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Short Run Labour Supply: Evidence from
Manufacturing Establishments in the North East

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Degree of Master of Philosophy in Social Sciences

University of Durham

North East Area Study

1977

Short Run Labour Supply: Evidence from
Manufacturing Establishments in the North East

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Appendices 1.1, 1.2 and 1.3 should be regarded, therefore as the result of joint research although they were written by the author. The remainder of the thesis, including all the analysis of survey and other data represents the individual contribution of the author.

It is the author's belief that none of the material contained in this thesis has been previously submitted for a degree in this or any other university.

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ABSTRACT OF THE THESIS

Short Run Labour Supply: Evidence from Manufacturing
Establishments in the North East. ERIC SMITH

This thesis draws upon both survey data and standard sources to argue that competitive labour markets exist and that the assumption of economic rationality in a market context assists an understanding of the behaviour and attitudes of suppliers of labour services.

Detailed analysis of the survey areas and the job histories of respondents suggests that spatial and occupational mobility may be substitutes and that these market dimensions are much more important than the industrial. Geographical and occupational mobility are therefore studied in greater depth through aggregate data although explanations at the level of individual decisions are presented throughout. It is found that labour markets are highly complex; for example they may overlap spatially and occupational markets may be inter-related. Factors affecting the training decision are also very complicated but partial explanations are suggested and a further chapter studies the distinction between general and specific training from the viewpoint of the worker rather than the firm.

The traditional approach can be supplemented by recognising the phenomena of imperfect, costly information and job search. Inefficient information systems are one reason why different groups might adopt various short run strategies to achieve a long run equilibrium. These groups are identified and the analysis presented indicates a line of further research aimed at understanding the key problems of differential lengths and incidences of unemployment and many workers accepting lower pay levels than in their previous job.

Chapter 1

Introduction: An Outline of the Thesis

Introduction: An Outline of the Thesis

1. Introduction

This thesis is intended as a contribution to Labour Market Economics. It presents evidence which adds to the stock of economic knowledge about the behaviour and attitudes of suppliers of labour services and uses both original data from a survey of workers and complementary data from standard sources. Arguments based upon the assumption that a labour market exists are offered as plausible explanations of the attitudes and behaviour patterns of those socio-economic groups represented by respondents to the survey. The ontological case for competitive labour markets is upheld further by studies of the definition and characteristics of local labour markets.

Most economic theory approaches the market behaviour of firms and households through an analysis of individual units. Empirical work usually studies the behaviour of aggregates and this thesis is no exception. We will examine the results of individual decisions at aggregate level then pursue the theme which emerges by studying both the behaviour of workers seeking to implement their market decisions and the determinants of that behaviour. Explanations will be offered from analysis at the level of the individual. Within this framework we will appraise some traditional theory relating to labour markets and test some specific hypotheses.

2. Methodology

Science is concerned with the explanation of particular events by reference to general principles or laws which typically act under specified conditions. Classificatory

systems, although mainly descriptive, constitute a form of explanation but this is often thought to be at a lower level than most scientific explanation, which can be seen as leading to some form of understanding. Prediction is the application of an explanatory scheme to future events which can lead sometimes to control. In this sense prediction and explanation are symmetrical concepts about a point in time - the present.

Theory forms the basis of scientific explanation and prediction. Scientific method is seen frequently as a process of theory, hypothesis, deduction and test to the exclusion of all other sequences. As a result empiricism only has a role in the testing of hypotheses and empirical research which does not set out to achieve this is relegated to the non-scientific function of the accumulation of facts. (see, for example HARRE (30)* In this view prediction achieves a respectability above mere explanation although it is recognised that a theory whose consequences are not borne out by experiment and observation must be modified in order to account for the empirical findings. An alternative formulation, for example SIMON (83) suggests that empirical data can, and often do, precede hypotheses and the formation of explanatory theories. Such theories generally make predictions that go beyond simple generalisations and suggest new experiments and observations that allow them to be tested further.

This thesis will demonstrate that, at least in the field of Labour Market Economics both these views of the scientific process can yield fruitful results.

* See Bibliography for references

An individual researcher setting out on a field of study will bring to it his preconceptions which, typically, will be dispelled as he achieves familiarity, through reading, with earlier work. Only then will he be specific about the phenomena which he wishes to observe. The mental processes involved could be termed 'hypothesis formulation' and, at least in economics these will be grounded, usually, in general theory. Such hypotheses can be seen as existing on two levels, those which yield specific predictions which, if refuted, involve the modification of theory and those which constitute little more than ideas.

In this thesis we will test hypotheses at both levels. An example of a specific prediction is the hypothesis (BECKER (3)) that 'general' training induces relatively greater non-occupational mobility amongst workers. In Chapter 6 we will find evidence to suggest that geographic mobility may be a determinant of the 'generality' of training; this has implications for Becker's theory of training. One of the hypotheses at the level of ideas is the notion that family responsibilities might prevent workers from undertaking further training courses. In Chapter 5 we will see that such responsibilities have little influence on the training decision and alternative explanations will be offered which are equally consistent with theory.

To the individual researcher the scientific process may appear to be the familiar sequence of theory, hypothesis, deduction and test. Science is not embodied in an individual however and in any particular field it may be difficult to distinguish whether theory preceded observation or vice versa

in the initial stages of development. In economics there has been, perhaps, too little empirical work relative to theorizing and many theories have been built upon early empirical work and crude hypothesizing which have been learnt second hand; the armchair economist is an established phenomenon. Too much reliance upon previous work, however, can lead to important areas of human behaviour being overlooked for both research and theoretical purposes. In Labour Market Economics concentration on testing the principle of net advantage (SMITH (86)), which is probably not falsifiable in practice (see Chapter 8), has led to the interesting areas of job search and information being neglected until recently. This thesis will show that a less narrow-minded approach to the scientific process can yield useful results in these areas.

3. The Survey

Full details of the selection of the seven survey firms are contained in Appendix 1.1 and a report of the interviewing and the selection of workers to be interviewed is at Appendix 1.2. Appendix 1.3. is a copy of the questionnaire. This section is a brief description of the survey which will probably suffice for most readers. Henceforth we shall refer to this survey of workers as 'the survey'.

The survey was conducted in 1975 by a small team at the North East Area Study of the University of Durham among 393 employees of seven manufacturing plants established in the Industrial North East since 1958, five of them since 1972. The firms were selected from 117 establishments, each of which had responded to a survey of managers in 1974.⁽¹⁾ The information

(1) For a report of this survey see MORLEY (56)

on each firm from this 1974 survey was subjected to fairly exhaustive analysis and the selection, bearing in mind a number of factors was made collectively by the team. These factors were the balance between the interests of the team members in geography, industrial sociology and labour economics; between male and female employees; between skilled and unskilled work; between the variety of industry which has moved to the Northern Region; between the fast growing areas of New Towns and other areas; and between types of travel to work areas with different labour market characteristics. One important criterion for all firms was an expansion of at least about 50 workpeople since mid-1972.

It was impossible to satisfy all these criteria simultaneously but the main objective was a group of five plants established in or since 1972. The managers of six such plants were approached and the permission of the employees was sought either directly or through their representatives. In only one case did a firm refuse. To secure a firm to represent those established during the period 1965 to 1970 three factories were approached, all accepted and the one giving the most favourable response was selected. Bearing in mind a possibly long settling-in period an earlier established firm was sought and in this case it was the third factory approached which agreed. The interviewing was conducted on 26th February, 5th March and over the period 21st April to 24th June, 1975.

Without naming the firms it is possible to describe the factories under a number of heads:-

Present Location. The seven factories are located in six areas in the Industrial North East which include all the broad destination areas ⁽²⁾ of plants moving into the region 1966-72 with the exception of Durham County. We will refer to the factories by their locations and display them in reverse order of the start of production:-

WASH 1	1974	(Washington New Town, Tyne and Wear County)
WASH 2	1973	(Washington New Town, Tyne and Wear County)
ASHT	1973	(Ashington, Northumberland)
SUND	1973	(Sunderland, Tyne and Wear County)
CRAM	1972	(Cramlington "New Town", Northumberland)
HART	1965	(Hartlepool, Cleveland County)
NEWB	1958	(Newburn area, Tyne and Wear County)

Industry. The seven factories fall into three Standard Industrial Classification (SIC) Order totals. Two plants are classified as electrical engineering (Order IX) one being concerned with electrical assembly and the other with process operations on component materials. Three of the plants are classified as mechanical engineering (Order VII), one being involved in the manufacture of gearing components for the vehicles industry and the other two with process operations on component materials and assembly. The remaining two firms fall technically into bricks, pottery, glass and cement (Order XVI), a highly heterogeneous Order but both include machining work and one has direct consumer sales.

(2) Source: unpublished summary paper of Department of Industry, Regional Office, Newcastle.

Geographic Origin and Ownership. In the Northern Region at large the South East and Eastern Regions were the main sources of inward movement of plants, 1966-72.⁽²⁾ Five of our firms have their immediate origin in the outer edges of London although one is in turn European owned and another has come into American ownership. Of the other two firms one is fairly directly controlled from the USA and the last is jointly owned by American and Tyneside firms.

Sex and Size. Three of the plants had virtually equal numbers of male and female employees, two were predominantly female employing and two overwhelmingly male. Lists of employees, normally for the first day of the month of interviewing in the firm, provide the following totals:-

Table 1. 1

Employment by the Factories prior to the Survey

	WASH1	WASH 2	ASHT	SUND	CRAM	HART	NEWB
Male	46	17	47	45	67	231	724
Female	47	27	47	2	118	208	29
Total	93	44	94	47	185	439	753

The Respondents. In all but one of the firms employing less than 100 people a 100% sample was attempted. At ASHT a level of 50% was utilized. In the three larger firms an effective sample size of approximately 100 was determined by proportional sampling from the departments in the factory. At HART and NEWB only employees recruited since early 1973 were interviewed, the cut-off dates being close to the average starting date for the other establishments. This ensured that all respondents had changed their job in the recent past.

The average response rate was 74.4%. Rates for individual firms are shown in Table 1.2.

Table 1.2

	WASH 1	WASH 2	ASHT	SUND	CRAM	HART	NEWB
Sample Size	93	44	47	46	100	137	119
Effective Sample Size*	86	44	47	46	98	104	103
Refusals	6	10	4	4	16	5	7
Absent During Visits	13	5	6	1	1	7	6
Others Not Contacted	6	2	-	2	3	12	19
Total Response	61	27	37	39	78	80	71
Of which Males:	22	9	17	38	25	42	69
Females:	39	18	20	1	53	38	2
Effective Response Rates.	71.0%	61.4%	78.8%	84.8%	79.7%	76.9%	68.9%

* Sample size minus those who had left since the sampling.

The overall total of respondents contains 56% of males, which is lower than the recorded rate of 67% for factories moving into the Northern Region between 1966 and 1972⁽³⁾, but higher than the figure of 50% for the period 1945-1965.⁽⁴⁾

4. Aims of the Thesis.

It was implied in the foregoing paragraphs that the survey had aims relevant to both regional and labour market economics. In one view of the regional problem these branches of economics are very closely related. This is that high and widely fluctuating unemployment rates are the main cause of concern and that since the source of this phenomenon, in the Northern Region at

(3) Source: unpublished summary paper of Department of Industry, Regional Office, Newcastle. (4) Source: BOARD OF TRADE (5)

least, is restricted to localized areas or 'unemployment black spots' the only justification for a truly 'regional' problem is that the economic difficulties of such 'local labour markets' have roots in a common factor or factors. Belief in this argument lies behind the designation of Special Development Areas in the 1960s. To the extent that this view is still valid, the findings of this thesis will be relevant to both labour market studies and regional development.

Clearly the argument cannot be true if the concept of a labour market is not important to the hiring of workers and the decisions of individual sellers of labour. The view taken by proponents of the 'job opportunities hypothesis' is that wages are determined by institutional bargaining and job chances by demand and the state of technology. (see, for example KING (43) p.13 for a summary of this position). This is in line with KERR (41) who argues that institutional rules and not frictions delineate job market limits, that wage markets are dominated by managerial and trade union leadership actions which, together with Government, substitute for market forces; if the single price occurs it is a consequence of policy. For recent work on the effects of trade union activity on the determination of wage rates see MULVEY (58). Another opinion is that the buying and selling of labour takes place chaotically, rather than in an orderly fashion governed by strong market forces (ROBINSON (79)) which is contrary to the view of SMITH (87) that a labour market is an orderly social system. These perspectives are inconsistent with the existence of a competitive labour market in the economic sense. It will be the central theme of this thesis that labour

markets do exist, at least at a local level but if studies of them are to be fruitful and relevant certain changes in emphasis in the traditional approach and analysis of previously neglected spheres of human behaviour, are needed.

At the simplest level a market implies the exchange of goods or services for money with the forces of supply and demand constituting the mechanism of resource allocation. More specifically the labour market consists of all those institutions, attitudes and value systems pertaining to wage levels. The participants are the 'individual' worker with his abilities, skills and preferences; the 'individual' employer with his manpower demands, policies and preferences; and formal and informal collective bargaining groups, organizations and institutions. Government functions largely as a regulator of employment conditions and labour relations but can intervene in its attempts to manage the economy. In competitive theory the forces of supply and demand are the predominant determinant of the price and the quantity traded. This thesis will show that there are imperfections in the labour market, such as spatial immobilities and imperfect information flows, which may result in the non-confirmation of some of the predictions of competitive theory. Such imperfections are not inconsistent with the existence of a market but competitive theory needs to be amended to take them into account.

Theory does not need to explain all behaviour or phenomena but good theory chooses important variables as explanatory and thus becomes relevant as emphasised by MARSHALL (53). If the neo-classical theory of wages is relevant to only a small portion of the labour market (although it might be the single most

important explanation) complementary theories may be helpful in explaining other areas of market behaviour which neo-classical theory leaves 'uncharted'. Perhaps the most comprehensive theory of the labour market is the classical approach of the principle of net advantage embodied in SMITH (86) which we will argue is probably not falsifiable in practice. An even broader view might emerge from the work of BECKER (2) or FISHER (20) on the inter-relationship between work and consumption through activity functions. In contrast job search theories, often concentrating on the unemployed, to the exclusion of other workers seeking to change jobs, is narrow in outlook. We will suggest that such behavioural theories of the labour market might be seen best as supplements rather than alternatives to neo-classical micro-economics.

Behavioural theory and traditional competitive theory imply two different approaches to the study of labour markets similar to the two differing views of the scientific process which we saw in 2 above. The traditional approach concentrates on the results of decisions taken by individual suppliers of labour; the behavioural view is concerned with analysis of the manner in which decisions are implemented and the actions taken to achieve goals. Both can provide useful insights into labour market phenomena and both are interested in the determinants of decision taking.

Most of the analysis in the thesis is conducted at the level of individual decision taking although aggregate data is presented throughout and Chapters 2 and 3 are concerned almost exclusively with aggregates. As in most economics it is considered that market behaviour can be understood best from the standpoint of

the individual, paying due attention to the relationship between individual decisions and market aggregates.

Sellers' decisions in the labour market are of three main types; participation; job change; and training. Occupational choice can be involved in each of these and it is in this limited sense that we will be able to make a contribution to knowledge of the participation decision which essentially relates to why people work, the hours they are prepared to sell, the shifts they prefer and the retirement decision (if any). Job change could be split usefully into leaving a job and taking the next job for some workers, but others appear to have only one deliberation. Training can be closely linked to job change but it is so important and involves so many different criteria that it merits separate consideration.

These two major decisions, job change and training, underlie the whole thesis but the structure of Chapters 2 to 6 rests upon the importance of spatial and occupational mobility which emerges from employment and unemployment data in Chapter 2 and survey data in Chapter 3. Unlike the spatial and occupational dimensions, the third labour market dimension, the industrial, turns out to be unimportant. Chapter 4 examines the spatial limits and characteristics of local labour markets; Chapter 5 looks in equal detail at the occupational dimension through the decision whether or not to undertake further training; and Chapter 6 considers the inter-relationship between spatial and occupational mobility through the work of BECKER (3).

Although this first set of chapters produces interesting findings, by emphasising the motives for and results of

individual decisions, several important questions remain unanswered by this traditional approach. A study of information systems in Chapter 7 and the short run behaviour of workers in seeking to achieve their long run goals in Chapter 8, provides further, supplementary insights into labour market phenomena.

5. Summary

Chapter 2 is a study of the local labour market areas relevant to the respondents at the seven manufacturing establishments, as defined by the responses to the survey (see Chapter 4 below). In addition to 'setting the scene' for the questionnaire replies, analysis of employment data by industry reveals that high levels of unemployment can be explained by declining employment in traditional industry but wide fluctuations in unemployment rates might be caused by a whole range of industry. Despite this, regional policy, in attracting small plants to small estates in small towns might be considered a success; this does not suggest a solution to the problem of large towns. Unemployment data for Cramlington do not appear to be consistent with a complete labour market existing in that area and this inconsistency suggests that the spatial dimension of local labour markets is very important.

Chapter 3 examines the industrial and occupational mobility reported by respondents and finds that the industries in work histories can be broadly predicted from the local industrial employment mix; industrial labour markets do not appear therefore to exist but the spatial dimension is confirmed as important. Occupational labour markets seem quite well defined for white collar and skilled manual workers but not for less skilled employees. It is suggested that spatial and occupational

mobility may be substitutes and it is possible that high unemployment rates may tend to induce both types of mobility. Although occupational labour markets may exist for some workers they seem to take on the form of a complex of inter-relationships rather than a series of non-competing groups; wage rate equalization studies therefore need broad occupational definitions.

