STEXA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STFOR				
STSOC				
STTUR				
STNOC				
STNOS				
STWME				
STEXP				
STTRA				
STEDU				
STEXS				
STEMP	-.85605			
STEST	.81993			
STTEC		.92404		
STEFF		.52889		
STPRE			.76983	
STEXA			-.50272	

FINAL STATISTICS FOR PRINCIPAL AXIS FACTORING FOR  
SINGLE SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.40012	*	1	3.04846	16.9	16.9
STWME	.67500	*	2	2.41346	13.4	30.3
STTEC	.84920	*	3	1.46552	8.1	38.5
STPRE	.10995	*	4	1.32683	7.4	45.9
STFOR	.64181	*	5	.91116	5.1	50.9
STFOU	.87502	*	6	.76322	4.2	55.2
STQUA	.88236	*	7	.47452	2.6	57.8
STEXA	.09143	*				
STEXP	.52075	*				
STNOC	.68088	*				
STTUR	.85220	*				
STNOS	.52730	*				
STEST	.34270	*				
STTRA	.49056	*				
STEMP	.67501	*				
STSOC	.57284	*				
STEXS	.66700	*				
STEDU	.54904	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL  
 AXIS FACTORING FOR SINGLE SITE ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.93085			
STFOU	.92889			
STFOR	.64075			
STSOC	.55814			
STTUR		.87878		
STNOC		.80906		
STNOS		.67302		
STWME			.79666	
STEXP			.71086	
STTRA			.53628	
STEXS				.79796
STEDU				-.69924
STEMP				
STEST				
STTEC				
STEFF				
STEXA				
STPRE				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STFOR				
STSOC				
STTUR				
STNOC				
STNOS				
STWME				
STEXP				
STTRA				
STEXS				
STEDU				
STEMP	-.81090			
STEST	.56417			
STTEC		.90405		
STEFF		.74284		
STEXA			-.52882	
STPRE			.42856	

Appendix 6iv

**White Collar Establishments**

- 1/ Scree Diagram for Principal-Component and Principal Axis Factoring
- 2/ Final Statistics for Principal-Component Analysis
- 3/ Orthogonal Rotation for Principal Component Analysis
- 4/ Final Statistics for Principal Axis Factoring
- 5/ Orthogonal Rotation for Principal Axis Factoring

Factor Names

Socio-Spatial Divisions of Labour

Firm Performance

Export

Resource Attributes

Community Status

Technological Investment and Training

Strategic Business Resources

Variable Names

STQUA STFOU STFOR STSOC

STTUR STNOC STNOS

STWME STEXP

STEDU STEXS

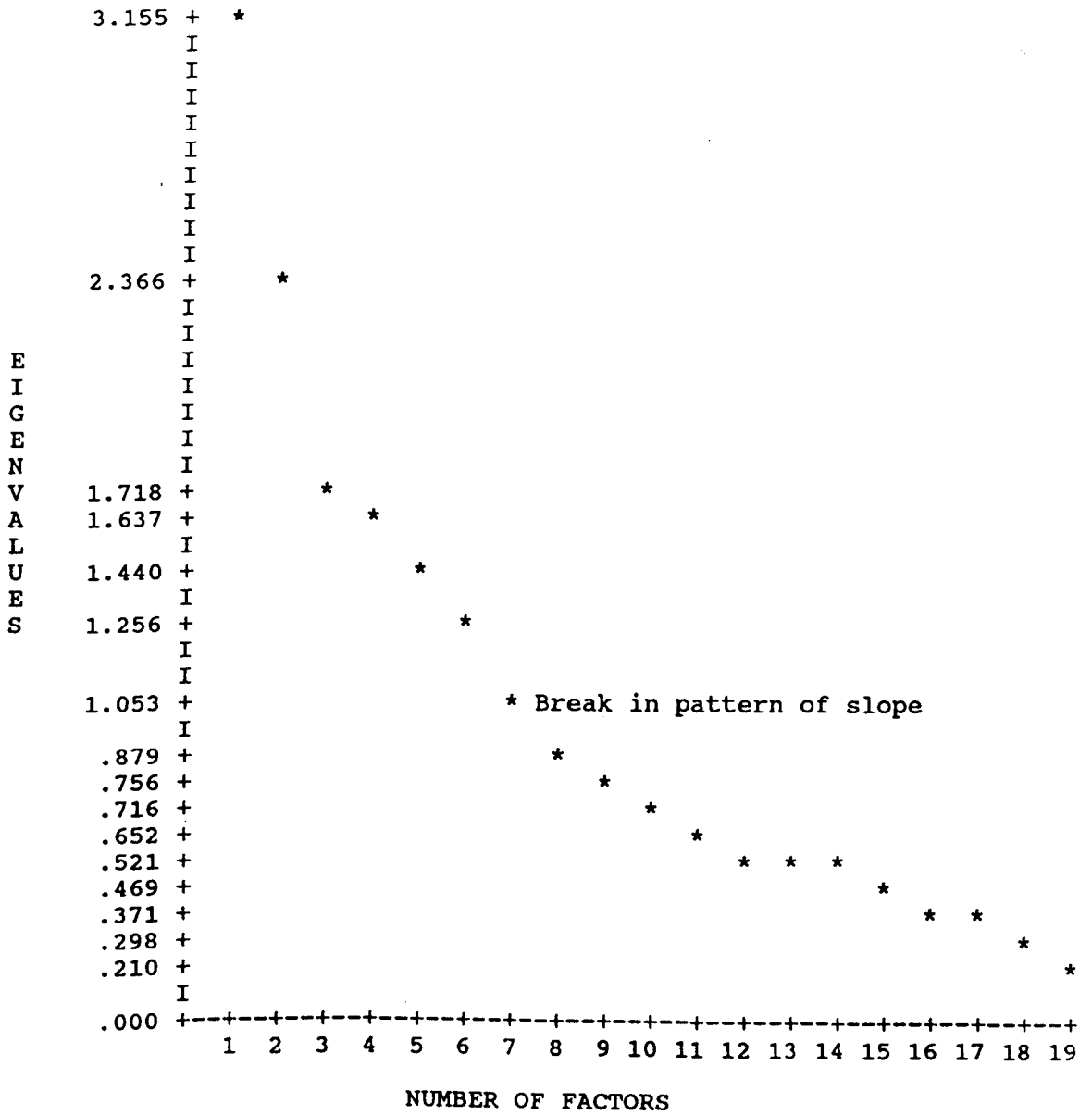
STEST STEMP

STEFF STTEC STTRA

STPRE STEXA STSIN



SCREE PLOT OF EIGEN VALUES EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS AND PRINCIPAL AXIS FACTORING FOR ALL WHITE COLLAR ESTABLISHMENTS