In Chapter 4 the spatial limits of labour markets, their definition and characteristics are explored in depth and are found to exist but to overlap in some cases; growth poles are therefore feasible but the pre-conditions for their creation remain unknown. A comparison is made between survey data and Census data and it is found that: different uses of labour market areas may require different definitions; sex is perhaps the most important differentiating factor; Census data may seriously overstate labour market areas and workers may be therefore less mobile than these data suggest; and Department of Employment (DE) definitions for the publication of Area Statistics of Unemployment rates may need amendment. In general, if more importance is attached to the spatial dimension labour market phenomena may be more easily explained.

Chapter 5 looks at occupational mobility through the decision whether or not to attend further training courses. Family commitments are not found to be important to the training decision. For men previous education and training seem to be a determinant of attitudes to further training but for women recent experience of unemployment may instigate interest. For both sexes there is room for improvement in the financial incentives to undertake training if those responsible wish to increase the stock of skilled manpower.

In Chapter 6 an association between spatial and occupational mobility, using training as a surrogate for the latter, is established but the direction of causation is problematical. This constitutes a test of BECKER's (3) hypothesis on general and specific training which is analysed from the viewpoint of the worker rather than the firm. Family responsibilities and the perception of training as an investment in 'human capital' are offered as alternative determinants of geographic mobility. Seemingly paradoxically more training of semi-skilled and unskilled workers may lead to more geographic mobility and less overall occupational mobility since an increase in formal training will induce workers to stay in their (new) occupations and reduce on-the-job training at firms because fewer less skilled workers will be changing jobs.

Chapter 7 studies the information channels used by respondents to obtain the jobs they held at the time of the survey. All are found to be imperfect but this does not preclude the existence of a market. Information is shown not to be a free good, which confirms US studies such as STIGLER (89) but, at least for the survey, a deeper analysis than that used in earlier work is justified (see, for example REES (72)). The most popular recruitment method, friend and kinship networks turns out to be inefficient on the criteria of the contentment of workers and the choice of jobs it offers. Reasons are given why this method continues to be heavily used and why this is consistent with economic rationality. In general, more intensive and extensive information, especially on pay levels would benefit both workers and firms.

In Chapter 8 a study of the strategies four different groups of workers might adopt in the context of a labour market is presented. It is shown that taking a job, for some workers may be an interim stage in their attempts to achieve a long run equilibrium. Age and life cycle position may determine the strategy to be adopted which can explain differential periods of unemployment and workers accepting lower pay levels than in their previous job. Training has a role to play in each of the strategies but spatial mobility does not seem to be important - nor does socio-economic group. Firms appear to have an incentive, in terms of better industrial relations and reduced labour turnover to discriminate in their hiring policy in favour of older, less skilled workers; this will benefit the region by reducing unemployment rates and increasing participation rates and regional income per capita. The evidence suggests that incomes policy does not seriously distort the allocation of labour.

Chapter 2

Analysis of Employment and Unemployment

Analysis of Employment and Unemployment

This chapter will be divided into two sections. In the first an industrial analysis of employment in the six survey areas will be presented as background material to assist in the interpretation of questionnaire responses. It will also 'set the scene' of the local labour markets in which respondents searched for and found employment during the period 1972 to 1975. The second section will also help to elucidate this by concentrating on the cyclical fluctuations of unemployment and vacancies in the labour market areas. In both sections data for the local areas surrounding the factories and wider 'job search areas' named by respondents to the survey (see Chapter 4) will be studied.

In section 1 the data are drawn from the annual Census of Employment for the years 1966 to 1974. Expectations are formulated of the possibility of finding survey evidence of the existence of industrial labour markets in each area; perhaps the best test of the hypothesis will be at Washington. The effect of regional policy in building new factories for workers being released from declining industries can be seen for small town locations; a temporary increase in construction employment followed by a permanent increase in manufacturing employment is particularly noticeable. With a view to helping to explain high levels of and wide fluctuations in unemployment rates at each of our locations (each of which had Special Development Area status at the time of the survey) a summary of those industries which experienced declining, growing or fluctuating employment is presented; deficiencies in the data source are recognised.

In section 2 unemployment and vacancy rates for the same geographic areas are analysed, firstly in the form of annual averages for the period 1966 to 1975 and then monthly rates from January 1972 to October 1975. Cyclical movements are evident for both the North East and most of the study areas although the data for Seaton Delaval (where CRAM is located) suggest that this is an incomplete labour market. Amalgamation of Seaton Delaval with other job search areas reported by the respondents largely removes the problem thus indicating that the spatial limitations of labour markets and close links with other areas are important (such links are not found for the other New Town location of Washington). Another finding is that male unemployment rates demonstrate wider fluctuations than female rates and one reason for this might be a tendency for male-employing industry to lay-off workers rather than adopt short-time working. An industry-based explanation of high levels of unemployment rates is also possible although an analysis of employment and unemployment data suggests that a broad base of industry is responsible for the wide fluctuations in unemployment rates. This only partially corroborates a recent Northern Regional Strategy Team finding.

Thus regional policy measures may have helped alleviate the problems of high unemployment in small towns by providing small factories on small trading estates. Such measures also have a cost attached to them however since, by increasing the local concentration of new industry of a variety of types, regional policy may have increased the susceptibility of some areas to wide fluctuations in unemployment rates. The data do not reveal any benefits accruing to large towns from regional incentives.

The survey was conducted against a background of rising unemployment and declining vacancies in all areas but the new factories opened at a variety of stages in the cyclical patterns. The opening of new factories at the 'New Town' locations is the likely explanation of variations in vacancy rates. It appears that for expansion firms prefer to use recruitment methods which do not involve the employment exchange once they have an established workforce; they do not, therefore, have any incentive to notify vacancies.

1. Industrial Analysis of Employment

1.1 General

1.1.1 The Areas In most local labour market studies the first step is to assume the spatial limits of the market area. Initially we will do this but we will go on to analyse larger areas defined in terms of the 'job search area' of the respondents to the survey. The narrow definition is the boundaries of the Department of Employment (DE) exchange areas in which the firms are situated. In the broader definition we will also be limited to exchange areas because data are only available in this form but this is not thought severely to restrict the analysis. Newcastle (including Elswick and Walker) exchange area will be considered in conjunction with Newburn and Seaton Delaval (Cramlington). Ashington and Seaton Delaval will be linked together although only the 'New Town' of Cramlington is included in the job search areas of Ashington respondents; this is justified by the few job opportunities existing elsewhere in the Seaton Delaval exchange area. This is not true of Bedlington, however, because there are alternative centres of employment in this exchange area, for example, Cambois.

It is not considered appropriate therefore to link Ashington with the whole of the Bedlington exchange area. (see also Chapter 4).

There are problems attached to the narrow definition of the areas. In the case of CRAM, the use of Seaton Delaval exchange area may be thought inappropriate because the factory is situated near the boundary between Seaton Delaval and West Moor. We will use the Seaton Delaval area because it includes Cramlington and the factory is within the 'New Town' boundaries. For the Sunderland and Hartlepool areas the DE conventions of aggregation of Sunderland and Southwick to form 'Sunderland' and Hartlepool and Hartlepool Headland to form 'Hartlepool' have been followed. These area names are as they existed at July 1975 but there have been several variations during the period under review, 1966-74, the most important being the absorption of Pallion into Sunderland in October 1971.

There have also been three changes to the area boundaries during the period. In July 1971 Harraton and part of Birtley were taken into Washington (total employment change not significant); in 1967 Ryhope was transferred from Seaham to Sunderland (total employment change said by the DE to be significant but this is not apparent from the data); also in 1967 Newton Bewley was transferred from Hartlepool to Billingham (total employment change not significant).

1.1.2. Rationale for Studying 1966-74 Period

1974 is the last date for which DE data are available, at the time of writing. In subsequent analysis reference may be made to

1971 in preference to a later date because a dis-aggregation of manufacturing employment is not available after 1971. Even the more limited breakdown was not possible in totality in respect of 1974 because of local government re-organisation. 1966 was chosen because the nature of the survey demands that the firms be seen in the context of regional policy which experienced new initiatives from this date. The main legislation was the Industrial Development Act 1966 which created New Development Areas and provided for grants of up to 35% of cost for buildings and up to 40% for plant and machinery in these areas, together with two rent free years for new establishments. These measures were strengthened and extended in subsequent years and the period 1966 to 1972 saw an average of 27 manufacturing establishments per annum move into the Northern Region compared with 14 per annum 1960-65, 5 per annum 1952-59 and 16 per annum 1945-51.

The analysis which follows seeks to describe the experience of declining industries from 1966 (the problem which the regional policy measures seem to have been designed to alleviate) and the effect of incoming and growing industry on job opportunities and the general industrial structure. We seek to provide a picture of employment prospects and patterns which may have been in the minds of respondents when they were interviewed (since they were all recent job changers).

1.1.3. The Analysis

The data source is DE forms ERII 1966-74 and lists of individual firms as at 1971 by Employment Exchange Area, classified by size band and Minimum List Heading (MLH) of the Standard Industrial Classification (SIC). The analysis is by

industrial sector and a more detailed study of manufacturing industry in 1971, as an approximation to the recruiting period of respondents which was 1972-75. The data bridge at 1969 presented no insuperable difficulties.

The data impose some limitations on the analysis. The form ERII shows male and female employment by MLH up to 1971 for each area with some MLHs aggregated to prevent the calculation of the work force of individual firms. It did not prove possible, therefore, to list only the significant employers of labour in each area; instead the Appendices 2.1 to 2.7 show the significant MLHs (or groups of MLHs) together with the names of the firms that have been identified under each category. 'Significant' in this instance was judged subjectively for each area with three objectives in mind:

- (a) to keep the number of firms on each list to manageable proportions. Thus, MLHs which covered many small firms, such as 212, bread and flour confectionery, have been excluded.
- (b) to ensure that all firms with a work force of at least 500 in 1971 were included.
- (c) to exclude all MLHs or groups of MLHs which showed total employment of less than about 50 for Seaton Delaval, Ashington, Washington and Newburn, 500 for Hartlepool and 1000 for Sunderland and Newcastle.

1.1.4. Treatment of Each Sector

Since the survey was of employment by manufacturing establishments it seems fairly obvious that the manufacturing sector will provide the most relevant background to this study. In the context

of labour market studies this is a preliminary hypothesis to be tested against the job histories and job search patterns of the respondents; we will look at industrial mobility in Chapter 3.

Table 2.1 shows employment in 1971 by sector in each area.

Table 2.1

Employment in 1971 by Industrial Sector

	Primary	Manufacturing	Construction	Service	Total
Ashington	7.9 (42.5)	2.6 (14.0)	1.8 (9.7)	6.3 (33.8)	18.6 (100)
Hartlepool	0.3 (0.8)	20.5 (53.6)	3.1 (8.1)	14.3 (37.5)	38.2 (100)
Seaton Delaval	neg (neg.)	4.3 (60.5)	0.9(12.7)	1.9 (26.8)	7.1 (100)
Sunderland	4.1 (4.8)	35.8 (42.0)	3.6 (4.2)	41.8 (49.0)	85.3 (100)
Newburn	0.1 (1.3)	3.5 (45.4)	0.4 (5.2)	3.7 (48.1)	7.7 (100)
Washington	1.6 (15.5)	3.9 (37.9)	1.8(17.5)	3.0 (29.1)	10.3 (100)
Ashington & Seaton Delaval	7.9 (30.7)	6.9 (26.9)	2.7(10.5)	8.2 (31.9)	25.7 (100)
Seaton Delaval & Newcastle	1.9 (1.0)	48.1 (26.0)	15.1 (8.2)	119.6 (64.8)	184.7 (100)
Newburn & Newcastle	2.0 (1.1)	47.3 (25.5)	14.6 (7.9)	121.4 (65.5)	185.3 (100)

Numbers in '000s, figures in parenthesis are percentages.

Using the four sector convention manufacturing is dominant in Hartlepool, Seaton Delaval and Washington. In Ashington the primary sector (mainly coal mining) still employs more than any other but in the areas formed by combination with Newcastle; Newburn; Sunderland and in the combined area of Ashington and Seaton Delaval the importance of the service sector is revealed.

The effect of adding Newcastle to Seaton Delaval is dramatic because of the relatively large size of the city area. Similarly, Newcastle 'swamps' Newburn in the combined area but a fundamental change in the employment picture is not produced. The aggregation

of Ashington and Seaton Delaval gives an interesting balance between employment in the primary, manufacturing and service industries.

Manufacturing industry is important in all areas - in Ashington because it is experiencing a phase of growth, especially in male employment. Coupling this with the idea of industrial labour markets (workers moving between jobs in the same industry) leads us to expect, at the broadest level and if such markets exist, a concentration on manufacturing in most of the relevant replies. Analysis down to the level of the firm, as a preliminary to the industrial mobility study in Chapter 3, is justified on these grounds. Since construction firms are typically small we will not identify firms in this sector, but service industry cannot be dealt with so easily.

Substantial proportions of employees in all areas work in the service sector so we would expect, a priori, an analysis of this employment to aid the interpretation of results, perhaps especially for females. There are two reasons why this is not justified, however. Firstly, the idea of industrial labour markets suggests that service sector employment will not be of great significance to employee in manufacturing industry (the respondents); if such markets exist we expect low numbers of replies mentioning service industry firms from the respondents. Secondly, apart from national and local government, National Health Service and possibly public utilities, employers in the service sector tend to be small relative to the numbers of our respondents and all employees in the study areas. Service sector analysis will therefore be completed down to SIC Order level, as permitted by the data.

1.2. Ashington

1.2.1. General. Figure 2.1 shows employment changes by sector annually since 1966. Total male employment shows a declining trend partially offset by growth in female employment. The local economy is still dominated at the end of the period by coal mining but its importance is diminishing as male employment in manufacturing grows. Female employment in manufacturing is remarkably stable 1966-74. A significant feature of the figure is the upsurge of male employment in construction 1969-70 which precedes the increase in male manufacturing jobs. This is a clear indication of investment in the area to create employment, probably with redundant miners in mind. We shall see a similar inter-temporal relationship between construction and manufacturing employment in Washington, Seaton Delaval and, to a lesser extent, in Newburn.

1.2.2. Manufacturing Industry. Reference was made to the compilation of lists of firms above; Appendix 2.1 shows the list for Ashington. The Appendices also contain lists of manufacturing SIC Orders which are likely to be well represented in the work histories of respondents if the local employment opportunities are an important determinant of industrial mobility.

In Ashington, only two firms in the size range 500-999 emerge and one, C. A. Parsons has probably declined since 1971 as the Alcan aluminium smelter project neared completion; however, Alcan itself should have grown during the same period. The names of Alcan, Clarke Chapman or Parsons might emerge from the male responses; female jobs are probably offered by the other larger size firm, Hepworths.

The main impression which emerges is that any job changer will have great difficulty remaining in the same industry throughout his job history because of the spread of major employers across SIC Orders (11 in all). There is, however, ample opportunity for remaining within the manufacturing sector during the period from about 1970, but before this date, choice was probably too constrained to show even this manifestation of an industrial labour market.

1.2.3. Service Industry. Figure 2.2⁽¹⁾ shows the SIC Order employment levels 1966-1974. The growth of the combined Orders XXII, XXIV and XXV (transport and communication; insurance, banking etc; and professional and scientific services) is noticeable and further analysis suggests that most new jobs were in professional and scientific services, probably education and health. The growth of public administration in the 1970s is repeated for most areas and is most likely due to local government expansion.

In terms of numbers of jobs the changes seem to bear equally on males and females for each SIC Order, including distributive trades so it is equally probable for either sex to have moved from this Order to manufacturing.

1.3. Hartlepool

1.3.1. General. See Figure 2.3. The fluctuations in total employment are largely explained by changes in male employment in manufacturing, thus demonstrating the dominance of this sector.

(1) Note that 'Service' in Figure 2.1 includes a small number of residual unclassified workers not included in Figure 2.2 prior to 1971 but thereafter absorbed. The same problem exists for other areas.

Female employment is remarkably stable, as is male employment in construction.

1.3.2. Manufacturing Industry. Overall growth in manufacturing employment disguises a decline in the shipbuilding and engineering industries particularly. There are two employers which stand out in Appendix 2.2 as very large - British Steel Corporation and GEC/AEI. It is probable that both employ a substantial number of men but only GEC/AEI will have a high proportion of jobs for women. The other major employers of females seem to be Ross Poultry, RHM Foods and John Collier. The firms listed are covered by only six SIC Orders, a remarkable contrast to Ashington given the relative sizes of the areas in employment terms. The opportunities for a job changer to remain in the same industry are seemingly good but HART is not in one of the six main industries so it can be argued that our sample is not representative of those people who perceive an industrial labour market. Nevertheless, we might find men who have been forced out of the industry of their choice during the post 1970 recession but reported mobility within the industry in their job histories.

1.3.3. Service Industry. See Figure 2.4. The relative stability of all the groups throughout the period contrasts with the growth of professional and scientific services especially in other areas. There was some growth in public administration in the 1970s and some fluctuation in the combined Orders XXII, XXIV and XXV, due mainly to transport and communication, which seems almost counter-cyclical. Distributive trades show a decline in male employment during the period but a growth of female employment although the

numbers of jobs involved are not large. The miscellaneous services changes were borne almost entirely by female labour. The curve for the service sector as a whole (Figure 2.3) shows an increase in employment 1969-70 of some 700 but these appear in the data source as unclassified and have been included in the service sector for convenience as they are not listed separately in subsequent years.

1.4. Seaton Delaval

1.4.1. General. See Figure 2.5. The 'New Town' of Cramlington dominates this area in terms of employment. The period sees the expiry of coal mining and, apart from 1968-69, the unhindered growth of total employment. The 1968-69 downturn has its source in male construction jobs, apparently the end of a building phase which pays dividends in subsequent years in terms of jobs in manufacturing, especially for men. The service trades have a much slower growth rate than manufacturing. Job opportunities are likely to be perceived in manufacturing and, to a lesser extent for women only, in the service sector.

1.4.2. Manufacturing Industry. See Appendix 2.3. The use of 1971 data as an approximation for the recruiting period 1972-75 is most suspect for areas of rapid growth such as New Towns. Nevertheless it is known that at the time of the survey, Wilkinson Sword and Commercial Plastics were major employers of female labour, as they were in 1971. The groupings on the form ERII prevent the identification of other large employers of females shown in Appendix 2.3 but it is probable that MLHs 349, 491 and 495 do not include employers of this type. This leaves six SIC Orders spanning thirteen firms which presents little opportunity

for changing job but staying in the same industry. Industrial labour markets might be evident at sector level, however.

1.4.3. Service Industry. See Figure 2.6. Growth is shown by each curve but it is more erratic than for the manufacturing sector. Within the combined Orders, XXII, XXIV and XXV, professional and scientific services are important, probably education and health provision for the growing population. Transport and communication also contributed. Female jobs grew mainly in the professional and scientific services and the distributive trades so there is little constraint of choice between service and manufacturing employment.

1.5. Sunderland

1.5.1. General. See Figure 2.7. The most noticeable feature is the loss of some 4500 jobs over the period, mainly in the 1970s and predominantly male. Female jobs have experienced cyclical change but are slightly up 1966 to 1973. The level of employment in the service sector distinguishes Sunderland as a large town with a hinterland of population generating demand for the products of service industry. The overall loss of jobs stems from manufacturing and, to a small extent, coal mining; the slight growth of services probably offsets the loss of female manufacturing jobs. Construction demonstrates cycles but they were not very severe.

1.5.2. Manufacturing Industry. See Appendix 2.4. The decline in manufacturing jobs 1966-71 needs further analysis. Some 4,000 jobs were lost, 2,700 in engineering and electrical goods, 1,300 in shipbuilding and marine engineering and 400 in clothing and footwear. Of the engineering jobs 1,200 were male, all of the

shipbuilding jobs were male and the clothing jobs were female. Despite decline, shipbuilding is of continuing importance in the local economy but firms employing more than 2000 workers also appear on the list in the mechanical engineering, electrical engineering (telecommunications) and glass industries. Apart from clothing and footwear, all firms on the list seem to employ a considerable number of men; this leaves seven SIC Orders covering forty eight firms, superficially giving the impression that we might expect evidence of industrial labour markets at SIC Order level. However, the sample size is small relative to total employment in Sunderland so we might find untypical results.

1.5.3. Service Industry. Figure 2.8 shows that the high level of employment in this sector can be explained by employment in the distributive trades which is mainly female. The 1970-71 increases in miscellaneous services and public administration may be ^{partly} due to DE accounting changes attributing some 1,000 to 2,000 previously unclassified jobs to employment of these types. Otherwise there is relative stability in the Orders which disguises a loss of some 600 male jobs in transport and communication 1966 to 1970.

Insurance, banking etc. and professional and scientific services show offsetting increases in employment for both sexes.

1.6. Newburn

1.6.1. General. The fluctuations in employment shown in Figure 2.9 are reflected in both male and female jobs but only in the 1970s is this caused by manufacturing, the previous sources being in service industry and construction. The primary sector had virtually disappeared by 1970. The inter-temporal relationship between construction and manufacturing employment is seen again

but in the case of Newburn it is less well defined. Perhaps the most remarkable feature, for an area with a relatively small working population, is the high level of service employment which presumably stems from the services associated with residential areas - Newburn is a working class and lower middle class commuter belt. Female manufacturing employment is stable throughout.

1.6.2. Manufacturing Industry. See Appendix 2.5. NEWB and Glass Tubes and Components are the largest single employers of labour and both lie within the same SIC Order. The only MLHs on the list for which a reasonable number of males are not recorded are 214 and 218 but even these figures are not negligible. Seven SIC Orders cover fifteen firms and the groupings suggest that it might be fairly easy for a man to change job but stay within the NEWB SIC Order Total XVI. Should this be revealed, however, it cannot be taken as firm evidence of an industrial labour market, because this SIC Order is very heterogeneous.

1.6.3. Service Industry. Figure 2.10 shows growth during the 1970s in public administration and defence and the combined Orders XXII, XXIV and XXV which we have also seen for other areas. In fact, the growth hides a decline in male jobs in transport and communication and a high growth rate in female professional and scientific jobs which almost doubled 1966 to 1970 to 945 - again concentrated in education and health. The 1969-70 downturn is shown in all service Orders except public administration, construction but not manufacturing; the causes of this concerted movement are still obscure but most of the jobs were for females and the phenomenon should have little influence on our, predominantly male, respondents.

1.7 Washington

1.7.1. General. See Figure 2.11. The period sees growth in total employment from 1967 with male employment growing continuously from this date and female employment growing from 1969. Manufacturing employment follows similar trends in analysis by sex, illustrating the dominance of this sector. The burst in employment in construction followed by an increase in manufacturing jobs is shown again. Coal mining has a continuing depressing effect on the area reducing from 3,000 to under 1,000 jobs 1966 to 1974. As for the other 'New Town', the use of 1971 data is a poor approximation to the recruiting period 1972-75 because of the rapid employment growth.

1.7.2. Manufacturing Industry. Appendix 2.6 shows the list of firms for this area. SIC Orders VI and XII are mainly male employing and omitting these, because our respondents are predominantly female, leaves nine SIC Orders covering twenty four firms. Analysis of firms by size band is likely to be misleading but Timex and Newalls' Insulation are known to have been large employers at the time of the survey. We might suppose from the number of employers who fall into mechanical engineering, SIC Order VII which also covers both WASH 1 and WASH 2, that there are good opportunities for sellers of labour services to remain in this industry. We expect, therefore, that the best test of the existence of an industrial labour market will be at Washington.

1.7.3. Service Industry. The slow 'take-off' of the service sector was in all SIC Orders except professional and scientific services, again education and health, which experienced greater growth (see Figure 2.12). Interestingly, employment in the distributive trades only becomes dominated by females in 1973, by which time all service industries had experienced considerable growth.

1.8. Ashington and Seaton Delaval

This is a combined area with respect to both males and females (see Chapter 4). Essentially the analysis is a straightforward aggregation of the two areas considered separately.

1.8.1. General. Figure 2.13 shows a trend of increasing employment for both sexes, the growth in manufacturing more than offsetting the decline in coal mining. By the end of the period total and male manufacturing employment supercede the primary sector as the most important source of job opportunities with service industry maintaining its position, through growth, as the second most important sector in terms of employment. The upsurges in construction employment, preceding a growth period in manufacturing jobs can still be observed for the combined area; we saw the same feature for each area separately.

1.8.2. Manufacturing Industry. Comments concerning specific firms are a simple aggregation of those appearing under 1.2.2. and 1.4.2. above except that we can no longer exclude the mainly male employing firms appearing in Appendix 2.3. Thus for the combined area there are 37 important firms covering 11 SIC Orders. Opportunities to change job within the same industry will therefore be limited.

1.8.3. Service Industry. Figure 2.14 shows the picture for the amalgamated area and it is very similar to Figure 2.2 for Ashington because of the relatively small size of Seaton Delaval. Comments are as they appear for Ashington in 1.2.3. above except that the addition of Seaton Delaval eliminates the overall decline in distributive trades.

1.9. Seaton Delaval and Newcastle

1.9.1. General. We have already noted that Newcastle 'swamps' Seaton Delaval and as a result the comments here relate mainly to the larger area and only to males for the purposes of the survey (see Chapter 4). There is a slight increase in total employment during the period but it cannot be said to be a consistent upward trend of growth. The situation is analagous to Sunderland: a large town with a hinterland of population creating a demand for services. Manufacturing employment and construction are fairly stable but demonstrate a slight downward trend. This is in line with the non-renewal of manufacturing jobs we might expect in old urban areas. The growth features of employment we saw as being associated with the 'New Town' of Cramlington can now be seen in perspective; the upsurges in employment in construction and manufacturing are too small to make any impact when the two areas are considered together.

1.9.2. Manufacturing Industry. See Appendix 2.3 and Appendix 2.7. Adding Newcastle to Seaton Delaval changes the outlook for a job seeker completely. There are now many firms, presumably offering many job opportunities within 11 important SIC Orders. Because the number of male respondents at CRAM is small, however, the survey will not provide conclusive evidence of industrial labour markets. Perhaps the industries we should be looking out for are chemicals and allied; and mechanical engineering because these seem to be important in both constituent areas.

1.9.3. Service Industry. See Figure 2.16. Public administration and the group which includes professional and scientific services are the major sources of growth. Local government and education

and health are the likely employers. There is no lack of choice between service and manufacturing jobs for a job changer in the Newcastle and Seaton Delaval combined area.

1.10. Newburn and Newcastle.

1.10.1. General. Just as Newcastle 'swamps' Seaton Delaval, the similarity of Figures 2.17 and 2.18 to Figures 2.15 and 2.16 shows that Newburn is relatively insignificant. The comments that apply to Newcastle under 1.9 above are also relevant here. The relationship between construction and manufacturing employment we saw for Newburn is lost in the combined figures. The overall nature of the Newburn area as demonstrating a high level of service employment is repeated in Figure 2.17, however, because of the similarity in this respect with Newcastle.

1.10.2. Manufacturing Industry. In the combined area any man wishing to change jobs but remain in the same industry seems to have ample opportunity. Evidence of an industrial labour market might be most likely to be presented in respect of mechanical engineering which is represented in both Newcastle and Newburn. We must have the same reservations that we expressed in respect of the HART firm, however; because the survey firm is not in one of the major industries in the amalgamated area our respondents may not be representative of people who perceive an industrial labour market.

1.10.3. Service Industry. As for the Newburn area considered alone the major sources of growth are public administration and professional and scientific services - probably education and health. The employment structure we saw for Newburn is therefore similar for the combined area and this is further justification

for concluding (as we will in Chapter 4) that Newburn is very firmly a part of the Newcastle labour market - much more so than Cramlington. Interestingly, in the context of the survey in manufacturing industry Newburn seems to have been forging its own identity in recent years.

Table 2.2

Summary of Changing Job Opportunities by Industry since 1966 : Survey Areas. (1958 S.I.Cs)

(1) Employment Exchange Area	Industries which have demonstrated employment:-			
	(2) Decline	(3) Growth	(4) Fluctuations	
Ashington	Coal (M); Food, drink and tobacco; Distributive trades	Various manufacturing industries; Professional and scientific services; Miscellaneous services	Construction (M); Distributive trades; Public administration (F).	
'Hartlepool'	Engineering and electrical goods (F); Shipbuilding (M); Transport (M); Miscellaneous services (F).	Food, drink and tobacco; Chemicals (M); Metal manufacture (M); Public administration (F).	Engineering and electrical goods; Clothing (F); Bricks etc.(M); Construction (M); Distributive (F); Miscellaneous services (F).	
Seaton Delaval	Coal (M).	Various manufacturing industries including Chemicals; Engineering and electrical. Construction (M); Transport (M); Distributive; Prof. and scientific services (F); Misc. services (F); Public admin.	Construction (M); Transport (M); Distributive (F); Prof. and scientific services; Misc. services; Public administration (M).	
'Sunderland'	Coal (M); Engineering and electrical goods; Shipbuilding (M).	Professional and scientific services (F); Miscellaneous services (F); Public administration.	Engineering and electrical goods (F); Shipbuilding (M); Bricks etc. (M); Construction (M); Distributive; Miscellaneous services.	
Newburn	Coal (M); Transport (M); Public administration (F).	Engineering and electrical goods; Bricks etc. (M); Distributive (F); Prof. and scientific services (F); Misc. services (F); Public administration (M).	Bricks etc.(M); Construction (M); Gas, electricity etc. (M); Distributive; Prof. and scientific services (M); Misc. services; Public administration (F).	
Washington	Coal (M).	Various manufacturing industries including Metal manu. (M); Engineering and electrical goods (F); Bricks etc. Construction (M); Distributive; Prof. and scientific services; Misc. services; Public administration.	Chemicals; Engineering and electrical goods; Construction (M); Distributive; Prof. and scientific services (F); Misc. services; Public administration.	
'Newcastle'	Engineering and electrical goods (M); Shipbuilding (M); Distributive trades.	Construction (M); Public administration.	Other manufacturing (M); Construction (M); Distributive trades; Miscellaneous services.	

(M) Indicates mainly male employees affected by the change(s).

(F) Indicates mainly female employees affected by the change(s).

1.11. Conclusion

Table 2.2 summarises the industries by area which have changed in terms of job opportunities in the period since 1966 as measured by numbers of employees in employment. It indicates the background against which a job changer had to take decisions to leave and take employment. It is not a complete picture because other industries, perhaps with a stable employment record may have experienced high labour turnover, thus presenting the job seeker with a large number of job chances. Data do not permit identification of these SIC Orders so we must assume that the relationship between turnover rates and employment opportunities does not vary between industries.

If the regional problem of the North has an industrial explanation then we should be able to identify it in our six areas, which all had Special Development Area status at the time of the survey. High unemployment rates might have resulted from low levels of employment; fluctuations in employment may be associated with changes in unemployment. This is not to deny that wide swings in unemployment rates which peak at unacceptably high levels may occur without radical changes in the numbers of workers employed because, for example, of population changes. Further, at the level of aggregation used in this chapter and because of the limitations of the data source changes in employment in some industries may have been offset by changes in others and hidden in the totals. Nevertheless, identification of industries with declining or fluctuating work forces should help to explain local unemployment problems- knowing which industries have expanded might tell us whether suitable job vacancies have been provided for displaced workers. Generalizing from the six areas to a regional level will be left to the reader. We will examine first the unemployment and vacancies records of the locations of the survey firms.

2. Analysis of Unemployment and Vacancies

2.1. General. The geographic areas to be studied are as for the industrial analysis of employment in section 1 above. The period for analysis is 1966 to 1975; the starting date is common with the employment analysis and is justified for the same reasons that 1966 marked the start of a period of new initiative in regional policy and was a 'trough' in the unemployment cycles of the British economy. The closing date of 1975 was the year of the survey.

In unemployment analysis we are concerned with cyclical fluctuations rather than secular change which is a feature of the employment study. This does not mean that long period trends in unemployment are unimportant but simply that growth or decline (or stability) are best studied through changes in the size of the labour force while unemployment rates are a good, if lagged, indicator of short term variations in economic activity.

The analysis will be in two parts, a study of annual averages 1966 to 1975 and monthly variations January 1972 to October 1975, the recruiting period of all our respondents; January 1972 was also a peak in North East unemployment. Annual averages are calculated from January and June figures for each year⁽²⁾ because these figures are most readily available and because the method of using the arithmetic mean crudely eliminates seasonal distortions. The source of all the data is the DE Monthly Summary of Unemployment and Vacancies for the Northern Region. Figures are not available for December 1974 and January and February 1975 and this imposes a limitation on the analysis⁽³⁾. Data in respect of wholly

(2) Except for 1975 when the January figure was not compiled. The March figure was substituted.

(3) Data for Ashington and Seaton Delaval for October 1973 were also not available but this does not hinder the analysis.

unemployed men and boys or women and girls, omitting temporary stopped, expressed as a proportion of the employed population, employed and unemployed are used throughout. The size of the employed population changes over the period and the figure used is the latest available at the time of publication of the DE Monthly Summary.

An attempt will be made throughout to interpret the experience of each area in the context of the North East, which is spatially the smallest unit that contains all the areas and which can reasonably be considered to warrant the term 'economy'.

2.2. 1966-1975

2.2.1. The North East Figure 2.19 shows the annual averages for males for each of the areas and the North East as a whole. There are three major points to note. Firstly the peak of unemployment in January 1972 is a clear indicator of a recession. The sharpness of the economic downturn is matched, however, by the speed of recovery, moving quickly into the second feature, the boom of 1974. This might be taken as marking the completion of the classic Juglar, business or trade cycle, measuring peak to peak 1966 to 1974. Eight years is a typical period for this cycle which is often thought of as originating in the variations in home and export demand for producer goods or consumer durables. Traditionally the North East has been thought of as having a dependence on heavy industry which is particularly susceptible to changes in investment nationally. This has been questioned recently, however see NORTHERN REGIONAL STRATEGY TEAM (NRST)(61) which concludes that the Northern Region is sensitive to fluctuations in economic activity across a wide range of industry

and variations in unemployment rates cannot be explained by an over-representation of sensitive industry in the region relative to the national structure. Whatever the source, the Figure suggests that the North East is still subject to cyclical fluctuations, although a minor cycle of some four years duration is difficult to discern. In particular a turning point in 1968 can barely be seen but the same can be said of national unemployment data.

The third point from the curve for the North East is the upward trend of unemployment from 1966, reflecting the 'shake-out' which occurred nationally from this date. It is partly because of this shift in the curve that the minor cycles are difficult to perceive.

Figure 2.20 shows the annual averages for females for each of the areas and the North East. These data are less reliable than the male figures because of the under-reporting of female unemployment possibly stemming from the lack of financial incentive. The amplitude of the cycles is less than that for males although the same three features are evident. An industry based explanation of the lesser fluctuations for females would suggest that heavy industry, which tends to employ males, is more sensitive to economic changes but the NRST work denies this without offering an alternative solution to the problem of the differential effects of cycles on the sexes. Perhaps the explanation lies in greater under-reporting of unemployment by females when there are few jobs available or possibly NRST place too little emphasis on industrial structure because of too little dis-aggregation. Another way in which the latter could have

occurred is through the use of unemployment data by industry; these statistics are compiled by classifying workers as belonging to the last industry in which they worked but, as the survey results will show (see Chapter 3) industrial mobility may be so great⁽⁴⁾ that such data could be misleading. A worker leaving heavy industry will not be classified as belonging to it once he has taken a job - even very briefly - in another industry. High inter-industry mobility might then produce a data set showing the apparent relative sensitivity of most industries to economic fluctuations and disguising acute problems in only a few. The problem is exacerbated by many workers changing job without an intervening period of unemployment. Similar points to these are made in BROWN (6) p.218.