FINAL STATISTICS OF PRINCIPAL-COMPONENT ANALYSIS FOR  
ALL WHITE COLLAR ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.64071	*	1	3.15512	16.6	16.6
STWME	.76194	*	2	2.36625	12.5	29.1
STTEC	.72290	*	3	1.71807	9.0	38.1
STPRE	.53326	*	4	1.63704	8.6	46.7
STFOR	.58675	*	5	1.44032	7.6	54.3
STFOU	.70739	*	6	1.25625	6.6	60.9
STQUA	.74637	*	7	1.05275	5.5	66.5
STEXA	.52378	*				
STEXP	.76654	*				
STNOC	.74686	*				
STTUR	.78742	*				
STNOS	.50673	*				
STEST	.70049	*				
STTRA	.51981	*				
STEMP	.69481	*				
STSOC	.55869	*				
STEXS	.78789	*				
STEDU	.78226	*				
STSIN	.55121	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR ALL WHITE COLLAR ESTABLISHMENTS  
(VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.84513			
STFOU	.82459			
STSOC	.69953			
STFOR	.57512			
STTUR		.85818		
STNOC		.84568		
STNOS		.58534		
STEST			-.81938	
STEMP			.81034	
STTEC				.82780
STEFF				.72903
STTRA				.52748
STEXS				
STEDU				
STEXP				
STWME				
STPRE				
STEXA				
STSIN				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STSOC				
STFOR				
STTUR				
STNOC				
STNOS				
STEST				
STEMP				
STTEC				
STEFF				
STTRA				
STEXS	-.87037			
STEDU	.86021			
STEXP		.86042		
STWME		.84997		
STPRE			.64844	
STEXA			-.63222	
STSIN			.49235	

FINAL STATISTICS OF PRINCIPAL AXIS FACTORING FOR  
ALL WHITE COLLAR ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.48119	*	1	2.68964	14.2	14.2
STWME	.64780	*	2	1.92432	10.1	24.3
STTEC	.37669	*	3	1.27559	6.7	31.0
STPRE	.20935	*	4	1.22306	6.4	37.4
STFOR	.47863	*	5	.96345	5.1	42.5
STFOU	.67931	*	6	.58822	3.1	45.6
STQUA	.77113	*	7	.52255	2.8	48.4
STEXA	.11831	*				
STEXP	.47054	*				
STNOC	.61870	*				
STTUR	.74156	*				
STNOS	.30602	*				
STEST	.47668	*				
STTRA	.39496	*				
STEMP	.50125	*				
STSOC	.25613	*				
STEXS	.58804	*				
STEDU	.62846	*				
STSIN	.44209	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL  
 AXIS FACTORING FOR ALL WHITE COLLAR ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.85804			
STFOU	.81022			
STSOC	.49191			
STFOR	.45064			
STTUR		.83643		
STNOC		.76460		
STNOS		.41953		
STEDU			.76843	
STEXS			-.74821	
STWME				.78258
STEXP				.67277
STEST				
STEMP				
STEFF				
STTEC				
STTRA				
STSIN				
STPRE				
STEXA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STSOC				
STFOR				
STTUR				
STNOC				
STNOS				
STEDU				
STEXS				
STWME				
STEXP				
STEST	.67478			
STEMP	-.67332			
STEFF		.63275		
STTEC		.58804		
STTRA		.44562		
STSIN			.50759	
STPRE			.46605	
STEXA			-.42020	

Appendix 6v

**Blue Collar Establishments**

- 1/ Scree Diagram for Principal-Component and Principal Axis Factoring
- 2/ Final Statistics for Principal-Component Analysis
- 3/ Orthogonal Rotation for Principal Component Analysis
- 4/ Final Statistics for Principal Axis Factoring
- 5/ Orthogonal Rotation for Principal Axis Factoring