It is possible, of course, to have an industry based explanation of the phenomenon without accepting the heavy industry hypothesis. Male workers may be employed predominantly in firms which, because of their technology, reduce their work force during a recession rather than adopt short time working - a solution which might be possible in female-employing industry (and perhaps more acceptable to females than males). Table 2.2, column 4 above shows rather more male employing than female employing industries which demonstrate fluctuations in their employment.

2.2.2. Ashington Changes in the male unemployment rate shown in Figure 2.19 are not typical of the North East although the 'booms' of 1966 and 1974 are shared together with the upward trend. The peak of unemployment is in 1969 and has a local explanation; industrial analysis revealed an acceleration in the

(4) This is also evident from GOVERNMENT SOCIAL SURVEY 1953-63(27)

decline in employment in coal mining 1968-9 and a sudden surge in construction 1969-70. The origins of the 1969 unemployment peak are therefore to be found in national policy to phase out inefficient pits and to build new factories to absorb the excess labour supply so created. This policy seems to have been remarkably successful in its implementation in Ashington. The period 1968 to 1971 can be seen as a transition and Ashington males enjoyed a below North East average level of unemployment at the end of the period, as they did in 1966.

Females in the area are still heavily dependent on the distributive trades and other service industries. Industrial analysis showed that this sector can explain much of the fluctuations in female unemployment above the North East average (see Figure 2.20) but the sudden improvement after 1973 has no obvious source.

2.2.3. Hartlepool. Male unemployment follows the same pattern as the North East as a whole except for the lack of an increase in unemployment 1974-75, possibly due to offshore oil developments. In addition, the fluctuations in Hartlepool are more pronounced than for the North East and although this may be broadly based, the declines in shipbuilding and the transport and communication industries do stand out from deeper analysis (see Table 2.2. above). The NRST work revealed an apparent sensitivity of the telephone and telegraph apparatus and equipment industry and the existence of GEC/AEI as a large employer in this industry may be an additional explanation of the wide fluctuations in Hartlepool. The underlying trend is towards increased male unemployment

although there is some indication that this may be abating towards the regional average in later years.

Female unemployment in this exchange area seems to be increasing relative to the North East average, however, but the upward trend and the cyclical pattern are shared with the regional curve. Perhaps the telephone equipment industry could provide an explanation again although the amplitudes of the swings seem little more than average.

2.2.4. Seaton Delaval. This is a singular area in many respects. Male unemployment was at a minimum in 1966, in line with the NE average but peaked at 1970-71, falling to 1973 and then experiencing a counter-cyclical slump in 1974. The period 1966 to 1970 saw a rapid increase in manufacturing employment in the area which more than offset the end of coal mining. The rise in unemployment 1968 to 1969 can be explained partly by the end of a building boom and a few of the unemployed 1966 to 1968 may have come from the service sector but, in general, unemployment changes cannot be explained by variations in employment in the area until after 1971 when manufacturing industry is the cause. To a large extent the picture must be confused by migration to Cramlington 'New Town' but people are not likely to move house without a job. We might suppose, therefore, that migrants took the new jobs while the indigenous population were being paid off at the pits and building sites. This is not entirely plausible although the numbers unemployed would be swollen by redundant miners (not necessarily from pits in the area) living on their lump sum and/or pension.

Although the overall trend is upwards the position relative to the region as a whole has improved from above average to approximately the same level - but it is difficult to judge because of the interesting counter-cyclical slump in 1974 which we shall examine later.

The influence of Cramlington 'New Town' is again the probable reason for the astonishing level of reporting of female unemployment 1966 to 1969. Although migrants usually require the head of household to have a job, it is common for wives to seek work only after the move has been completed. Cyclical influences are swamped by this secular phenomenon. The downward trend in the unemployment rate is matched by an increase in female employment, especially in manufacturing and it is probable that the change from above average to below average unemployment in 1971-72 is a permanent shift.

2.2.5. Sunderland. In the survey males dominate the number of respondents so we will not analyse female unemployment. The cyclical pattern for males is similar to Hartlepool, showing wide fluctuations but timed in step with the North East. The trend is steeply upwards so Sunderland may be suffering both excessively high unemployment secularly and wide variations cyclically although the conventional explanation - too much dependence on traditional industry - may not hold for both phenomena. The level of unemployment is consistently above average.

2.2.6. Newburn. Since we interviewed relatively few females in Newburn we will only analyse male unemployment. Figure 2.19 shows that this broadly follows the cyclical pattern of the North East, and displays a strong upward trend. The rise in 1967-68

might be attributable to a decline in coal mining although this was offset by increases in manufacturing and construction employment. The cyclical pattern might have its roots in employment in a wider area of Tyneside, especially Newcastle, since Newburn is a commuter belt. On this basis a broad range of sensitive industry might be responsible and this might also explain the apparently permanent shift from below to above average unemployment in 1968-69.

2.2.7. Washington. The male unemployment peak in 1969, preceded by a minimum in 1966 probably has its origins in coal mining. Otherwise the cyclical movements of the area and the region are in step. The problems of the other 'New Town', Cramlington are not repeated here and Washington seems to have greater similarity to another coal mining area, Ashington. A period of transition, from coal mining to manufacturing industry (1968-71) with a source in national policy, below average male unemployment in 1966 and 1975 and a general upward trend can all be included in the comparison.

Female unemployment also shows a resemblance to Ashington, since the trend is downwards and the level changes from above to below average near the end of the period; Washington shows much greater dependence on service sector employment, however. Note that the absence of high reporting of female unemployment tends to cast doubt on our tentative 'New Town' explanation of the phenomenon in Cramlington.

2.2.8. Ashington and Seaton Delaval. See Figures 2.19, 2.20 and 2.21. In the same way that these areas considered separately were not typical of the North East, the combined area does not

reflect the regional picture. The periods of high economic activity, 1966 and 1974 can be observed, however, and both males and females improved their position relative to the regional average. The underlying trend for males is increasing unemployment but the severe levels of 1969-70 have not been repeated since. The explanation lies, again in the decline of coal mining and the growth of new manufacturing industry, which is also a factor behind the declining trend in female unemployment.

Amalgamation of the areas removes some of the less comprehensible features of unemployment in Seaton Delaval. In particular, the male counter-cyclical movement of 1973-75 is reversed and the steep rise in 1968-69 can be seen as arising from both areas with a probable common cause of decline in coal mining. The high level of female unemployment we saw for Seaton Delaval considered separately is much less pronounced in the combined figures although it is still more than double the North East average in 1966. It seems fairly clear from this analysis that the 'New Town' of Cramlington does not constitute, by itself, a labour market, at least for most of the period 1966 to 1975. We expect a local labour market to reflect the fluctuations in economic activity in the rest of the economy, upon which it is dependent. For most of the period under study unemployment rates in Seaton Delaval seem to constitute a commentary on job opportunities in a wider area and Chapter 4 will suggest that this includes Ashington and Newcastle. The peculiar phenomena of unemployment rates in Seaton Delaval seem attributable to, possibly disequilibrium, conditions affecting the residents of a 'New Town', many of whom seek employment in other areas. By

amalgamating areas, a recognisable pattern, which we associate with the existence of a market, emerges.

2.2.9. Seaton Delaval and Newcastle

We noted in employment analysis that Newcastle tends to 'swamp' the relatively small Seaton Delaval area; the same is true for unemployment data. The combined curve for males (see Figure 2.21), which largely indicates the Newcastle unemployment figures, follows the North East average quite closely but at a slightly lower level, especially after 1973. This suggests a reasonable supply of job vacancies for those men in Cramlington who are prepared to travel to the city area but any pattern of this type is lost in the overall totals. Further analysis is unlikely to be useful.

2.2.10. Newburn and Newcastle

Similar observations to those in 2.2.9 above are appropriate to this combined area; the unemployment curve is almost identical to that for Seaton Delaval and Newcastle because of the relative size of the city. The changes that occur by adding Newcastle to Newburn are not so dramatic as those which were brought about by combining Seaton Delaval and Newcastle, however. Newburn experienced above average male unemployment from 1968-69, probably resulting from a concentration of manual workers and although this does not emerge from the combined curve, in general terms Newburn could be said to match the unemployment fluctuations in Newcastle and thus be considered to be firmly entrenched in the larger area.

In contrast, the period 1966-75 seems to have been one of transition for Seaton Delaval, perhaps reflecting a series of 'shocks' creating continual dis-equilibrium conditions which we

might associate with its 'New Town' status. Washington did not have a similar experience, however, possibly due to its weaker links with the central districts of the conurbation.

2.3. 1972-1975. January 1972 was a peak of unemployment in the North East and in most of our areas. It is therefore a useful starting point for our monthly analysis and conveniently the period 1972-1975 covers the recruiting period of our respondents. In this analysis we shall be looking also at vacancies notified to the Department of Employment. Vacancies are as notorious for under-reportage as female unemployment but it is believed that changes in vacancies are a reasonable indicator of variations in economic activity. The argument is that employers stop advertising for more workers well before they make redundancies at the downturn and notify vacancies only when the recovery is in full swing, after short-time and underemployment have been eliminated and no further output can be obtained by extending overtime working. Examination of vacancies, therefore, can help to uncover cyclical movements.

We also need to look at vacancies to see the state of the labour market at the time our respondents were recruited. Because of under-reporting, however, the best we will be able to conclude is that job opportunities were either expanding or contracting.

Our period includes January and February 1974 which was the time of the 'three-day week'. We must take care to regard fluctuations at these dates as responses to an exogenous shock to the system.

2.3.1. The North East. Figure 2.22 shows a clear cyclical swing in male unemployment. The three day week occurred just at the trough of the movement and increased unemployment rapidly.

Recovery from this shock was not until May and June 1974. Male vacancies confirm this although the recovery from the sudden drop in January 1974 occurred as early as February-March 1974.

Female unemployment and vacancies follow their male equivalents almost step for step. Note that proportionally more female than male jobs are notified to employment exchanges; unfortunately we do not know whether this is due to females being in greater demand than males or whether employment exchanges are more efficient at filling female vacancies than male. The survey revealed that equal proportions of each sex were recruited by this method so the cause of the difference may be demand.

Another feature is the relative severity of the July and August 1975 increases in female unemployment. Again, we can draw no firm conclusion because of under-reporting but the large increase in unemployment, July to August for each of the four years (except 1973) which is attributable to school leavers, gives a relative measure of the 1975 problem.

2.3.2. Ashington. Male unemployment follows the North East cycle fairly closely (see Figure 2.23) and although female unemployment is not too dissimilar, the amplitudes of the very short run variations are greater than the North East average. Ashington was not hit very hard by the three day week and it can barely be distinguished in notified vacancies. In general, the pattern of vacancies does not display a cyclical nature and it is more likely that the opening or extension of factories (rather

than demand and general economic expansion) is responsible for increasing vacancies above the 0.5% level. The increase in female vacancies at April 1973, when ASHT opened, results from a month on month increase of only 29 notified vacancies.

At the time of the survey the DE was not collecting statistics but we can judge that both male and female job opportunities were declining and unemployment was rising. None of the respondents were recruited at a time of particularly high unemployment: the maximum rates of unemployment during the period were nearly 6% for men⁽⁵⁾ and 4.5% for women. It is worth noting that this female rate was due to school leavers in August 1974 and the next highest rate during the recruitment period was under 4%.

2.3.3. Hartlepool. See Figure 2.24. Although it is difficult to identify trends in short run analysis, it might be that male unemployment in Hartlepool has been tending to fall since January 1972. Fluctuations about this tendency have followed the North East average in general terms and the same commentary is true for female unemployment rates. As for Ashington, vacancies do not display strong cyclical tendencies and the three day week did not appear to have any effect on these data, although there was a response in both male and female unemployment rates. In the longer period analysis it was observed that Hartlepool male unemployment rates have larger cyclical swings than the average for the North East. This can be seen here by comparing the January 1972 peak with the December 1973 trough but the amplitudes of the variations about the cyclical tendency

(5) Compared with a 1969 peak of nearly 10%

do not seem to be greater than those in the North East curve.

The survey was conducted just before the steep rise in unemployment rates in July and August, 1975, some of which is attributable to school leavers. The upward movement in unemployment is clear before the survey, however, but with a static or rising tendency in notified vacancies. The entire period of the recruitment of respondents is characterised by a fairly stable level of unemployment for both sexes.

2.3.4. Seaton Delaval. Figure 2.25 confirms the counter-cyclical slump in male unemployment in 1974 which was noted in the analysis of the period 1966-1975. The peak of January 1974 does not match the high level of January 1972 (or the earlier pinnacles of 1970-71) but the period September 1973 to July 1974 is distinctly out of line with the region as a whole, female unemployment and the remainder of the curve. This period includes the three day week and this can be seen as having an effect on both unemployment and vacancies for men. The high male unemployment rates of the middle period are not matched by declining vacancies, however, although the North East cyclical pattern is revealed by notified vacancies. This makes us suspect that the pattern of male unemployment is an aberration due to the incompleteness of the labour market in Seaton Delaval, as we have suggested already above (2.2.8). Notification of female vacancies is at an even higher level than for males and there is an obvious positive correlation between male unemployment and female vacancies during the middle period. It is tempting to conclude that this was due to firms substituting females for males but we have no evidence to support this.

The relatively high level of reporting of vacancies will be seen again at the other New Town location and may be due to the absence of alternative information channels; in particular friend and family networks may not be developed amongst migrants. The evidence from the survey does not corroborate this, however; respondents in the 'New Towns' were at least as likely to have been recruited by personal contact methods. It appears, therefore, that new factories, without any workers tend to notify the DE of vacancies but once a firm has some workers it prefers to rely upon their friends and family for labour during a recruiting phase.

Relative to other areas and the region, Seaton Delaval seems to have escaped the full severity of the 1975 downturn; this might be further evidence of a counter-cyclical nature or it may result from a low proportion of school leavers.

The opening of CRAM coincided approximately with an increase in both male and female vacancies and generally declining unemployment while the survey was conducted against a background of gently increasing unemployment.

2.3.5. Sunderland. In Figure 2.26 male unemployment is seen to follow the cyclical pattern of the North East but male vacancies show, if anything, an upward trend - unlike the region as a whole. In particular, there is little sign of the three day week in vacancies yet it is evident in the unemployment data.

SUND opened in a period of declining unemployment but the survey was conducted while the unemployment rate was rising steeply - and the firm itself made some contribution to this with several redundancies prior to the interviewing.

The figure shows a contrast between the wide fluctuations in the longer run and the very short run variations which seem no more than average. The largest amplitudes are due to school leavers - a particularly severe problem in Sunderland in recent years.

2.3.6. Newburn. Figure 2.27 shows how male unemployment and vacancies have followed the North East pattern since January 1972. A point to note is the severity of the school leaver problem in July and August 1972 which shows the 1975 picture as relatively mild.

Vacancies barely show the three day week but it had a substantial effect on unemployment - recovering in May 1974. The survey was conducted during persistently rising unemployment and declining job opportunities but this did not prevent an industrial dispute at NEWB shortly after the interviewing. In general terms, all respondents were recruited during static or increasing unemployment.

2.3.7. Washington. See Figure 2.28; one feature is a high rate of vacancies notification for both sexes. As at Seaton Delaval the reason might lie in the opening of new factories rather than the expansion of nursery units. For females in particular it is reasonable to suppose that the peaks of January - February 1973 (increase of 214 jobs), October 1973 and May - June 1974 are due to this factor. These peaks are well above the levels of female unemployment. The traditional theoretical method of measuring excess demand by calculating unemployment and vacancies differences is not a good guide to the level of economic activity in this case, however, because of the transitory nature

of the phenomenon and the under-reporting of female unemployment. Another wide fluctuation to note is the severity of the increase in unemployment, particularly female, March to September 1975; the survey was conducted in the middle of this period.

Despite the wide amplitudes of the variations, the cyclical pattern is similar to that of the North East, whether measured by unemployment or vacancies. The three day week had its expected effects except on female unemployment. It is unlikely that the opening of WASH 1 in January 1974 had any influence on the data since the effect cannot be seen in vacancies and 37% of the respondents from this firm were recruited via the employment exchange.

While all WASH 1 employees were recruited at or after the trough of the unemployment cycle, WASH 2 workers are split on this count before and after December 1973.

2.3.8. Ashington and Seaton Delaval. In Figure 2.29 the wild fluctuations in female vacancies we saw for Seaton Delaval are absorbed into an almost cyclical pattern for the combined area. The counter-cyclical tendency in male unemployment we saw for Seaton Delaval is not identifiable in the aggregated area thus tending to confirm the phenomenon as an aberration of an incomplete labour market. The three day week seems to have had little effect on vacancies.

The effect of the opening of ASHT on female vacancies can still be seen but the opening of CRAM appears insignificant and both surveys were conducted during a period of rising unemployment. School leavers seem to be the cause of the very short run unemployment peaks.

2.3.9. Seaton Delaval and Newcastle. Figure 2.30 reports the picture of what amounts to male unemployment and vacancies in Newcastle (because Seaton Delaval is 'swamped' by the city). Unemployment is very close to the regional pattern but vacancies run at a high level while still maintaining their basic cyclical nature. The three day week can be identified in the vacancies curve.

Further analysis would not be fruitful because we cannot identify that part of Newcastle which is relevant to Cramlington males.

2.3.10. Newburn and Newcastle. Newcastle also tends to 'swamp' Newburn and Figure 2.31 is almost a replica of Figure 2.30. The difference is that Figure 2.31 also bears some similarity to Figure 2.27 for Newburn alone, giving further evidence of the entrenchment of Newburn in the Newcastle labour market. For Newburn, aggregation with the city area reduces the level of unemployment but the cyclical pattern remains; vacancies are at a higher level in the joint area. The explanation for this probably lies in the higher proportion of manual workers in Newburn and the preponderance of white collar vacancies in Newcastle.

2.4. Comparison Between the Areas

In this section we will examine the levels and variations in the unemployment rates of each area relative to the others and see if an industry based explanation of the experiences of the worst hit areas is feasible.

Table 2.3 shows the ranking of each area by the highest level and widest range of unemployment in the two periods we have

studied. The range for each area was calculated from the difference between the maximum and minimum unemployment rate for each period. Rank 1 indicates the highest rate or widest range.

TABLE 2.3

Ranking of Study Areas by Rate or Range
of Unemployment

<u>1966-1975</u>	<u>Male</u>		<u>Female</u>	
Rank	Rate	Range	Rate	Range
1	Hartlepool	Newburn	Seaton Delaval	Seaton Delaval
2	Sunderland	Hartlepool	Ashington & S. Delaval	Ashington
3	Newburn	Sunderland	Hartlepool	Ashington & S. Delaval
4	Ashington	Ashington	Washington	Hartlepool
5	Seaton Delaval	Washington	Ashington	Washington
6	Ashington & S. Delaval	Ashington & S. Delaval		
7	Washington	Seaton Delaval		
8	S. Delaval & Newcastle	S. Delaval & Newcastle		
9	Newburn & Newcastle	Newburn & Newcastle		
<u>1972-1975</u>				
1	Sunderland	Hartlepool	Ashington	Ashington
2	Hartlepool	Sunderland	Hartlepool	Washington
3	Newburn	Newburn	Washington	Ashington & Seaton Delaval
4	Seaton Delaval	Washington	Ashington & Seaton Delaval	Hartlepool
5	Newburn & Newcastle	Seaton Delaval	Seaton Delaval	Seaton Delaval
6	Washington	Newburn & Newcastle		
7	S. Delaval & Newcastle	S. Delaval & Newcastle		
8	Ashington & Seaton Delaval	Ashington		
9	Ashington	Ashington & Seaton Delaval		

The most striking feature of Table 2.3 is the positive correlation between level and range of unemployment rates. For men the highest three ranks, for either period, are the same three

areas; for women the association, although weaker, also exists. This dual aspect of unemployment has characterised the problem of the Northern Region, relative to national figures, for a long period. It is tempting to suppose that both features have a common cause but we will not assume this.

A further generalisation from Table 2.3 is that extending the boundaries of the labour market areas of Ashington, Seaton Delaval and Newburn tends to 'dilute' the unemployment problems of the original areas. For comparative purposes it is more appropriate to study the wider areas⁽⁶⁾ and we will adopt this convention. This does not 'define away' certain problems but rather puts them in perspective.

Do the 'new' areas warrant Special Development Area status? Closer analysis reveals that for the period 1966-75 all areas had maximum unemployment rates above the NE maximum for both sexes and all except 'Newburn and Newcastle' and 'Seaton Delaval and Newcastle' demonstrated a range of rates in excess of the NE range. For the period 1972-75 however, for males, only Sunderland and Hartlepool had maximum rates above the highest NE rate although the range of every area was greater than the NE range. For females during 1972-75 Washington and Hartlepool were higher than the maximum NE unemployment rate while only Seaton Delaval had a range below the NE figure.

It would seem from this analysis that the male unemployment problems of all our areas except Sunderland and Hartlepool have

(6) The argument for this is contained in Chapter 4

been alleviated to some extent, probably by regional policy taking effect after 1972. For females a similar picture emerges with Washington and Hartlepool remaining as serious problems. If regional policy is the cause of the improvements we have noted then we must look first to the industrial record of each area for a fuller explanation.

Table 2.2. shows that an industrial explanation of the initiation of the problem of all our areas cannot be denied. The decline in employment in coal mining, shipbuilding and mechanical and electrical engineering can be seen as the source of high levels of unemployment in our longer period. Other industries also contracted but they were relatively small in terms of numbers employed and do not represent a wide range of industry; the industries listed in column 2 of Table 2.2 represent only 8 Orders out of 24 SIC Orders (1958 version). The reductions in the numbers of workers in the service industries can be seen to reflect the multiplier effects of the decline in the major, predominantly heavy, industries.

The common cause of growth in levels of employment is the new industry established in the areas. This is of a wide variety; there are 11 out of 24 Orders specifically listed in column 3 of Table 2.2 not including various additional manufacturing industries at Ashington, Seaton Delaval and Washington. We can also see that a wide range of industry is responsible for fluctuations in employment with 13 out of 24 Orders represented in column 4 of Table 2.2.

Despite the reservations we expressed about the data source it would seem that there is an element of truth in the NRST finding that a wide range of industry is responsible for large cyclical fluctuations but it is the traditional industries which

initiate the high levels of unemployment. One of the most sensitive SIC Orders found by NRST was construction and we find confirmation in Table 2.2; we have already linked this with the building phase of new factories. Even when they are occupied such factories seem to be a source of employment variation and an explanation of this might lie in the profitability of attracted industry, a high concentration of branch plants, faltering expansion plans or sensitive industry at a sub-Order level.

We see a suggestion of this last point in the record of the mechanical engineering and electrical goods industry as shown in Table 2.2. During the same period this industry has declined, grown and fluctuated, indicating that in demand terms this Order is very heterogeneous. An industry based partial explanation of variations in unemployment rates is possible, therefore, at a MLH level of classification but in general many industries are responsible. It seems that this is one of the risks that must be borne in order to attract growing industry.

The continuing high levels of unemployment at Washington (females), Sunderland (males) and Hartlepool require closer examination. We can expect the problem at Washington to be solved by growing new industry but in the large towns it seems more intractable. Why has the benefit of new industry, which has helped the small towns and villages, by-passed the large towns? One reason might be the size of mobile firms. A new factory in a coal mining village can make an impact on unemployment levels quite quickly. For the same effect in large towns, many small firms or a few large firms are needed. Perhaps because of dependence on local suppliers, large firms are less mobile. Small mobile firms may

be more autonomous and therefore better able to choose small towns which may have cost and environmental advantages over their large neighbours. Small firms who wish to grow are more likely to choose large towns, partly because of the labour supply but it takes time to expand, especially with an imperfect capital market. Detailed research would be needed to ascertain whether such firms already exist in Sunderland and Hartlepool but if they do, the solution to the unemployment problem may already exist within the towns.

2.5 Conclusions

We have analysed changes in employment in each of our survey areas by industry and have discovered an interesting inter-temporal relationship in several areas between a temporary employment increase in construction followed by a permanent increase in manufacturing employment. We saw that the best test of an industrial labour market at SIC Order level will be at Washington.

We have also analysed unemployment and vacancies, for two periods at each of our areas and have interpreted the findings in a North East context. The high level of unemployment in our areas seems to stem from the decline in traditional industries but the wide fluctuations in the rates are caused by employment changes in a variety of industry. A higher concentration of new industry may be a partial explanation of unemployment rates fluctuating more widely than the NE average. Male rates may vary more than female rates because male employing industries experience more variation in their work forces.

In the case of Seaton Delaval we have associated unusual unemployment statistics with a possible dis-equilibrium situation.

which stems partly from labour market links with other areas. Washington does not have such links and does not demonstrate similar phenomena.

All areas were suffering rising unemployment and declining job opportunities at the time of the survey but the factories opened at a variety of stages in the cycle.

Wild variations in vacancies rates at the New Town locations are probably due to the opening of new factories rather than extensions since once a work force is acquired, a firm is likely to depend more on friend and family networks for recruitment. The efficiency of this information channel will be questioned in Chapter 7.

Chapter 3

Occupational and Industrial Mobility

Occupational and Industrial Mobility

In this chapter we will examine the past mobility of respondents in the occupational and industrial dimensions. When a worker changes his job he may change his occupation; the set of work tasks he performs. He may also change his industry depending on the product of the firm when compared with his previous firm. A market may exist in either or both of these dimensions depending on the competitive behaviour of workers and firms. In section 1 we will look at the evidence for occupational labour markets leaving the industrial dimension until section 2.

1. Occupational Mobility. The ideas of non-competing groups and occupational labour markets are very closely connected. If certain groups of workers do not compete between groups for jobs then they must compete within groups for supply, demand and the occupational labour market to have any meaning. The assumption of competitive theory is that labour is homogeneous within these non-competing groups. Originally the argument was couched in terms of abilities or natural talents but it was quickly realised that the augmentation of ability through training - particularly training which is useful to more than one firm - strengthened the theory. The important role of training here is to erect a barrier between groups of workers and this may be supplemented by trade union restrictions on entry to some occupations. If this theoretical fabric has any relevance to the working of labour markets we should find that at least a large minority of respondents demonstrate occupational continuity through the various jobs they have held in the past.

The interviewees were asked for details of their present job and three previous jobs plus their longest job, which may have been already included as one of the four most recent. The replies to these questions provide a measure of occupational mobility or continuity.

There are a number of different ways of looking at the data. We will first study the people who gave only one occupation but more than one job - thus excluding school leavers who were in their first job and those who did not reply.⁽¹⁾

We will then go on to study the replies of skilled manual workers, using two different definitions of this group. The work histories of white collar workers will be analysed separately and, finally we will look briefly at semi-skilled and unskilled respondents. We will find that it may be useful to think in terms of occupational labour markets for skilled manual and white collar workers but it is not relevant to other workers. We will also see evidence to suggest that the labour force participates in a complex of inter-relationships rather than a series of non-competing groups. It will be suggested that the prospect of unemployment may induce occupational mobility and this may be a substitute for geographical mobility for the individual. For the economy a different configuration of behaviour may be more appropriate.

1.1. All Respondents. Initially we rely upon the OPCS Classification of Occupations to indicate occupational continuity. Table 3.1 shows the numbers and proportions in each firm who reported only one occupation in their job history.

(1) Only 5 out of 393 fall into this category, leaving 388 replies for analysis. All subsequent figures in this Chapter are drawn from these 388 unless otherwise stated.

Table 3.1

Firm	One Occupation Reported		Number of Replies
	Numbers	%	
WASH 1	4	6.7	60
WASH 2	-	-	27
ASHT	3	8.1	37
SUND	1	2.6	38
CRAM	6	7.7	78
HART	4	5.1	79
NEWB	10	14.5	69
Total	28	7.2	388

The proportion of all workers is only 7.2% with a low dispersion about this mean. It is unlikely, therefore, that demand factors or differences in hiring policy influence the figure for any one firm.

The occupations of the 28 workers with occupational continuity are as follows:-

- WASH 1 - Typist; Machine Tool Setter(2); Electrician.
- ASHT - Electrical Assembler; Planning, Production Engineer; Clerk.
- SUND - Machine Tool Operator.
- CRAM - Typist; Clerk(2); Laboratory Assistant; Electrical Production Process Worker; Assembler (Electrical & Electronic).
- HART - Maintenance Fitter; Fitter; Draughtsman; Engineer.
- NEWB - Laboratory Assistant; Bricklayer(3); Driver of Road Goods Vehicle(2); Electrician(2); Clerk; Bricklayer's Labourer.

The majority of these occupations require training of the type predicted by theory. 12 of the 28 said they had completed an apprenticeship in the relevant skill so they might be classed as skilled manual. Most of the remaining 16 are 'Administrative,

Technical or Clerical Staff' (A.T. & C.S.) who also possess training which is of use to more than one firm but a small number of people (4), who can only be classed as semi-skilled, have managed to transfer their skill between firms. These are the Machine Tool Operator, the Electrical Production Process Worker and the Electrical Assemblers. One man, a bricklayer's labourer, is unskilled.

We will deal with each of these three groups separately. For skilled manual and A.T. & C.S. workers we will abandon the use of the OPCS Classification of Occupations and present results derived from studying the completed questionnaires directly. All occupational classificatory systems involve arbitrary decisions based upon subjective judgments which introduce errors into the results of analysis. Use of the OPCS system for fine analysis revealed errors which are not consistent, being both too broad and too narrow, depending upon the occupation under consideration. It was considered preferable, therefore, to analyse the actual words as written by the interviewers, bearing in mind the object of the analysis; attempting to establish some connection between occupations reported by the same respondent. The bias in the results will therefore tend consistently to overstate the numbers of jobs which are connected and too much importance cannot be attached to any of the figures which appear in the tables. Similary the errors in using the OPCS. Classification of Occupations have not been eliminated from Table 3.1 above.

1.2. Skilled Manual Workers. Out of the 388 respondents, 90 gave the trade for which they had served an apprenticeship. Only 71 of these were recognised skilled manual apprenticeships, the

remainder were mainly AT & CS professional qualifications or courses of study. If we define this group of 71 as our skilled manual workers there is an element of double counting because AT & CS, semi-skilled and unskilled manual respondents can only be classified by their present job. There are 4 A.T & CS and 25 unskilled or semi-skilled manual workers (defined by present job) included in the group of 71 who have served a skilled manual apprenticeship. It nevertheless proves useful to deal with the 71 as a group but to provide figures comparable with those in section 1.3 below on AT & CS workers. The second part of this sub-section will define skilled manual workers by present job and recognised apprenticeship served.

1.2.1. Skilled Manual Defined by Apprenticeship Served Only

As stated above, 71 people fall into this category and only 12 of these reported exactly the same occupation for each job in their work history ('perfect' occupational continuity). A more rigorous test for the existence of occupational continuity amongst men who have served an apprenticeship is to distinguish between those who have had jobs unconnected with their skill after serving their apprenticeship (A) and those who have not (B). The latter group will include people who had other (unconnected) jobs prior to apprenticeship. Thus a man who had taken a job as a labourer after serving an apprenticeship as a bricklayer would not demonstrate occupational continuity and would fall into group A. A man who was a labourer before his apprenticeship as a bricklayer but has only had bricklaying jobs since would demonstrate occupational continuity and would be classified as a member of group B along with all bricklayers who did not report working in any other occupation at any time.

An inevitable element of subjective judgment is involved in analysing questionnaires for this purpose but there does not seem to be any way of avoiding this problem. 30 of the 71, (42%) fall into group A, 41 (58%) into group B. This is a very different picture from that obtained by looking only at 'perfect' occupational continuity (12 out of 71 or 17%). The distributions of groups A and B between the firms is shown in Table 3.2.

Table 3.2

Firm	'Mobility' Group A	'Continuity' Group B	Total
WASH 1	2	6	8
WASH 2	1	5	6
ASHT	1	3	4
SUND	10	11	21
CRAM	3	3	6
HART	5	5	10
NEWB	8	8	16
Total	30	41	71

There is a slight tendency for the high unemployment areas - Hartlepool, Sunderland and Newburn⁽²⁾ - to be associated with a higher proportion of workers seeking employment unconnected with their trade after serving their apprenticeship. This does not contradict the well known finding that with full employment there is more job changing (job mobility) see, for example SMITH (87). The numbers at each location are small, however, so we cannot attach too much importance to the general inference that men are not using their skills because of the lack of job opportunities in

(2) These three areas have all experienced male unemployment rates in excess of 10% since 1970.

some local labour markets. It may be that high unemployment areas produce a higher proportion of workers with skills that are no longer in demand but we will see later that the skills no longer being utilized are not associated with declining industries (mainly shipbuilding, coal mining, and engineering) which we argued in chapter 2 were responsible for high levels of unemployment in our areas.

The explanation of the difference between the proportion in group B (58%) and those who demonstrated 'perfect' occupational continuity (17%) lies mainly with those people who held jobs after serving their apprenticeship which were not in their trade but where their skill was relevant. Only 4 people had held jobs unconnected with their trade prior to serving their time and this is to be expected from knowledge of trade union restrictions on the age of apprentices. It is amongst skilled manual workers that we expect the strongest evidence of occupational labour markets because of barriers to competition erected by trade unions. In the light of this 58% does not seem to be a high proportion but it is a majority and possibly an understatement of the regional or national picture because of the heavy weighting in favour of unemployment black spots. In these areas especially it seems that a substantial number of skilled men compete for jobs outside their trade. This is not to say that all jobs in the individual trades are open to outside competition; it is difficult to see how the strict trade union rules on 'time-served or equivalent⁽³⁾ men only' can fail to restrict supply. But supply is also affected by wage rates, conditions of employment and working conditions for

(3) e.g. Government Skillcentre trained.

less skilled jobs and the evidence of Table 3.2 is that a large minority of apprenticeship served men are attracted by these, perhaps in preference to geographic mobility. Seen in this light occupational mobility and geographic mobility may be substitutes for the individual although both may be desirable from a policy standpoint.

It also follows that those tests of competitive theory which look for equalization of wage rates among, for example, men with the job title 'fitter', define occupation too narrowly. Only fitters compete for these jobs but fitters may also apply for jobs in different occupations, which may or may not be related but which do not warrant the description 'fitter'. Of the two, the wage rates attached to related occupations are probably much more important than the wage rates of less skilled jobs. The general picture, then, is not of a series of non-competing groups, but of a complex structure of inter-relationships between markets which might be seen to be extending the markets in the occupational dimension.

If the results can be generalized to the whole of the North East, there seems to be little to be said for the argument that the regional problem is one of redundant skills and lack of occupational mobility as far as skilled men are concerned. These workers are not immobile between different occupations.

This does not preclude the possibility that workers are not changing to the 'right' occupations as far as policy is concerned. It may be that neither the market nor government training establishments are offering suitable inducements or distributing enough information to attract workers into occupations in which there is a shortage of labour.