Factor Names

Status and Linkage

Socio-Spatial Founder Status

Firm Performance and Training

Export

Credentials

Community Status

Technological Investment and Educational Contact

Variable Names

STEXA STSIN STEXS

STFOR STSOC STPRE

STTUR STNOC STNOS STTRA

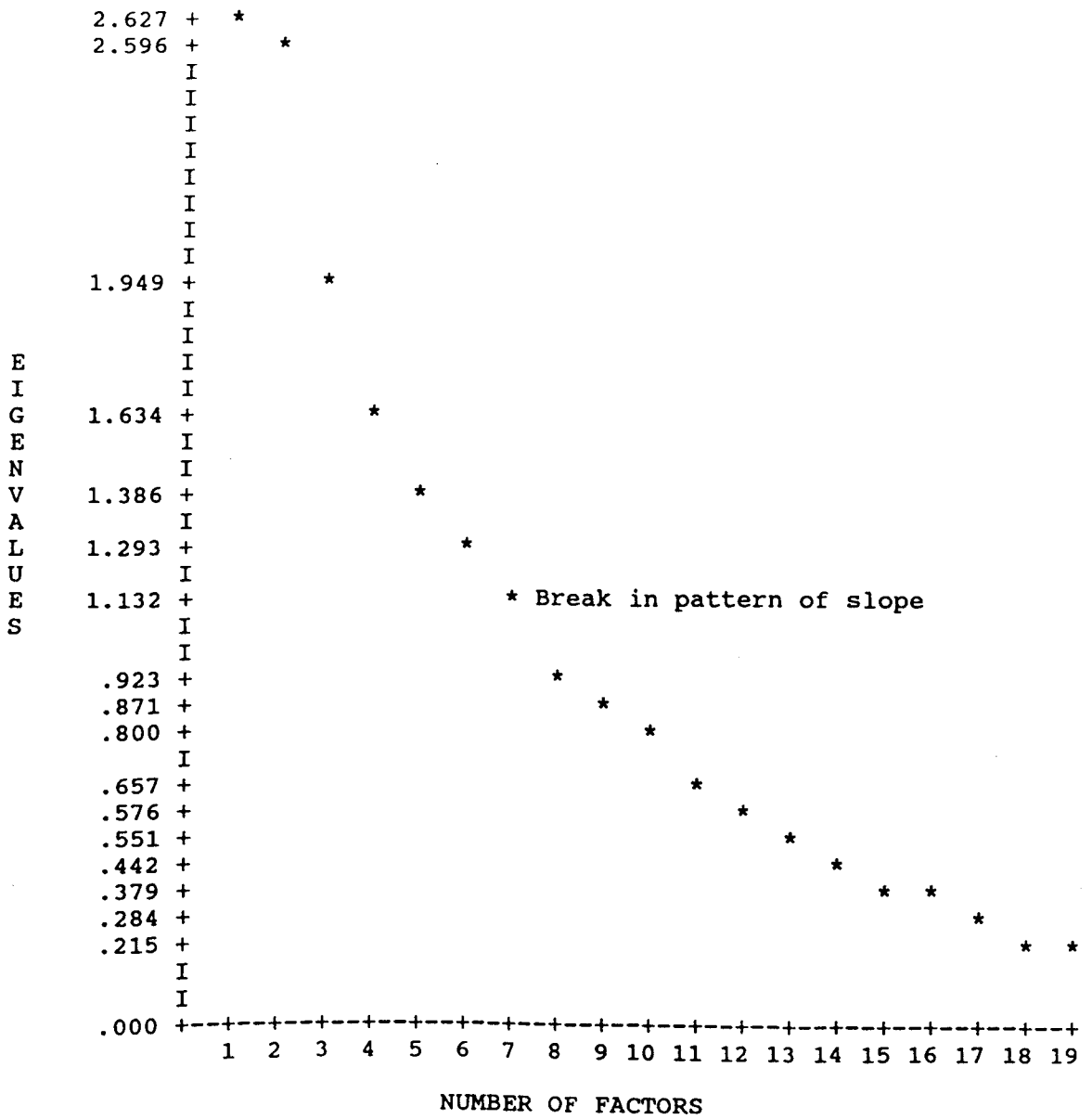
STWME STEXP

STFOU STQUA

STEST STEMP

STEFF STTEC STEDU

SCREE PLOT OF EIGEN VALUES EXTRACTED BY PRINCIPAL-COMPONENT  
ANALYSIS AND PRINCIPAL AXIS FACTORING FOR ALL BLUE COLLAR ESTABLISHMENTS



FINAL STATISTICS OF PRINCIPAL-COMPONENT ANALYSIS  
FOR ALL BLUE COLLAR ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.67915	*	1	2.62665	13.8	13.8
STWME	.74548	*	2	2.59589	13.7	27.5
STTUR	.76549	*	3	1.94863	10.3	37.7
STTEC	.61586	*	4	1.63422	8.6	46.3
STPRE	.52662	*	5	1.38608	7.3	53.6
STFOR	.65797	*	6	1.29279	6.8	60.4
STFOU	.82857	*	7	1.13221	6.0	66.4
STEXA	.77860	*				
STEXP	.75547	*				
STNOC	.61905	*				
STNOS	.58355	*				
STEST	.50774	*				
STTRA	.56359	*				
STEMP	.73350	*				
STSOC	.58585	*				
STEXS	.62687	*				
STEDU	.54538	*				
STSIN	.73899	*				
STQUA	.75874	*				



ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED  
BY PRINCIPAL-COMPONENT ANALYSIS FOR ALL BLUE COLLAR ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STEXA	.85124			
STSIN	-.84723			
STEXS	.76578			
STNOS		.73688		
STTUR		.67739		
STNOC		.59851		
STTRA		.57623		
STEXP			.84857	
STWME			.84615	
STFOR				-.77101
STSOC				.73164
STPRE				.45988
STEFF				
STTEC				
STEDU				
STFOU				
STQUA				
STEMP				
STEST				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STEXA				
STSIN				
STEXS				
STNOS				
STTUR				
STNOC				
STTRA				
STEXP				
STWME				
STFOR				
STSOC				
STPRE				
STEFF	.75329			
STTEC	.70308			
STEDU	.43922			
STFOU		.85322		
STQUA		.81773		
STEMP			.80616	
STEST			-.57175	

FINAL STATISTICS OF PRINCIPAL AXIS  
FACTORING FOR ALL BLUE COLLAR ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.63491	*	1	2.21335	11.6	11.6
STWME	.57031	*	2	2.11875	11.2	22.8
STTUR	.81595	*	3	1.56036	8.2	31.0
STTEC	.39607	*	4	1.25101	6.6	37.6
STPRE	.22117	*	5	.92441	4.9	42.5
STFOR	.46500	*	6	.81554	4.3	46.8
STFOU	.95157	*	7	.62401	3.3	50.0
STEXA	.75297	*				
STEXP	.68771	*				
STNOC	.47593	*				
STNOS	.30062	*				
STEST	.14049	*				
STTRA	.38829	*				
STEMP	.68701	*				
STSOC	.38948	*				
STEXS	.42665	*				
STEDU	.17281	*				
STSIN	.63644	*				
STQUA	.39403	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED  
BY PRINCIPAL AXIS FACTORING FOR ALL BLUE COLLAR ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STEXA	.83204			
STSIN	-.78298			
STEXS	.62947			
STTUR		.85145		
STNOC		.62650		
STNOS		.48049		
STTRA		.40772		
STEXP			.80980	
STWME			.72829	
STFOU				.92686
STQUA				.56639
STFOR				
STSOC				
STPRE				
STEFF				
STEDU				
STTEC				
STEMP				
STEST				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STEXA				
STSIN				
STEXS				
STTUR				
STNOC				
STNOS				
STTRA				
STEXP				
STWME				
STFOU				
STQUA				
STFOR	-.65141			
STSOC	.59626			
STPRE	.31605			
STEFF		.76499		
STEDU		.64723		
STTEC		.55071		
STEMP			.77945	
STEST			-.40772	

Appendix 6vi

**White Collar Multi Site Establishments  
and Blue Collar Single Site Establishments**

- 1/ Scree Diagram for Principal-Component and Principal Axis Factoring
- 2/ Final Statistics for Principal-Component Analysis
- 3/ Orthogonal Rotation for Principal Component Analysis
- 4/ Final Statistics for Principal Axis Factoring
- 5/ Orthogonal Rotation for Principal Axis Factoring