It may be that our results are not typical of the North East and that regional policy, in attracting new factories is helping to eradicate occupational immobility. To test this Table 3.3 shows groups A and B for skilled men prior to present job.

TABLE 3.3

Firm	'Mobility' Group A	'Continuity' Group B	Total
WASH 1	2	6	8
WASH 2	1	5	6
ASHT	1	3	4
SUND	7	12	19
CRAM	2	4	6
HART	3	6	9
NEWB	8	8	16
Total	24	44	68

The total sums to a smaller figure than that in Table 3.2 because of the exclusion of respondents who only reported two jobs. The overall proportion that group B forms of the total is increased to 65% but this is only slightly higher than the 58% derived from Table 3.2.

Excluding the two older plants, HART and NEWB changes the group B proportion, who demonstrated occupational continuity to 70%. Group B consists of workers who have not had jobs unconnected with their trade since serving their apprenticeship and includes people who have had other (unconnected) jobs prior to serving their time. If new plants are encouraging occupational mobility we would expect the proportion that group B forms of the total to be less after excluding HART and NEWB, when compared with the

proportion of 65% we derived from Table 3.3. In fact it is marginally more.

Occupational mobility seems, therefore to be a general feature of a substantial minority of skilled men and not induced by the arrival of new factories.

The skills which are no longer in use may be redundant or the firms may be attracting skilled workers from trades in no danger of extinction. The skills not now being utilized are:-

- WASH 1 - Bricklayer
- WASH 2 - Electrician
- ASHT - Mechanical Transport Fitter
- SUND - Plater, Butcher, Upholsterer, Engraver, Plumber, Sheet Metal Worker, Cooper.
- CRAM - Maintenance Fitter (NCB), Dressmaker.
- HART - Sheet Metal Worker, Plumber, Welder, Panel Beater, Maintenance Fitter (NCB).
- NEWB - Plumber, Bricklayer, Jockey, Painter, Heating Engineer.

The skills are as reported by the respondents and few are specific to the declining coal, shipbuilding and engineering industries. We can conclude that new factories are not having a substantial direct effect on the employment of men with redundant skills because most of these trades are still in demand, although some, such as Maintenance Fitter (NCB) and Cooper are required in much fewer numbers. It is still possible that labour market repercussions through the setting up of new factories could help workers with redundant skills by creating vacancies further along the 'chain'. Equally, it should be stated that there is no substantial tendency for new factories relative to established employers (represented here by Hart and

NEWB) to attract skilled workers away from occupations where there is labour shortage and where people were previously content to work; the older firms seem just as effective as the new factories in this respect.

This is not to say that we found no evidence of skills which might be thought of as going to waste by those responsible for increasing the supply of trained manpower. All respondents who said they had served an apprenticeship were asked whether their job was what most people in their trade do and 57 out of 89 (64%) replied negatively. Unfortunately this is a poor measure of 'wastage' since some of those who replied 'No' may still have been using their skills although the work task had been supplemented by additional responsibilities.

1.2.2. Skilled Manual Defined by Present Job and Apprenticeship Served.

Table 3.4 shows the distributions of groups A and B for the 42 people who both said they had served an apprenticeship and were doing a skilled manual job at the time of the survey. A relatively high proportion of workers fall into group B (88%)

Table 3.4

Firm	'Mobility' Group A	'Continuity' Group B	Total
WASH 1	-	6	6
WASH 2	1	4	5
ASHT	-	2	2
SUND	-	10	10
CRAM	-	3	3
HART	1	5	6
NEWB	3	7	6
Total	5	37	42

compared with the equivalent figure from Table 3.2 (58%). Thus many skilled men once they have taken a job outside their trade, seem not to return to their skilled occupation to reap the full benefits of their investment. It may be that short run unemployment, or the prospect of it has long run consequences to the economy by inducing permanent occupational mobility and aggravating shortages of skilled labour. Further analysis of such workers might be interesting but the size of the group is too small.

1.3. Administrative, Technical and Clerical Staff (White Collar)

Unlike skilled manual workers, who can be identified by their own classification as to whether or not they have served an apprenticeship (or this plus present job), there is no clear attribute common to the members of other categories. The difficulties of using the OPCS Classification of Occupations for fine analysis have already been mentioned. We are interested here, initially, in broad classifications and the OPCS system is satisfactory for this purpose. We therefore define A.T. & C.S. as those within OPCS Orders XXI (Clerical Workers), XXIV (Administrators and Managers) or XXV (Professional, Technical Workers, Artists).

An additional difficulty in the present analysis is to decide the population from which those who demonstrate occupational continuity are drawn. By definition, the other A.T. & C.S. workers in the sample (those who show occupational mobility) have had a job in an occupation different from their present job. Should we use present job or a previous job as the criterion? On balance, it seems best to maximise the population by using present job.

It is convenient to use the categorisation of groups A and B as for skilled manual workers in 1.2.1. above but here we define group A as those people who have had jobs unconnected with the training they were using in their present job, after receiving that training. Group B consists of those workers who have not had unconnected jobs. These definitions are much more nebulous than those used for skilled manual workers, especially for clerks where there are few recognised courses of study or qualifications. When in doubt, consideration was given to whether the job fell within the same OPCS Order as the other jobs in the work history. If all jobs qualified on this criterion, the respondent was classified as group B. The tendency is therefore towards an overstatement of group B.

Table 3.5 shows the results for A.T. & C.S. respondents and is very similar to Table 3.4. for skilled manual workers

Table 3.5.

Firm	'Mobility' Group A	'Continuity' Group B	Total
WASH 1	-	3	3
WASH 2	-	4	4
ASHT	1	3	4
SUND	1	1	2
CRAM	1	16	17
HART	-	9	9
NEWB	2	15	17
Total	5	51	56

91% fall into group B, compared with 88% from Table 3.4. If anything, we expected to find more occupational mobility among A.T. & C.S. workers than among skilled manual respondents since,

although the training barrier is similar, trade union restrictions to competition are weak⁽⁴⁾. The proportions we have found suggest that trade union restrictions to entry into skilled manual occupations may be much less important than the training obstacle and this is a matter of concern to Government Skillcentre trainees. Another test is to look at the numbers who held jobs unconnected with their training before the training period. 4 out of 42 (10%) of the skilled manual workers and 9 out of 56 (16%) A.T. & C.S. respondents fall into this category. This indicates that trade union restrictions to becoming trained for skilled trades are effective. But (presumably) educational qualifications perform a similar function for white collar occupations.

Only 6% of A.T. & C.S. workers gave identical job titles for their entire work histories. This compares with 17% for skilled manual workers but the difference is probably due to the plethora of job descriptions among white collar staff rather than differential occupational mobility.

Table 3.5 constitutes strong evidence of the existence of occupational labour markets among A.T. & C.S. workers. But the same could be said for Table 3.4. in respect of skilled manual workers and our broader analysis in 1.2.1 above showed that this must be severely qualified. It is not possible to draw any firm conclusions as to the relative strengths of white collar and skilled manual workers occupational labour markets.

(4) The finding is supported by a study of the 1971 Census, DE Gazette Dec. 1975, which shows that the least occupational mobility is among professional and technical workers.

1.4. Semi-skilled and Unskilled Workers We were successful in identifying skilled manual and A.T. & C.S. personnel by their training, either directly from the replies to the questionnaire or indirectly via the OPCS Classification of Occupations (which has a basis in the training or degree of skill of workers). Almost by definition training is much more difficult to use as a classificatory device in the case of unskilled and semi-skilled respondents. Educational qualifications which such workers may hold are largely irrelevant to their work tasks. Training 'on the job' is usually given by the firm and may have limited usefulness even to another firm in the same industry because the technology may differ. It follows that, in order to make a successful classification of the semi-skilled and unskilled a good knowledge of the type of work is required. This proved possible in our seven study firms but lack of resources meant that previous jobs could not be classified similarly.

The OPCS Classification of Occupations was used to establish continuity and, as we have seen in 1.1 above only four of the respondents possessed this attribute and could be classed as semi-skilled. But we really have no way of knowing whether this figure is too high or too low. We can relate it to the residual of the sample, after excluding skilled manual and A.T. & C.S. workers and say that only 4 out of 290 people classified as semi-skilled or unskilled in their present job had remained in the same occupation throughout their work history. This is enough to conclude that the notion of an occupational labour market is not very relevant to semi - and unskilled workers. For evidence tending to corroborate this view see RAIMON (71).

If an occupational labour market does not exist for less skilled workers perhaps they operate in an industrial labour market. Their training may be useful to another firm in the same industry especially if it uses the same technology. We will study industrial mobility in sub-section 2 below.

1.5. Conclusions

We have seen enough evidence to conclude that it is relevant to think in terms of occupational labour markets for skilled manual and white collar workers. It might be irrelevant to semi-skilled and unskilled workers. We must, however, reserve judgment about the strengths of such markets from the evidence of the survey because the results may not be representative of the national or regional picture because of the weighting in favour of high unemployment areas.

At such locations higher than average occupational mobility may be induced by unemployment experience or the prospect of it and since some workers, once they have abandoned their skill do not return to it, those responsible for the supply of trained manpower perceive high skill wastage levels in unemployment black spots.

Workers may see occupational mobility as an alternative to geographic mobility although the needs of the economy might be served by both.

In order to find evidence for occupational labour markets it was necessary to define broadly the occupations reported by respondents. Despite this a substantial minority of skilled manual workers were found to compete with other, often less skilled

workers for jobs requiring less stringent qualifications. The labour force might be seen better as participating in a complex of inter-relationships rather than a series of non-competing groups and these might be seen to be extending the market in which workers seek jobs. These points need to be borne in mind when conducting wage rate equalization studies.

Even though a substantial minority of skilled manual workers demonstrate occupational mobility this may not be enough for the needs of the economy and, perhaps more importantly, it may not be harnessed into the right training channels to meet those needs. In Chapter 5 we will investigate the reasons why many workers are not interested in further training or re-training.

New factories (as opposed to established firms) seem to make little direct impact either on the incidence of occupational mobility or the employment of workers with redundant skills. We have no evidence on possible secondary effects of jobs created by new firms, however.

Trade union opposition to the 'dilution' of a skilled work force seems less important than restrictions on admission to apprenticeships.

2. Industrial Mobility

Skilled manual and white collar workers can perform substantially the same jobs in a variety of industries. There is virtually no barrier to industrial mobility for these groups.

Semi-skilled and unskilled manual workers have training and experience which might be of use to only a limited number of firms. In some industries there are many firms using similar

technologies in the same locality and in such a situation semi-skilled and unskilled workers may find it easy to transfer their 'skills' between firms in the same industry and thus create 'industrial labour markets'. Good examples of this might be West Midlands engineering companies or Lancashire textile mills.

Other industries can be dominated by only a few firms at diverse locations and semi-skilled or unskilled employees who change firm are also likely to change industry. Two of our study firms are in this situation - NEWB and HART; the technologies of each are very different from that of other firms in the same locality. It should also be noted that although both these firms are classified as SIC Order XVI - bricks, pottery, glass and cement - their production processes are very different and illustrate the heterogenous nature of this SIC Order. Evidence of continuity of employment in this industry could not be considered, therefore as constituting a case for an industrial labour market because it is unlikely that such continuity implies a transfer of 'skills'.

In the analysis which follows we will find that the industries in which respondents have worked in the past depend largely on the industries represented in the local labour market. The evidence for industrial labour markets is weak and it seems that the industrial dimension is much less important than the spatial dimension of labour markets.

2.1. Industrial Continuity

387 respondents gave recorded replies which could be tested for industrial continuity and of these only 11 (3%) had worked

for firms belonging to the same SIC Order throughout their work histories. This suggests that there is very little competition among workers seeking to use the 'skills' and experience which they have acquired while working with the technologies of particular industries. At SIC Order level there is little industrial continuity and the evidence for industrial labour markets seems very weak. At MLH level it is, of course, even weaker.

Of the 11 respondents demonstrating industrial continuity, 9 were either skilled manual or white collar workers. For a minority, therefore, it seems that there is some benefit to be gained from transferring skills which are specific to an industry between jobs in addition to skills which are occupation-specific. The notion that occupational skills act as a form of protection and encourage industrial mobility seems slightly weaker than the idea that the easily acquired skills of semi-skilled and unskilled workers can be abandoned more readily because the investment is smaller; this follows from the higher proportion of these less skilled respondents who demonstrate industrial mobility.

In Chapter 2. (1.7.2) we saw that evidence of an industrial labour market was most likely to come from respondents at Washington. In fact, the numbers from each location are too small to test this hypothesis. For the record the numbers at each firm who showed industrial continuity at SIC Order level are:-
WASH 1 - 2; WASH 2 - 1; ASHT - 2; SUND - NIL; CRAM - 5; HART - 1;
NEWB - NIL.

Thus, industrial mobility at each of our locations is substantial. This is perhaps surprising since a study of a coal mining area in the USA in the 1950s showed that workers who

stayed within the area were unlikely to change industry but out-migrants had a high probability of industrial mobility; see GEGAN and THOMPSON (22). From this we might expect the migrants at the 'New Towns' of Washington and Cramlington to show greater industrial mobility than workers at the other locations who are likely to be long-standing residents. In fact there is little difference between our study areas and this might be attributed to new industry moving into the areas but not exclusively the survey firms since ignoring present job in the work histories makes little difference to the industrial continuity levels. It should be remembered, however, that our respondents are unlikely to be representative of all workers at the survey locations.

Although we have seen that mobility between SIC Orders is considerable it is possible that it may be taking place within the industrial sectors. Analysis at the primary, manufacturing, construction and service sector level reveals 28% of respondents with sector continuity. All of these held jobs within the manufacturing sector, of course, so to see whether our firms were attracting workers who had previously worked only in the other sectors the analysis was repeated ignoring present job. This gave 39% of respondents with sector continuity. It is difficult to interpret this figure but it is, perhaps, no more than might be expected if jobs are selected without regard to their industrial sector: a random allocation of workers between industries. This evidence, taken in conjunction with that of substantial industrial mobility at SIC Order level does not suggest that new factories are significant in enticing workers from non-manufacturing sectors.

National figures for 1967-68 indicate that the survey results are not untypical. In that year 50% of the people in the manufacturing sector who changed industry Order also changed sector; 60% of workers in the service sector did the same, including 43% who changed to manufacturing⁽⁵⁾. In the survey, ignoring present job which is in manufacturing industry by definition, 215 respondents changed sector at least once in their work histories out of 326 who said they had changed industry Order. Thus a survey figure of 66% compares crudely with 50% from national figures for 1967-68. We expect the survey proportion to be higher because the average working life of respondents is some 18 years which, although the work histories are not complete for all persons, is considerably longer than one year.

2.2. Source Industries

Table 3.6 shows the industries, by SIC Order, from which the survey firms attracted employees as recorded for the previous firm at which each respondent was employed.

National industrial mobility figures⁽⁵⁾ show disproportionately high outflows from miscellaneous services; the distributive trades; other manufacturing; timber and furniture; and leather, leather goods and fur. The survey results are in broad agreement on the distributive trades and miscellaneous services but the other three industries are poorly represented, probably because there are few firms in these industries in the local areas (see Chapter 2). Employment in the 'other manufacturing' Order is significant only at Ashington, Cramlington and Washington

(5) Department of Employment Gazette Dec. 1975 P.1267

TABLE 3.6

Source Industries of Employees. (Percentages)

	All	Wash	Asht	Sund	Cram	Hart	Newb
<u>Primary Sector</u>							
I Agriculture, forestry, fishing.	1	-	3	-	-	1	1
II Mining & quarrying	1	2	5	2	-	-	3
<u>Manufacturing</u>							
III Food, drink & tobacco	5	-	3	8	8	8	3
IV Coal & petroleum products	neg	-	-	-	-	-	2
V Chemical & allied industries	4	-	8	-	16	1	-
VI Metal manufacture	5	-	11	3	-	11	6
VII Mechanical engineering	10	16	5	30	1	4	10
VIII Instrument engineering	2	7	-	-	1	-	-
IX Electrical engineering	16	28	16	11	17	10	7
X Shipbuilding & marine engineering	neg	-	-	-	-	-	3
XI Vehicles	1	-	3	13	-	-	-
XII Metal goods n.e.s.	5	3	-	-	18	3	-
XIII Textiles	2	-	5	-	1	5	2
XIV Leather, leather goods & fur.	1	-	-	-	-	5	-
XV Clothing & footwear	3	1	8	-	-	8	-
XVI Bricks, pottery, glass cement etc.	3	1	-	3	1	5	4
XVII Timber, furniture etc.	1	1	3	-	1	1	2
XVIII Paper, printing & publishing	3	5	-	5	-	3	3
XIX Other Manu.industries	3	9	3	-	6	-	-
XX <u>Construction</u>	3	1	-	5	1	1	12
<u>Service</u>							
XXI Gas, Elec. & water	2	-	3	-	3	4	1
XXII Trans. & communication	3	1	-	3	1	4	6
XXIII Distributive trades	11	14	5	3	14	10	10
XXIV Insur. banking etc.	1	1	3	-	1	-	2
XXV Prof. & Scien. Serv.	4	1	3	3	6	3	10
XXVI Misc. services	7	6	5	8	3	13	4
XXVII Pub. admin. & defence	3	3	8	3	1	-	9
	100	100	100	100	100	100	100

N.B. neg = negligible

and these are the locations at which workers were drawn from this industry. The correlation is not so neat for the other two industry Orders but this may be because of the exclusion of small firms from the analysis of industrial structure.

National figures show disproportionately low outflows of workers from professional and scientific services; public administration and defence; gas, electricity and water; and transport and communication. Again, there is broad confirmation in the survey results with the highest overall figure of the four recorded for professional and scientific services and explained by a strong representation of students, especially at NEWB, whose place of study was counted as a work place. Disproportionately high percentages at individual plants are due to nurses and ancillary medical staff recruited by CRAM and local authority staff and military personnel obtaining employment at NEWB and ASHT.