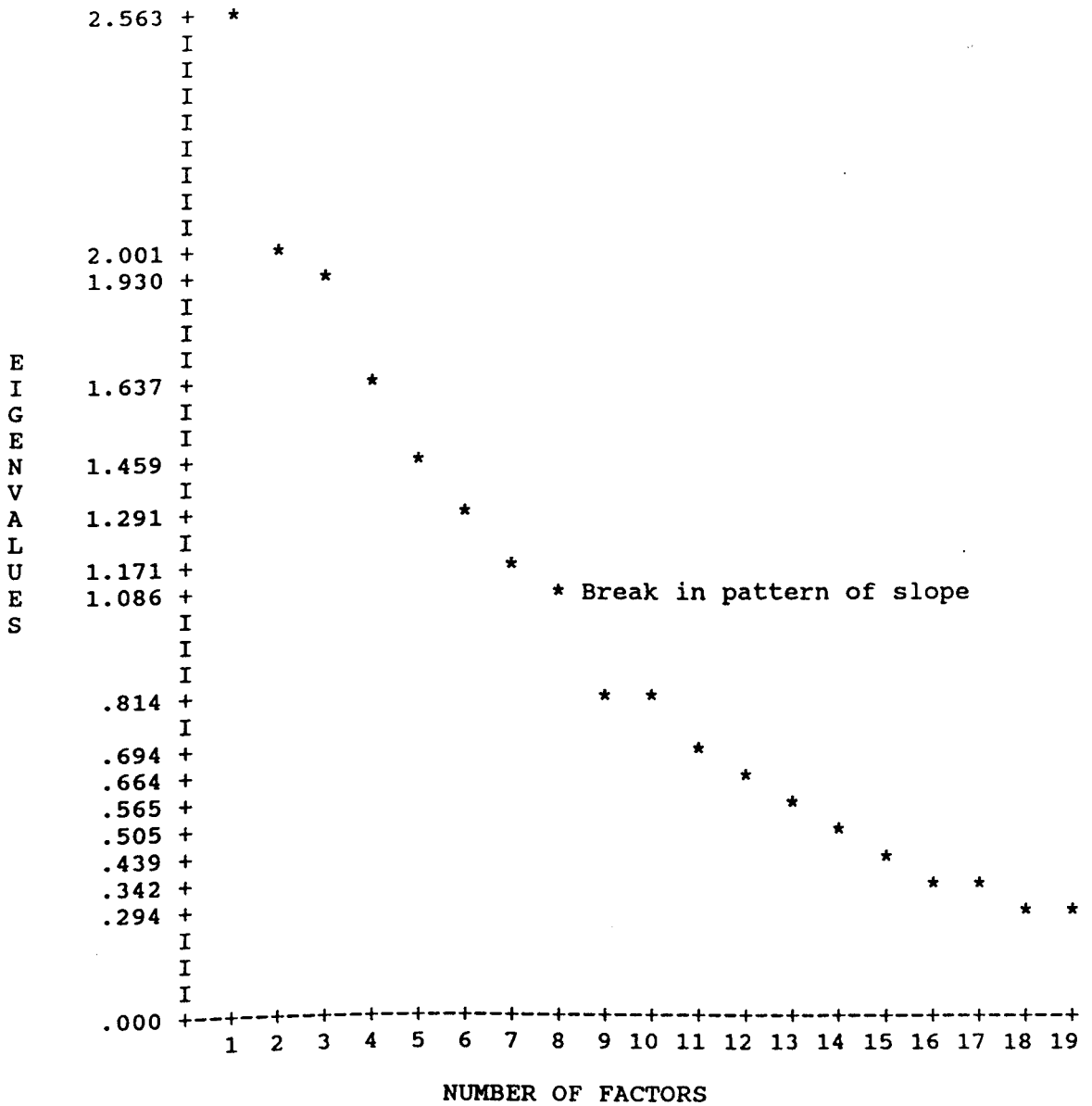
**White Collar Multi Site Establishments**

<u>Factor Names</u>	<u>Variable Names</u>
Credentials	STQUA STFOU
Firm Performance	STTUR STNOC STNOS
Export	STWME STEXP
Resource Attributes	STEDU STEXS
Founder's Background and Community Status	STEST STEMP STPRE
Technological Investment and Training	STEFF STTEC STTRA
Social and Economic Status	STSTA STEXA STSOC
Merseyside Residence	STFOR

**Blue Collar Single Site Establishments**

<u>Factor Names</u>	<u>Variable Names</u>
Credentials and Firm Size	STQUA STFOU STEMP
Firm Performance and Age	STTUR STNOC STPRE STEST
Export	STWME STEXP
Resource Attributes and Service Range	STEDU STEXS STNOS
Social Status	STSOC STFOR
Technological Investment	STEFF STTEC
Resource Development	STTRA STEXA

SCREE PLOT OF EIGEN VALUES EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS AND PRINCIPAL AXIS FACTORING FOR WHITE COLLAR MULTI SITE ESTABLISHMENTS



FINAL STATISTICS OF PRINCIPAL-COMPONENT ANALYSIS FOR WHITE  
COLLAR MULTI SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.75123	*	1	2.56268	13.5	13.5
STWME	.73129	*	2	2.00076	10.5	24.0
STTEC	.73607	*	3	1.93018	10.2	34.2
STPRE	.62114	*	4	1.63711	8.6	42.8
STFOR	.76944	*	5	1.45928	7.7	50.5
STFOU	.78591	*	6	1.29111	6.8	57.3
STQUA	.78655	*	7	1.17053	6.2	63.4
STEXA	.67607	*	8	1.08617	5.7	69.1
STEXP	.78084	*				
STNOC	.71172	*				
STTUR	.78135	*				
STNOS	.42394	*				
STEST	.65437	*				
STTRA	.57771	*				
STEMP	.64528	*				
STSOC	.55052	*				
STEXS	.78325	*				
STEDU	.80820	*				
STSTA	.56296	*				

ORTHOGONAL ROTATION OF EIGHT FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR WHITE COLLAR MULTI SITE ESTABLISHMENTS  
(VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STEFF	-.83738			
STTEC	.83373			
STTRA	.57666			
STTUR		.85791		
STNOC		.82441		
STNOS		.38781		
STQUA			.87708	
STFOU			.87306	
STEDU				.87881
STEXS				-.85693
STEST				
STEMP				
STPRE				
STEXP				
STWME				
STEXA				
STSOC				
STSTA				
STFOR				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	<u>FACTOR 8</u>
STEFF				
STTEC				
STTRA				
STTUR				
STNOC				
STNOS				
STQUA				
STFOU				
STEDU				
STEXS				
STEST	-.80339			
STEMP	.65914			
STPRE	.65519			
STEXP		.86772		
STWME		.81871		
STEXA			.75138	
STSOC			-.64794	
STSTA			.54316	
STFOR				.87377

FINAL STATISTICS OF PRINCIPAL AXIS FACTORING FOR WHITE  
COLLAR MULTI SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
		*				
STEFF	.70198	*	1	2.10309	11.1	11.1
STWME	.50598	*	2	1.56831	8.3	19.3
STTEC	.58928	*	3	1.46994	7.7	27.1
STPRE	.30967	*	4	1.20185	6.3	33.4
STFOR	.26853	*	5	1.00584	5.3	38.7
STFOU	.60687	*	6	.79430	4.2	42.9
STQUA	.62013	*	7	.66041	3.5	46.3
STEXA	.53327	*	8	.44567	2.3	48.7
STEXP	.59102	*				
STNOC	.40244	*				
STTUR	.84537	*				
STNOS	.23176	*				
STEST	.48626	*				
STTRA	.41058	*				
STEMP	.37796	*				
STSOC	.20920	*				
STEXS	.52273	*				
STEDU	.76880	*				
STSTA	.26757	*				

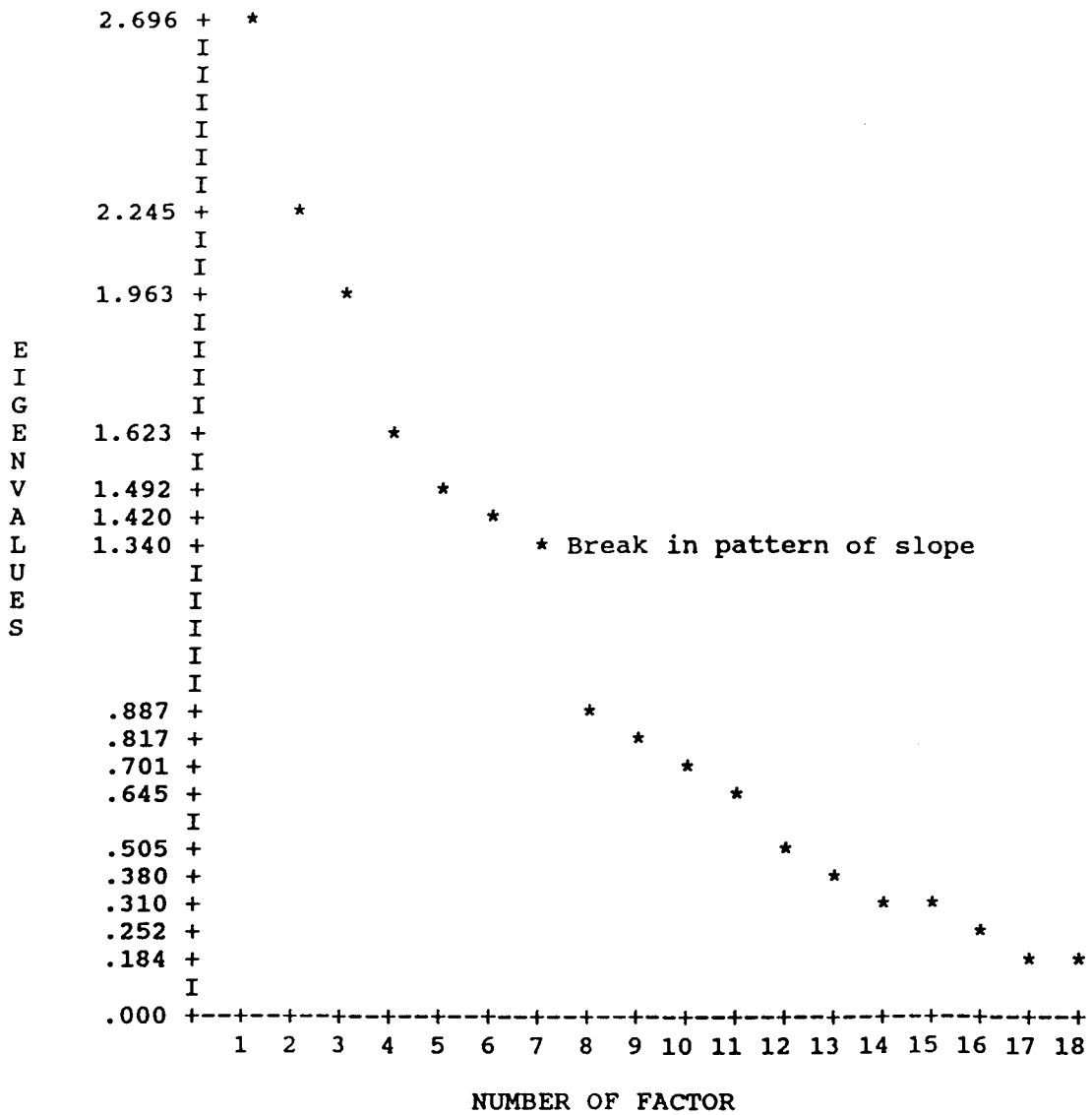


ORTHOGONAL ROTATION OF EIGHT FACTORS EXTRACTED BY PRINCIPAL  
 AXIS FACTORING FOR WHITE COLLAR MULTI SITE ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STEFF	-.80065			
STTEC	.74515			
STTRA	.45588			
STTUR		.89731		
STNOC		.60865		
STNOS		.45277		
STQUA			.85347	
STFOU			.69538	
STEDU				.77577
STEXS				-.76249
STEST				
STEMP				
STPRE				
STEXP				
STWME				
STEXA				
STSTA				
STSOC				
STFOR				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	<u>FACTOR 8</u>
STEFF				
STTEC				
STTRA				
STTUR				
STNOC				
STNOS				
STQUA				
STFOU				
STEDU				
STEXS				
STEST	-.75326			
STEMP	.66619			
STPRE	.47511			
STEXP		.72068		
STWME		.67511		
STEXA			.67367	
STSTA			.40675	
STSOC			-.38398	
STFOR				.51200

SCREE PLOT OF EIGEN VALUES EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS  
AND PRINCIPAL AXIS FACTORING FOR BLUE COLLAR SINGLE SITE ESTABLISHMENTS



FINAL STATISTICS OF PRINCIPAL-COMPONENT ANALYSIS FOR BLUE COLLAR  
SINGLE SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.76753	*	1	2.69620	15.0	15.0
STWME	.73184	*	2	2.24464	12.5	27.4
STTEC	.76766	*	3	1.96322	10.9	38.4
STPRE	.57843	*	4	1.62333	9.0	47.4
STFOR	.60598	*	5	1.49164	8.3	55.7
STFOU	.83167	*	6	1.41980	7.9	63.5
STQUA	.78398	*	7	1.34006	7.4	71.0
STEXA	.80787	*				
STEXP	.80838	*				
STNOC	.66128	*				
STTUR	.76602	*				
STNOS	.56137	*				
STEST	.48940	*				
STTRA	.79432	*				
STEMP	.61126	*				
STSOC	.72418	*				
STEXS	.73297	*				
STEDU	.75475	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR BLUE COLLAR SINGLE SITE ESTABLISHMENTS  
(VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STFOU	.89330			
STQUA	.83406			
STEMP	-.47031			
STTUR		.82023		
STEST		-.57026		
STNOC		.51553		
STPRE		.45243		
STEFF			-.86423	
STTEC			.81121	
STEXS				.79992
STEDU				-.79228
STNOS				.54066
STEXP				
STWME				
STSOC				
STFOR				
STEXA				
STTRA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STFOU				
STQUA				
STEMP				
STTUR				
STEST				
STNOC				
STPRE				
STEFF				
STTEC				
STEXS				
STEDU				
STNOS				
STEXP	.88753			
STWME	.83526			
STSOC		.76227		
STFOR		.75564		
STEXA			.83653	
STTRA			.52170	