The high overall figures in Table 3.6 are for mechanical and electrical engineering and distributive trades. The mechanical engineering figure originates in Sunderland, Washington and Newburn. Analysis of the industrial structure in these areas (and in Newcastle for NEWB employees) showed that this result was to be expected, particularly in the case of Washington. Finding the highest proportion at SUND is, perhaps, a little surprising but we have very few respondents in a large employment centre; nevertheless it is possible that a hiring policy requiring recruits to have some relevant previous experience may be a partial explanation.

The highest overall proportion, 16% for electrical engineering, reflects the strong representation this industry has in the North East. High individual proportions at CRAM and ASHT might be taken

as evidence of an industrial labour market in electrical engineering but there is an even higher proportion at WASH where both plants are in the mechanical engineering SIC Order. The most likely explanation for all these figures lies with the existence of local electrical engineering factories, particularly Welwyn Electric at Bedlington; and Littlefuse, RCA and Philips at Washington. There was some evidence, in the case of Littlefuse of a 'snowball' effect; apparently two or three female operatives moved to WASH 2 and many ex-colleagues decided to join them. Managers at Littlefuse may have perceived this as 'poaching' by a new firm but there is no corroboration from the survey.

The substantial overall proportion of respondents who were drawn from the distributive trades has its source at Washington and Cramlington, the 'New Towns'; this might be taken as evidence of a mobility pattern to be associated with economic growth. Both the service and manufacturing sectors have been growing in employment terms at these localities but the attraction of the higher earnings to be obtained in factories results in a net inflow from the service sector.

Several of the proportions from manufacturing industries are low. Coal-and-petroleum-products is poorly represented in terms of employment in all our areas. Only at Sunderland are there large employers in the vehicles industry; instrument engineering is only significant at Washington with Timex as a large employer. The survey results are in line with the employment pattern in each case.

The textiles industry has improved its representation in the region in recent years but in our survey areas only Cramlington

and Ashington have firms of any size. The figure for Ashington in Table 3.6 confirms this; the relatively high proportion at HART can probably be explained by small textile firms in the area which were excluded from the analysis of employment by industry in Chapter 2.

Perhaps the most surprising figure in Table 3.6 is the absence of any workers drawn from the shipbuilding industry at SUND. We expected a substantial proportion because there are several declining but large employers in the area. It is unlikely that hiring policy is responsible since shipbuilding experience is relevant to some of the work at the firm. It may be that shipbuilding workers are not interested in employment at a small mechanical engineering plant at a location which involves considerable travel time from the shipyards.

The Appendices to Chapter 2 show the manufacturing industries which are likely to be well represented in the work histories of respondents if employment opportunities are an important determinant of industrial mobility. Comparison with Table 3.6 reveals broad agreement for each of our areas. Exceptions to this are at Ashington where chemical and allied industries appear quite strongly in Table 3.6 but this is not entirely unexpected because a small firm in this industry does appear in Appendix 2.1.

At HART the unanticipated emergence from the survey results of leather, leather goods and fur; and bricks, pottery, glass, cement etc. is probably due to the exclusion of small firms from the industrial analysis of employment as mentioned above for the textile industry.

For CRAM the apparent importance of food, drink and tobacco and electrical engineering was not expected but it can probably be explained by the growth of a variety of firms in recent years. A similar explanation holds for the emergence of paper, printing and publishing at WASH. It is more difficult to explain the low representation of mechanical engineering at CRAM as shown by Table 3.6.

The absence of workers at SUND drawn from shipbuilding and marine engineering has already been discussed.

If the lists at Appendix 2.5 and Appendix 2.7 are combined for the joint area of Newburn and Newcastle we find broad agreement with the survey results, the only exception being the omission of workers from the chemical and allied industries in Table 3.6.

2.3. Conclusions

The job opportunities hypothesis holds that job chances are determined by the state of demand and technology; the supply and demand forces of economic theory do not influence the allocation of labour between job vacancies. Despite the small size of the sample the evidence of this section might be taken as support for this hypothesis since neither supply preferences nor hiring policy seem to operate effectively in the industrial dimension; work histories can be predicted broadly from the employment opportunities which exist in local labour markets. Workers appear to be allocated randomly between the different industries, either at SIC Order level or sector level, which are available locally. Support for this view can be found in UK SOCIAL SURVEY 1945-49 (95).

This would be claiming too much, however. The same evidence examined in this sub-section indicates that the spatial definition of the area in which workers look for jobs is important; that a market exists in the spatial dimension but not the industrial dimension. To say the least, the case for industrial labour markets is very weak in manufacturing industry and substantial industrial mobility is to be found in most areas independently of the existence of new or expanding firms. Industrial barriers to mobility seem ineffective.

The importance of the spatial dimension is shown by geographic mobility studies. At both an inter-regional and local level it has been shown that worker movements are typically from areas of low net advantage to areas of high net advantage, as measured by income differentials; see, for example BUNTING (9).

Other evidence indicates that industry may be important in determining wage levels from the demand side; see PARDEE (68) which shows that inter-city wage differentials are largely dependent on industrial composition. This is entirely consistent with the finding that industrial labour markets may not exist.

3. General Conclusions

In this chapter we have seen that occupational labour markets are important to white collar and skilled manual workers; the spatial dimension of labour markets seems important to all workers but industrial labour markets do not appear to exist. We will examine the occupational and spatial dimensions and their possible inter-relationship in the next three chapters.

Chapter 4 will show the importance of the spatial dimension and the difficulties involved in delineating boundaries.

The training and experience of semi-skilled and unskilled manual workers do not appear to act as a barrier to either occupational or industrial mobility. We will see in Chapter 5 however that training might seem to be a 'hurdle' to upward social mobility for many of these workers which they are not prepared to try to overcome.

In Chapter 6 we will see that geographic mobility and training are associated but the direction of causation remains indeterminant for most workers.

Chapter 4

The Spatial Limits of Labour Markets

1. INTRODUCTION

1.1 Nature and Characteristics of Labour Market Areas

In a non-slave economy it is usual for workers to enter into agreements to supply their labour services under various conditions of employment, one of which is a wage rate, rather than selling the fruits of their labour in a product market. The employers may be private firms, individuals, the state or state-owned agencies.

Entering into such agreements is both a necessary and sufficient condition for the existence of a labour market which is commonly thought of as having spatial, occupational and industrial dimensions.⁽¹⁾ In justification of this, JEVONS (38) says that "markets may or may not be localised", the only condition for the existence of a market is that buyers and sellers be "in close communication with each other". But most of the standard labour economics literature assumes that local labour markets exist, especially for manual labour.⁽²⁾

The separation of residence and workplace is a phenomenon which, in modern industrial society, has become, secularly, increasingly evident as technological change has reduced the price and increased the availability of private and public transport. Recent changes in the relative prices of energy sources have threatened to reverse this trend but the long run picture is clear. In less developed societies a common pattern is for people to be either resident at their place of work or live adjacent to it. This is also true for a minority in modern industrial society, for example, caretakers, but the vast majority indulge in some form of daily journey to work.

(1) See, for example, PHELPS BROWN (7)

(2) See, for example, KING (43)

In small country towns remote from alternative sources of employment it is common to find most of the workforce living in the town, often walking to work. Such a town can be thought of as a well defined local labour market area but the balance between the numbers of jobs and workers can often only be achieved by the migration of young people to large towns and conurbations where the daily journey to work consumes a significant amount of time and traverses long distances. In some cases there are complex flows of workers between suburbs in addition to movements between the suburbs and the generally recognised centre. Here a local labour market is not well defined.

Some workers, particularly professional and executive, operate in a national or international labour market area for at least part of their working life, moving house each time they change jobs but typically joining the local commuters in daily travel to work. It is also probable that some workers, drawn from all social classes, demonstrate similar labour market behaviour at a regional or sub-regional level. In addition some people may move to a place of work but maintain their home elsewhere.

Analysis of travel to work data to identify labour market areas is only an approximation, therefore, on the ground that it cannot identify mobility of a more permanent nature.

The transport facilities in local labour market areas can operate to promote the economic efficiency of the community. They act as a lubricant to the allocation of labour between various uses. If the market mechanism is emitting the correct signals, one of which will be price (or wage levels), then, for example,

expanding industry will attract labour from declining industry, provided there are no imperfections to interrupt the flows. In the spatial dimension the worker need only vary his daily journey to work in the majority of cases, thus avoiding any change of residence. In a similar way information flows in the local labour market oil the economic system, so much so that the extent of the information network will delineate the maximum limit of labour market boundaries.

Data on information flows in labour markets are sparse, but we do know that manual workers, especially the semi-skilled and unskilled, tend to depend on word of mouth from friends and family⁽³⁾ and at the other extreme professional and executive workers rely on trade journals and national newspapers. In addition employment exchanges are thought to be a poor source of information, perhaps because employers do not notify vacancies, preferring to use other methods of recruitment.

Since information flows set the maximum limits of labour market areas and differ between types of worker, the areas will also tend to depend on occupation, and possibly industry.

Labour market areas also vary with sex. Men are known to travel further than women although younger, single females can have considerable journeys to work. The main influence seems to be the pull of children in the home which restricts married and often part-time women workers to very short work-journeys where alternative child care facilities are not available.

(3) In the survey this was the most common method of recruitment amongst semi-skilled manual workers.

Finally, it is probable that local labour market areas vary with cyclical fluctuations in unemployment. Men may be prepared to travel greater daily distances in order to secure a job if there is a shortage of opportunities near their homes. This is not to say that all the spatial horizons of workers extend during recessions: national and inter-regional migration of a permanent nature tends to fall at times of general depression, perhaps because workers prefer to maintain their social links in their own locality when unemployed. The prospect of being out of work in a strange environment may seem very bleak indeed.

1.2 Scope of the Chapter

We have seen that the spatial limits of labour market areas can vary with the availability and efficiency of transport facilities, the willingness of workers to change their place of residence, the information systems used by workers - and hence the occupation and industry to which an individual worker considers he belongs. We have also noted that family commitments may influence the length of the daily journey to work and that this is likely to differ between the sexes. Also, unemployment rates may be important in the spatial dimension.

With so many sources of fluctuation it may be considered that any attempt to delineate the boundaries of labour market areas is doomed to failure. Nevertheless, this is the objective of this chapter but we will concentrate on local labour markets because available data are too poor to estimate regional, national or international labour markets. We will compare the results of two methods, one using Census material as the data source and the other the replies of respondents to the survey. In particular

we will look at the feasibility of estimating labour market areas at all and the deficiencies of the two methods but the chief emphasis is on assessing the value of survey data in this context. To ensure clarity in a field which has received too little attention in previous work, the approach is non-rigorous and the specific conclusions which are drawn are thought to be only examples of more extensive findings which could result from deeper analysis and further research.

We will begin by studying some of the reasons why the delineation of labour market boundaries might be useful.

2. Labour Market Areas: Uses

Labour market area boundaries need to be known for a variety of purposes. In this section we will look at three major fields where knowledge of boundaries would be useful.

2.1 Statistics for Economic Planning

Information on employment and unemployment levels is of general public interest and is relevant to planning decisions taken by central and local government. Although national bodies make disturbed noises when the unemployment rate in the economy as a whole reaches its higher levels, local groups seem to capture more attention by pointing to the unequal incidence of unemployment at the local level. Thus local unemployment rates have influenced policy on the distribution of industry and regional development and may become even more important in the context of EEC regional policies. An example of past uses is the specification of Special Development Areas in the 1960s.

It is important to relate local unemployment rates to local labour market areas to give an unbiased picture of the state of

the local economy. If the area chosen is too small it may show, for example, a high proportion unemployed in a predominantly dormitory area with a correspondingly low proportion in the relevant employment centre. The need for assistance would thus be indicated in the wrong area and often where it would be difficult and costly to provide. If the area chosen is too large, acute pockets of unemployment may be disguised and overlooked.

Partly for these reasons the Department of Employment publish unemployment rates for ' travel-to-work areas' based upon Census data and local knowledge. The statistics will attract most attention at times of high unemployment when the groups most affected are the semi-skilled and unskilled manual workers. Yet it is these workers who depend upon friend and family networks to get jobs and, as we have seen, these information flows tend to define the labour market areas. It seems likely that the less skilled workers have what are to the outside observer the most idiosyncratic labour market boundaries and, perhaps partly because of this, are in more need of job opportunities and government assistance than the rest of the community.

It is possible, therefore, that decisions designed to remedy high unemployment will be based on inadequate or incorrect information relating to local labour market areas. The problems that might arise as a result of such decisions include the location of a new factory or government training establishment at a site to which the unemployed will not travel. Alternatively, if they do travel, as soon as jobs become available in the preferred labour market area they may leave. The new factory

could then experience labour shortage or the training establishment vacant places. It was for similar reasons to these that, in designating Special Development Areas for regional aid some attempt was made to align the boundaries with labour market areas.

There is an alternative outcome to the posited situation of a wrongly located new factory or government training establishment. By providing opportunities and persuading some workers to attend, policy may induce a change in those attitudes which may have been irrational or prejudiced, and thus bring about a change in the areas in which people prefer to work. This is unlikely to be achieved without a time lag, however, and there is certainly a risk that it will not be achieved at all. The argument in this chapter is that this risk can be minimised by trying to measure labour market areas before the investment decision is taken.

Evidence of intransigent attitudes about location of work place comes from new towns, especially those designed as overspill areas for Greater London. A substantial minority of people made the move only to obtain better or cheaper housing and continue to commute to their old place of work despite the cost of travel, the time involved and alternative local job opportunities. For North East evidence on this point see North-East Area Study Working Paper 18, p.6.

2.2 Political and Sociological Aspects

The Redcliffe-Maud Commission into local government in England and Wales considered that their proposed areas should match local communities. One of the key criteria for this was the relationship between residence and workplace. The argument used gave recognition to people's interest in the areas where they work,

shop and find recreation which is parallel to their interest in their place of residence. The Local Government Act of 1972 was not totally unrelated to the proposals of the Commission and the new local authorities appear to be taking a greater interest in local employment opportunities than their predecessors. This could be attributed to the higher proportion of people who both live and work in the new area, relative to the old. Concurrency between labour market areas and local authority boundaries can be seen both to reflect and to reinforce local communities.

Sociologists who wish to study local communities need some conception of an area containing the broad span of activity. Local labour market areas will be at least a starting point for this, in the same way that an industrial sociologist will begin his research at the level of the factory.

2.3. Testing Theories in Labour Economics

Alfred Marshall quotes Cournot in his discussion of market areas "A market is wherever buyers and sellers are in such free intercourse with one another that the prices of the same goods tend to equality easily and quickly." MARSHALL(53) Adam Smith made similar statements.

Many attempts have been made to test neo-classical theory by analysis of the range of earnings in the same occupation within the same area, searching for wage-rate equalisation tendencies. In general, such tendencies have not been found⁽⁴⁾ but most studies have not attempted any systematic definition of the area over which to collect data. In some cases a large conurbation has been

(4) See ROBINSON (79)

assumed to be a local labour market.⁽⁵⁾ This is not to suggest that all the variation found in the studies can be accounted for by differences between labour market areas, but elimination of this source of variation may have led to more understandable results. Economists despair of ever finding corroborative evidence yet they cannot be sure they have been looking in the right place.

The theoretical extent of labour markets is usually couched in vague terms such as "within a radius of less than a day's journey from where the worker is living" PHELPS BROWN (7) or "in which workers can change their jobs without changing their residences".⁽⁶⁾ The underlying assumption seems to be that travel is a costless, time-free good. Goodman's attempt is "a spatially delineated area, the boundary of which is rarely crossed in daily journeys to work" GOODMAN(26) - along with a high degree of intra-market movement. This is more appealing; it is related to behaviour patterns which must take some account of travel costs. Travel to work patterns are proposed as the key to understanding labour market behaviour in large industrial and urban areas like Tyneside which superficially appear as one continuous "local" labour market.

The traditional steps taken in research into labour markets are to define the labour market in terms of potential travel-to-work flows; analyse wage rates in this area; then explain differences between wage rates for the same job in terms of organisational factors such as trade union strength and internal

(5) MACKAY (46) especially the work on Birmingham data.

(6) Report of War Manpower Commission (US), quoted in THOMPSON (91)

labour markets. These factors are important, of course, but the suggestion here is that wage rates and travel to work costs (including time costs and psychic costs) are inter-related. In the short run workers' pre-conceptions of this relationship will determine where they look for work and thus the location of the jobs they find and their travel to work patterns. In the long run, given perfect information and flexible public transport, the potential area of the labour market is the relevant unit but in the short run, the time period in which most research is conducted, labour market areas will be more circumscribed. It then becomes a research task to explain the differences between the long run and the short run in terms of rigidities in public transport, wage rates, and imperfect information. Furthermore, it is clear in the light of this that the researcher would not expect to find wage rate equalisation throughout the potential labour market area, because effective competition will only exist within those areas determined by behavioural patterns.

We can also see this point as a problem of aggregation. Most empirical work recognises the importance of maintaining the homogeneity assumption, that workers in different occupations and of different sexes are not comparable because they form non-competing groups. The better studies also control for industry. It is much more difficult to control for age and experience. Thus, theoretical competition is assured, as far as possible, because it does not make sense to aggregate (for example) clerks and miners. For the same reason, if a man in South Shields does not compete with a man in Wallsend simply because of the locational difference, there is little point in aggregating them or comparing them for wage rate

equalisation purposes. There is a need to define rigorously the spatial limits of the local labour market to be studied in research.