FINAL STATISTICS OF PRINCIPAL AXIS FACTORING FOR BLUE COLLAR  
SINGLE SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.68238	*	1	2.33500	13.0	13.0
STWME	.50163	*	2	1.88446	10.5	23.4
STTEC	.62821	*	3	1.62799	9.0	32.5
STPRE	.33255	*	4	1.23220	6.8	39.3
STFOR	.28479	*	5	.99495	5.5	44.9
STFOU	.89330	*	6	.93040	5.2	50.0
STQUA	.66068	*	7	.92608	5.1	55.2
STEXA	.65447	*				
STEXP	.82969	*				
STNOC	.37582	*				
STTUR	.83889	*				
STNOS	.33458	*				
STEST	.15573	*				
STTRA	.70626	*				
STEMP	.25898	*				
STSOC	.58011	*				
STEXS	.60435	*				
STEDU	.60865	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL  
 AXIS FACTORING FOR BLUE COLLAR SINGLE SITE ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STFOU	.93046			
STQUA	.76360			
STEMP	-.36227			
STTUR		.87786		
STNOC		.45802		
STPRE		.33212		
STEST		-.32702		
STEXP			.90023	
STWME			.69038	
STEFF				-.81544
STTEC				.72649
STEXS				
STEDU				
STNOS				
STSOC				
STFOR				
STEXA				
STTRA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STFOU				
STQUA				
STEMP				
STTUR				
STNOC				
STPRE				
STEST				
STEXP				
STWME				
STEFF				
STTEC				
STEXS	.72779			
STEDU	-.71809			
STNOS	.41389			
STSOC		.70148		
STFOR		.51810		
STEXA			.73407	
STTRA			.51730	

Appendix 6vii

Blue Collar Multi Site Establishments

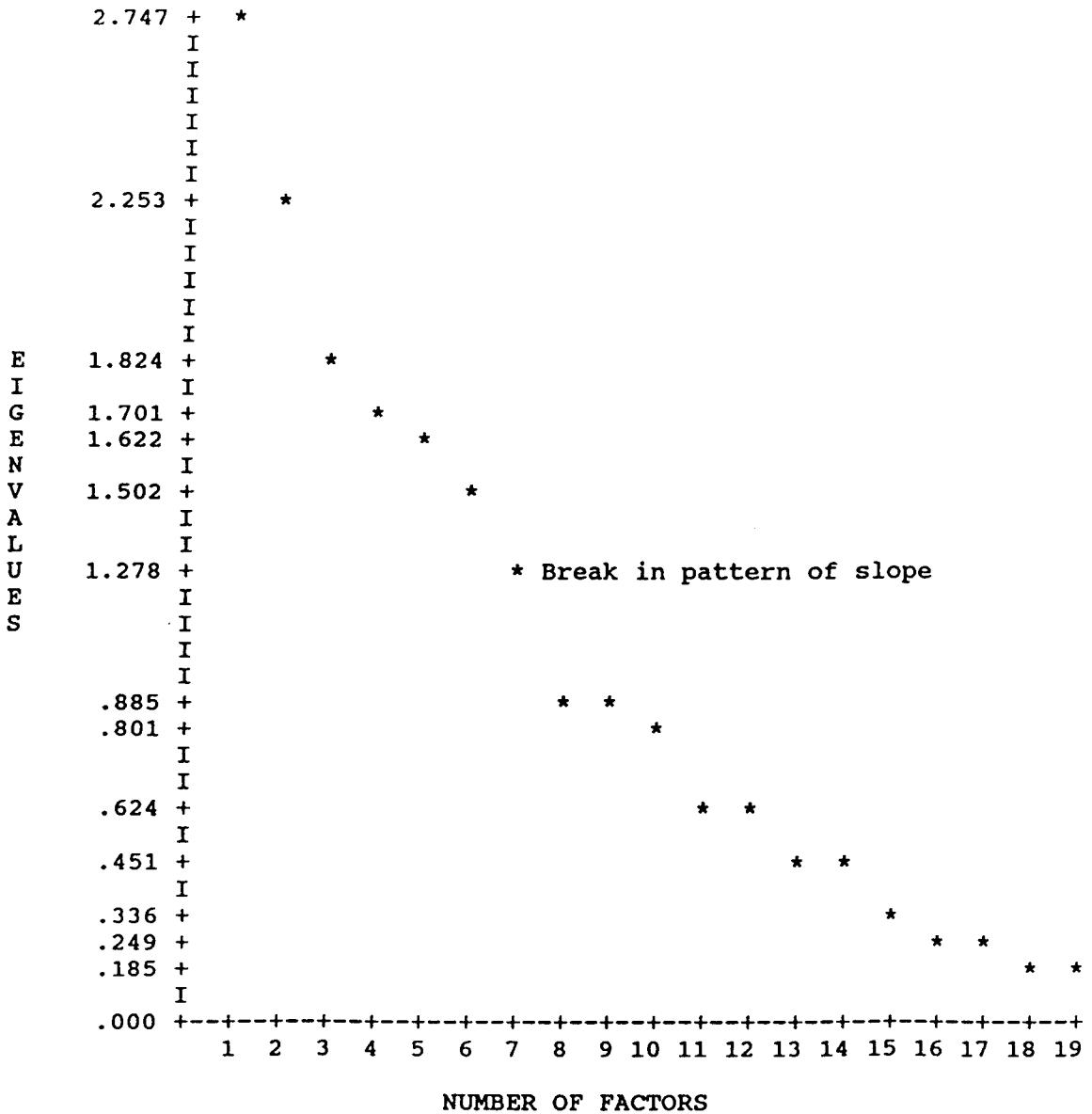
- 1/ Scree Diagram for Principal-Component and Principal Axis Factoring
- 2/ Final Statistics for Principal-Component Analysis
- 3/ Orthogonal Rotation for Principal Component Analysis
- 4/ Final Statistics for Principal Axis Factoring
- 5/ Orthogonal Rotation for Principal Axis Factoring

Factor Names

Variable Names

Technological Investment	STTEC STEFF
Firm Performance and Community Status	STTUR STNOC STST STSTEMP
Credentials	STQUA STFOU
Community Links and Firm Status	STEDU STFOR STSTA
Business Linkage and Resources	STNOS STEXS STTRA STPRE
Export	STEXP STWME
Routine Business Links and Social Status	STEXA STSOC
Residential Preference	STFOR STPRE STSTA

SCREE PLOT OF EIGEN VALUES EXTRACTED BY PRINCIPAL-COMPONENT ANALYSIS AND PRINCIPAL AXIS FACTORING FOR BLUE COLLAR MULTI SITE ESTABLISHMENTS





FINAL STATISTICS OF PRINCIPAL-COMPONENT ANALYSIS FOR  
BLUE COLLAR MULTI SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.74145	*	1	2.74718	14.5	14.5
STWME	.73255	*	2	2.25281	11.9	26.3
STTUR	.78015	*	3	1.82420	9.6	35.9
STTEC	.76103	*	4	1.70108	9.0	44.9
STPRE	.54876	*	5	1.62238	8.5	53.4
STFOR	.61200	*	6	1.50182	7.9	61.3
STFOU	.75980	*	7	1.27784	6.7	68.0
STEXA	.78475	*				
STEXP	.82534	*				
STNOC	.65744	*				
STNOS	.54250	*				
STEST	.55060	*				
STTRA	.79317	*				
STEMP	.54778	*				
STSOC	.59749	*				
STEXS	.56413	*				
STEDU	.82191	*				
STSTA	.63537	*				
STQUA	.67106	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR BLUE COLLAR MULTI SITE ESTABLISHMENTS  
(VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STNOS	.72365			
STEXS	-.64466			
STTRA	.54064			
STPRE	.41081			
STEFF		.83706		
STTEC		.77056		
STEXP			.88675	
STWME			.83532	
STTUR				.77815
STEST				-.58406
STNOC				.53587
STEMP				.52715
STFOU				
STQUA				
STEDU				
STFOR				
STSTA				
STEXA				
STSOC				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STNOS				
STEXS				
STTRA				
STPRE				
STEFF				
STTEC				
STEXP				
STWME				
STTUR				
STEST				
STNOC				
STEMP				
STFOU	.84080			
STQUA	.75674			
STEDU		.72997		
STFOR		-.67316		
STSTA		-.65842		
STEXA			.86058	
STSOC			.44317	

FINAL STATISTICS OF PRINCIPAL AXIS FACTORING FOR  
BLUE COLLAR MULTI SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.62278	*	1	2.33559	12.3	12.3
STWME	.43876	*	2	1.92771	10.1	22.4
STTUR	.85037	*	3	1.40554	7.4	29.8
STTEC	.69740	*	4	1.32176	7.0	36.8
STPRE	.32559	*	5	1.23318	6.5	43.3
STFOR	.33873	*	6	.96351	5.1	48.4
STFOU	.71734	*	7	.85462	4.5	52.9
STEXA	.65825	*				
STEXP	.99749	*				
STNOC	.39895	*				
STNOS	.31056	*				
STEST	.20614	*				
STTRA	.71918	*				
STEMP	.22043	*				
STSOC	.39399	*				
STEXS	.32480	*				
STEDU	.92412	*				
STSTA	.42792	*				
STQUA	.46912	*				

ORTHOGONAL ROTATION OF SEVEN FACTORS EXTRACTED BY PRINCIPAL  
 AXIS FACTORING FOR BLUE COLLAR MULTI SITE ESTABLISHMENTS  
 (VALUES BELOW 0.3000 ARE NOT SHOWN)

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STEXP	.98028			
STWME	.64460			
STEFF		.77731		
STTEC		.73697		
STTUR			.85666	
STNOC			.50629	
STEST			-.32761	
STEMP			.30503	
STTRA				.55568
STNOS				.53552
STEXS				-.49712
STPRE				.36518
STEDU				
STFOR				
STSTA				
STFOU				
STQUA				
STEXA				
STSOC				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STEXP				
STWME				
STEFF				
STTEC				
STTUR				
STNOC				
STEST				
STEMP				
STTRA				
STNOS				
STEXS				
STPRE				
STEDU	.87418			
STFOR	-.40324			
STSTA	-.53968			
STFOU		.82338		
STQUA		.62215		
STEXA			.77632	
STSOC			.65428	

Appendix 6viii

**White Collar Single Site Establishments**

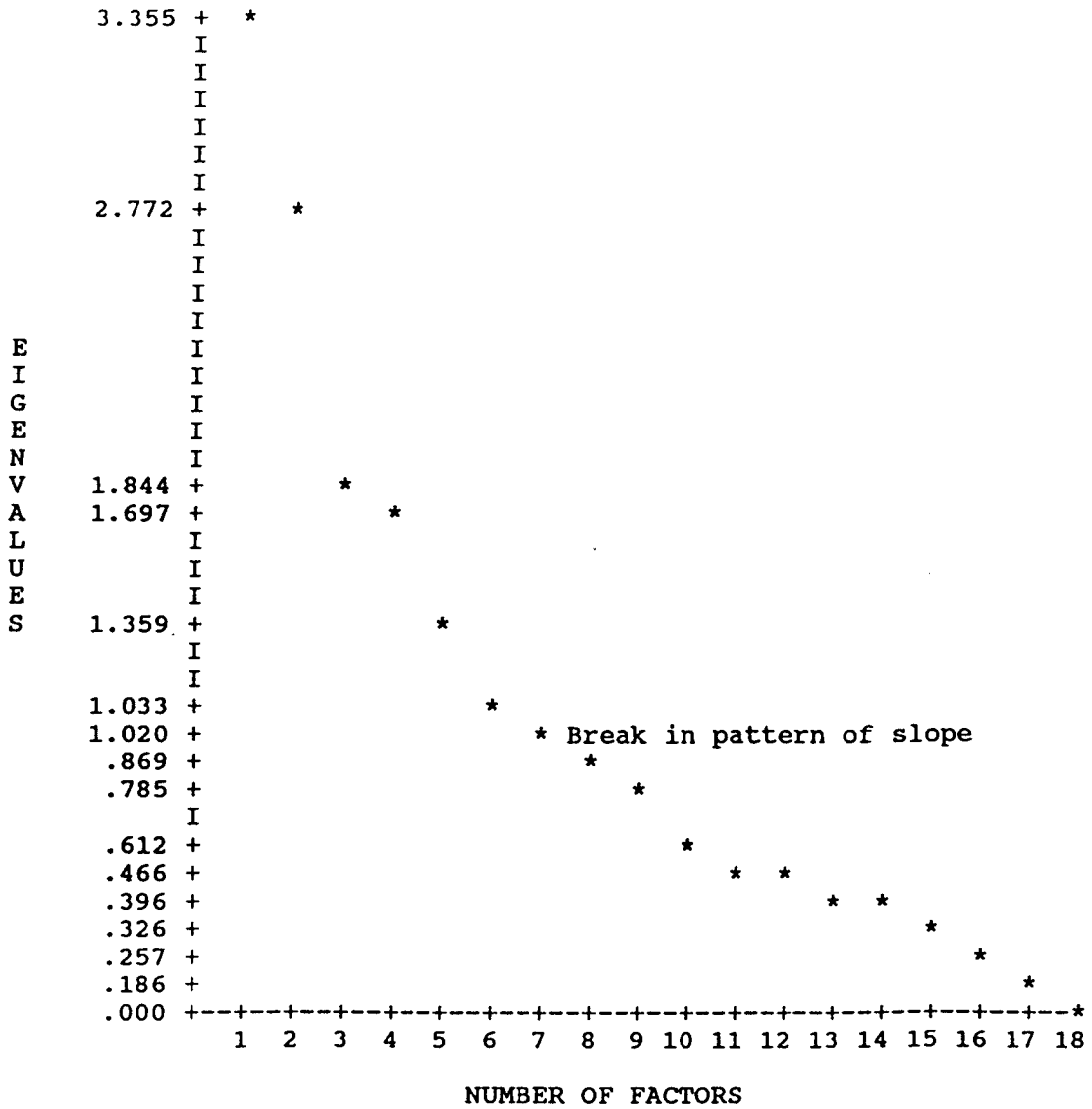
- 1/ Scree Diagram for Principal-Component and Principal Axis Factoring
- 2/ Final Statistics for Principal-Component Analysis
- 3/ Orthogonal Rotation for Principal Component Analysis
- 4/ Final Statistics for Principal Axis Factoring
- 5/ Orthogonal Rotation for Principal Axis Factoring

Factor Names

Variable Names

Socio-Spatial Divisions of Labour	STQUA STFOU STFOR STSOC
Firm Performance and Fututre IT Investment	STTUR STNOC STNOS STEFF
Export and Training	STWME STEXP STTRA
Resource Attributes	STEDU STEXS
Community Status	STEST STEMP
Technology	STTEC
Auxiliary Supporting Expertise	STPRE STEXA

SCREE PLOT OF EIGEN VALUES FOR PRINCIPAL-COMPONENT ANALYSIS  
AND PRINCIPAL AXIS FACTORING FOR WHITE COLLAR  
SINGLE SITE ESTABLISHMENTS



FINAL STATISTICS FOR PRINCIPAL-COMPONENT ANALYSIS OF  
WHITE COLLAR SINGLE SITE ESTABLISHMENTS

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.64647	*	1	3.35505	18.6	18.6
STWME	.78049	*	2	2.77164	15.4	34.0
STTEC	.88315	*	3	1.84420	10.2	44.3
STPRE	.70672	*	4	1.69729	9.4	53.7
STFOR	.71206	*	5	1.35884	7.5	61.3
STFOU	.81259	*	6	1.03325	5.7	67.0
STQUA	.84223	*	7	1.01989	5.7	72.7
STEXA	.49276	*				
STEXP	.72002	*				
STNOC	.74974	*				
STTUR	.83342	*				
STNOS	.69238	*				
STEST	.70825	*				
STTRA	.58104	*				
STEMP	.75613	*				
STSOC	.63434	*				
STEXS	.75561	*				
STEDU	.77276	*				

ORTHOGONAL ROTATION OF THE SEVEN FACTORS EXTRACTED BY PRINCIPAL-  
COMPONENT ANALYSIS FOR ALL WHITE COLLAR SINGLE SITE ESTABLISHMENTS

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.91315			
STFOU	.89517			
STFOR	.77760			
STSOC	.76746			
STTUR		.86677		
STNOC		.85259		
STNOS		.77683		
STEFF		.52981		
STWME			.85421	
STEXP			.84174	
STTRA			.35838	
STEDU				-.84899
STEXS				.83885
STEMP				
STEST				
STTEC				
STPRE				
STEXA				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STFOR				
STSOC				
STTUR				
STNOC				
STNOS				
STEFF				
STWME				
STEXP				
STTRA				
STEDU				
STEXS				
STEMP	-.85581			
STEST	.81989			
STTEC		.92130		
STPRE			.77590	
STEXA			-.50625	



FINAL STATISTICS FOR PRINCIPAL AXIS FACTORING OF  
WHITE COLLAR SINGLE SITE ESTABLISHMENTS

FINAL STATISTICS:

<u>VARIABLE</u>	<u>COMMUNALITY</u>	*	<u>FACTOR</u>	<u>EIGENVALUE</u>	<u>PCT OF VAR</u>	<u>CUM PCT</u>
STEFF	.39992	*	1	3.05552	17.0	17.0
STWME	.66995	*	2	2.40367	13.4	30.3
STTEC	.84903	*	3	1.46944	8.2	38.5
STPRE	.10464	*	4	1.32808	7.4	45.9
STFOR	.59780	*	5	.91525	5.1	51.0
STFOU	.85371	*	6	.76695	4.3	55.2
STQUA	.89481	*	7	.47467	2.6	57.9
STEXA	.09157	*				
STEXP	.53096	*				
STNOC	.68676	*				
STTUR	.85869	*				
STNOS	.52454	*				
STEST	.34805	*				
STTRA	.58378	*				
STEMP	.66344	*				
STSOC	.53306	*				
STEXS	.68418	*				
STEDU	.53868	*				

ORTHOGONAL ROTATION OF THE SEVEN FACTORS EXTRACTED BY PRINCIPAL  
 AXIS FACTORING FOR ALL WHITE COLLAR SINGLE SITE ESTABLISHMENTS

ROTATED FACTOR MATRIX:

	<u>FACTOR 1</u>	<u>FACTOR 2</u>	<u>FACTOR 3</u>	<u>FACTOR 4</u>
STQUA	.94116			
STFOU	.91668			
STFOR	.67912			
STSOC	.62674			
STTUR		.88722		
STNOC		.81472		
STNOS		.65734		
STEFF		.48229		
STWME			.78939	
STEXP			.71845	
STTRA			.53862	
STEXS				.81098
STEDU				-.68643
STEMP				
STEST				
STTEC				
STEXA				
STPRE				
	<u>FACTOR 5</u>	<u>FACTOR 6</u>	<u>FACTOR 7</u>	
STQUA				
STFOU				
STFOR				
STSOC				
STTUR				
STNOC				
STNOS				
STEFF				
STWME				
STEXP				
STTRA				
STEXS				
STEDU				
STEMP	-.80352			
STEST	.56900			
STTEC		.90454		
STEXA			-.62332	
STPRE			.56234	

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