3. The Spatial Limits of Labour Market Areas: Definitions and Methodology

We have seen that few writers have given consideration to defining rigorously local labour market areas, possibly because of the complex, heterogeneous and fluid character of work movements. Those who have written on the subject, however, agree about the key role of travel-to-work data, thus recognising that the problem is essentially one of labour supply rather than demand.

3.1 Supply or Demand Perspective?

This point can be seen by considering the relative importances attached to the work journey by the worker and his employer. The worker usually bears all the cost of travel, which increases with distance while the employer often only takes an interest when travel difficulties mean frequent late-coming and consequent loss of production or shortage of labour.

Apart from factors due to the employer's size and turnover of labour he can influence the extent of the market area in certain circumstances, through hiring policy. Few would agree with Lloyd Reynolds that these policies are so diverse that each firm is a separate labour market, but some employers do impose narrow spatial limits on the place of residence of their workers. The motive for this is usually to eliminate absenteeism and bad time-keeping. The same results often can be achieved by the provision of works buses and this is more common than discriminating against workers who live in certain areas. Works buses are also used by some large

employers to try to extend their labour catchment areas. Wide advertising and other forms of transport - for example, the river ferry of Ford at Dagenham - may serve the same purpose but such measures are usually restricted to areas of labour shortage or for special shifts.

The most common attitude of employers seems to be to accept established patterns of travel to work. Planners, especially in new towns, might disagree with this. HUNTER (36) believes that planners have a management role in a local labour market because, left to itself, the market produces socially undesirable consequences - it either does not work well or not quickly enough. It is a matter of opinion whether planners have achieved socially desirable results but, at least superficially, labour markets seem to work well enough and remarkably quickly. About one third⁽⁷⁾ of the economically active change jobs every year and the post war period has seen levels of unemployment, which compared with the inter-war period, can only be described as "full employment".

Little of this can be attributed to planners, although they have had an impact in the post war period. In particular we can note the effect on metropolitan areas and conurbations which were defined in 1950 by the Registrar-General in terms which included focal centres for work. The subsequent dispersal of population and employment to the peripheries and overspill areas has rendered such centres redundant in some areas. The planning decisions for these developments probably involved an implicit model of the

(7) Department of Employment Gazette, December 1975, p.1264

(created) labour market in terms of space, time and cost. But the numbers of workers who continue to travel to their old areas of work suggest that planners underestimated the extent of labour market areas.

Even if the assertion that supply is more important than demand in determining labour market areas is not accepted, the work of VANCE(96) suggests that a supply side measurement might be equivalent to a demand orientated approach. Vance compares the twin concepts of "labour shed" and "employment field". A labour shed is defined as a line enclosing the area in which the employees of a group of factories live, omitting extreme cases. Employment field is the area in which most residents of a given area work. He concludes that in practice these tend to coincide in shape and general size. The absolute limits are set by communications (information flows) linking buyers and sellers and the areas are marked by zones of transition, the market being defined in terms of resistance points on a scale of mobility rather than by fixed frontiers.

Similar ideas are expounded in a paper by GOLDNER(24) who discusses in theoretical terms the determinants of labour market boundaries. The emphasis is on the supply side of the market. The approach is through 'normal preference areas' which Goldner defines for the worker as 'that geographical area within which he is willing to work at a particular point in time'. It is claimed that labour force participation, methods of transportation and union rules exert systematic influences on the number, shape and size of normal preference areas. Pay, status and promotion prospects

may all extend the boundaries for individual workers. In suggesting a method of aggregation Goldner posits a preference profile of contours which is similar to the resistance points of Vance. Demand is located at each factory gate. These points must be within the preference areas of some workers since, being rational by assumption, workers must, to some extent, be realists. A man will not have a preference area which does not include any work places.

Goldner combines this framework with a traditional model of a city, complete with nodal point and concludes that spatial incompatability can explain high wage rates in large plants and large urban centres. To extend this to the specific case of Greater London (for example), to explain high wage rates, or to suggest that a cure for inflation would be to replace large conurbations by small towns containing small plants on small trading estates would be going too far. But the order of importance of the spatial dimension is indicated by this suggestion.

3.2 Expected Variations at the Survey Locations

Goldner does not encourage the empirical application of his ideas; "Labour market boundaries are arbitrary, flexible and shift with time and economic circumstance". GOLDNER (24) One of the aims of this paper is to discover whether the boundaries are sufficiently stable to lend themselves to approximate measurement.

Most studies of labour markets involve looking at either the unemployed or the results of labour market "trades", that is, workers in particular jobs. The latter method involves the selection of jobs, rather than workers, which are typically filled

at a variety of times when the state of the labour market differed. They may also have been filled by mobility internal to the firm. For the purposes of testing neo-classical economic theory it might be argued that each labour "vintage", identified by the firm's recruiting phases, forms a non-competing group and should be treated separately to preserve homogeneity. The alternative argument is that date of recruitment is irrelevant, that an otherwise homogeneous group is in a state of potential competition and that this is the essential requirement of theory. Studies of the unemployed have the advantage that most actors are in the same labour market state at the same time.

Our survey falls between these two extremes since most workers were recruited during a short time span, 1973-74. The respondents are therefore relatively homogeneous in terms of labour market cyclical fluctuations although this varies between areas. In Washington, Cramlington, Hartlepool and Ashington the female unemployment rates during the period 1973-1974 were fairly constant, the maximum variation being $2\frac{1}{2}$ percentage points at Ashington. The male unemployment rates at Cramlington followed a similar pattern but, at the other locations male rates fluctuated by between 3 and $4\frac{1}{2}$ percentage points, (see Chapter 2). However, the numbers interviewed in the survey and the other possible sources of variation do not allow us to study changes in labour market areas attributable to the trade cycle. Similarly, because we have only one industry represented at each location we will not be able to discover whether differences between the areas have an industrial or locational source. However, we expect more variation to be due to the nature of the areas than to the industries.

The six locations represent a variety of types of area. Cramlington and Washington are new towns catering primarily for overspill from the Tyne and Wear conurbation. Newburn is now a suburban working class commuter belt for Tyneside. Ashington forms part of a series of discrete urban developments in South East Northumberland. Hartlepool is a self contained urban development still fairly isolated from Teesside. Sunderland is a traditionally self-contained area, now part of the Tyne and Wear conurbation.

From the locational source of variation alone, therefore, we expect Sunderland and Hartlepool to be the most self-contained, followed by Cramlington and Washington with Newburn and Ashington having most ties with their neighbours.

The occupational dimension presents problems because we expect it to be a major source of variation. All groups except the semi-skilled are fairly small at all our locations, however, so we must be prepared to draw only tentative conclusions, at best, about the other groups.

We expect sex to be an important differentiating factor at those locations where both sexes are well represented.

3.3 The Survey: Job Search Areas

How might we go about measuring labour market areas?

The phenomenon of job search amongst unemployed workers has received considerable attention in economic literature in recent years. However job search behaviour is not unique to unemployed workers. The majority of annual job changes take place without any intervening period registered as unemployment and these other

workers probably indulge in some form of search to acquire knowledge about the new job in a "job search area". If Goldner is right, such workers will have an idea of a geographic area in which they prefer to work which may or may not include the location of their present job but which probably includes the location of the new job.

In the survey we asked respondents to say where they had searched for work while they were looking around for a job before they were employed at the survey firm. The replies were precise enough to identify geographic locations and we shall use these to estimate job search areas. We will see that the results approximate to those derived from a method using Census material and thus justify the assertion that an aggregate job search area is a useful approximation to a local labour market. There are, however, several problems associated with the use of survey data.

In the survey (of 1975) only workers who had been engaged from 1972 were interviewed. There were two school leavers in the sample and 49 people who had a break between their previous job and their present job which was not one of unemployment (by their own definition). The remaining 342 (87 per cent) had been either unemployed or in work immediately prior to the new job or did not reply.

The question of the representativeness of the respondents was considered at an early stage of the research. It can be argued that the new participants in the labour force, school leavers or women who had spent a considerable time as housewives, could have only vague notions of where they would like to work. They might

lack knowledge about the rigours of the daily journey to any place of work, or about wage rates in different areas, or have misconceptions about the degree of fatigue felt after a day's work (affecting the work-leisure trade-off). Such people are still adjusting their preference functions. We do not know a priori whether the inclusion of these people will bias results towards a too wide or too narrow search area and given the constraints of a "snap-shot" survey it was not possible to contemplate investigating this point. Instead, it was considered, on balance, that the process of aggregation should be trusted to even out any possible bias from this source.

A further problem for consideration is whether we might expect any important differences between the job search area of people taking up new employment ("job changers", for convenience) and the potential job search area of workers who are not changing jobs ("stayers") in any one time period. Our sample are all "job changers". It is possible that the trade cycle could have an effect if some groups change jobs only at time of recession and others only during a boom. This is a slightly different point from the anticipated extension of job search areas when unemployment is high, which was mentioned earlier. We are not now discussing variations in the individual's area but considering the possibility that certain groups of workers are consistently without work whenever there is a slump. There is some evidence of this in the literature on Dual Labour Market Theory but it does not suggest a large scale phenomenon which would affect our results drastically.

There is another reason why the job search areas of job changers and stayers might differ. STIGLER(89) argues that

stayers are in the minority and benefit, in terms of wage rates, from the search of others, because job changers leave for other work and low-wage employers will experience labour shortage and be forced either to go out of business or raise wages. A similar argument applied to promotion prospects, fringe benefits and other conditions attached to the job rather than the worker but this will only happen in the long run. In the short run we are likely to find, by interviewing only job changers, that there are specific advantages attached to the new job relative to the old one. If this is the case then we can tentatively conclude that any aggregation of the job search areas of individuals will tend to overstate the labour market area because the job changer will look further afield for the benefits he requires. The stayer will wait for benefits to come to him. In fact 205 of 372 thought their present job "better". This is just a majority so the overstatement may not be important.

The question of occupation is important, if rather obvious. In the sense we are considering it here, occupation is an attribute of the worker rather than a characteristic of the job. At times certain occupations are in excess demand, possibly due to the lag involved in training programmes, and this may result in a short run equilibrium wage which is higher than the wage rate which will prevail after training programmes have increased supply. At such an equilibrium point, job changers can earn quasi-rents. An example of this is the demand for welders created in building North Sea Oil Rigs in Hartlepool. The high earnings have attracted men from long distances in addition to local men, resulting in shortages in Teesside, for example, despite some increase in wage

rates in the traditional workplaces. This large discrepancy in earnings between job changers and stayers has a parallel in their respective job search areas. Job changers will look further than stayers. There was no evidence in the replies of the respondents to suggest that such quasi-rents were being earned. This is shown from an analysis of the reasons respondents gave for leaving their previous job. Only about one quarter left because of the attraction of the job they held at the time of the survey. The rest were "repelled" by some aspect of their previous job. Thus it is likely that only a small minority of respondents, if any, were earning quasi-rents. However, because some influences of this type may be operating and because it was not possible to select factories with identical jobs, it is important to remember that inter-firm comparison of the resultant job search areas should be conducted cautiously.

Modes of transportation pose a more difficult problem. Car ownership and the standard of public transport services in particular areas are obviously key variables determining the size and shape of job search areas. Stayers may find themselves in a sort of poverty trap on low wages, unable to take higher wage vacancies because they cannot afford to own a car (or learn to drive it, a high initiation cost) and are unable to move house either because of lack of finance or the availability of council housing in the recipient area. Government policy, operating through the Department of Employment, provides assistance to try to combat this source of labour immobility (both short and long range) but in practice it is mainly the unemployed, not the low paid workers who benefit. There is little we can do about this

probable source of non-representativeness except to recognise that the job changers we interviewed will tend to be more mobile than stayers, whom we did not interview, and will have larger job search areas.

4. Census Data

Before we proceed to more detailed analysis of the present survey we will look at a major attempt to measure local labour markets by exclusive use of 1961 Census travel-to-work data, and give an updating of this attempt using 1971 Census data.

4.1 The Method

SMART (85) makes the key assumption that the labour market is in a state of equilibrium, which enables him to measure labour market areas in terms of daily travel to work.

"In view of the extreme uncertainties attached to estimating behaviour in a hypothetical situation, it seems necessary to assume that workers' jobs at any given moment, and the journeys they make to them, represent their highest preferences on a complex individual combination of objectives and within the limits of their situation. It follows that the definitions of labour market areas should be related to actual work movements.."(8)

Smart completed an exercise determining labour market areas throughout Great Britain involving the calculation of the following statistics:-

- REP - resident employed population defined as the economically active population resident in the area and in employment.
- RWA - number of persons both resident and working in each area defined as REP less persons resident in the area but working elsewhere in England and Wales.

(8) Smart, p. 256 op cit.

DEP - Day employed population defined as RWA plus persons working in the area but resident elsewhere in England and Wales.

RWA as a percentage of REP (Level of self-containment measures.
(For any given area the lesser of
(these two values is regarded as
RWA as a percentage of DEP ("critical".

x - Commuter flow from area A to area B.

y - Commuter flow from area B to area A.

a - Residents of A who also work in A.

b - Residents of B who also work in B.

$\frac{x^2 + y^2}{ab} 100$ - a simple gravity type formula yielding a link value between areas A and B.

The use of a and b instead of resident or day employed population is justified on grounds of economy of calculation.

The exercise involved the selection of arbitrary levels of self-containment - 75% both for the proportion of the resident employed population working in the area and the proportion of the day employed population living in the area - and the association of areas only with their immediate neighbours to form labour market areas.⁽⁹⁾

The process is to select a region or sub-region which has a relatively low volume of travel to work into and out of the total area and rank the Local Authority areas in order of critical level of self-containment, from low to high. The link values for the area at the top of the ranking (i.e. lowest critical level of self-containment) are then calculated for all the areas bordering it, including any that may have a critical self-containment level

⁽⁹⁾ Smart terms this rule the "principle of contiguity".

above 75%. The highest link value shows which two areas are to be associated and subsequently treated as a single area. The revised areas are then ranked as before and the process repeated until all areas on the list have critical self-containment levels above 75%.

Some of Smart's results for the North-East are worth noting. Eleven labour market areas were identified in Durham, excluding Tyneside and Teesside which were found to dominate the sub-region. The "mini-conurbation" in S.E. Northumberland emerged from the data, and Tyneside was found to consist of two self-contained labour market areas, Newcastle and South Shields (and their surrounding districts). Unfortunately a map of these results has not been published.

4.2 1971 Census Data - Results

A comparison between Smart's results and the results from the survey will be of assistance in assessing the value of the job search area method. Because Smart did not publish his detailed results for the North-East and because travel-to-work patterns have changed since 1961, it proved necessary to update his work (for the North-East only) using 1971 Census Workplace Tables. Using this more recent data is of particular importance in the cases of Washington and Cramlington, the New Town locations which did not begin to be substantially developed until after 1966. They may also have changed between 1971 and 1975.

Smart's methodology was followed as strictly as possible and the shortcomings, which Smart recognises, were ignored. In particular no distinction was made between the sexes although the

travel-to-work patterns are very different. Also, the principle of contiguity between areas to be associated was strictly adhered to even though this meant ignoring some of the strongest links. This was to highlight, in the results, the problems which might arise from the principle (see Appendix 4.1). The basic geographical unit of the data (Local Authority areas) also presents problems in the exercise. One of these is the impossibility of identifying any labour market enclaves which may exist within Local Authority areas. Similarly, inadequate data preclude the possibility of estimating labour market areas specific to occupational or industrial groupings. (See Appendix 4.1)

Notwithstanding these difficulties the exercise was completed and a summary of the results is shown in map form as Chart I. Further detail appears in Appendix 4.1.

4.3 Conclusions

Comparison of the results with those published by Smart using 1961 data shows only five labour market areas in Durham (excluding Tyneside and Teesside) instead of 11. The probable explanation for this lies in the extension of car ownership between 1961 and 1971. The other labour market areas reported by Smart as surrounding Newcastle, South Shields and in S.E. Northumberland appear to survive and this is consistent with a view that the method has the characteristic of producing reasonably stable results over time. Stability over time is not a sufficient recommendation, however. The problems inherent in the system, which are detailed in Appendix 4.1 are real and need to be overcome in further work on estimating labour market areas from Census data. The bias towards male and white collar workers in the data tends to lead to an over-estimation of labour market areas. In addition, at least in the case of S.W. Durham, use of Local Authority area boundaries tends to lead to a further overstatement.

For our purposes the shortcomings of Smart's system should not be exaggerated, but only recognised to draw our attention to the more important of the findings: the bias in the method is towards too much aggregation and we therefore have most to learn from the lack of expected aggregation.

The division of the Tyne and Wear conurbation into three areas - Tyneside, South Shields and Sunderland⁽¹⁰⁾ is outstanding in this regard. It might be argued that the Metropolitan Areas of

(10) Ignoring Easington R.D. as a "cuckoo in the nest" which belongs to Hartlepool. See Appendix 4.1.

South Tyneside and Sunderland indicate public recognition of these findings but the Newcastle-upon-Tyne, North Tyneside and Gateshead areas do not emerge. The Department of Employment includes South Shields and its environs as part of Tyneside in their monthly Area Statistics of Unemployment. The explanation may lie partly in the coal mining and shipbuilding industries which, until the fairly recent past, were major sources of employment in the areas. These industries are known to produce strong local affiliations and establish firm friend and kinship networks. The setting up of new factories and the establishment of trading estates has tended, it seems, not to overbalance these ties. Another part of the explanation will be the high proportion of council house tenancies relative to all types of tenure, in both Sunderland and South Tyneside. NRST(62) have shown that council house tenants are less geographically mobile than the occupiers of dwellings with other forms of tenure and suggest that this is due not only to differences in social composition but also to the allocation and exchange policies of Local Authorities. These same factors could also tend to re-inforce local affiliations.

There is scope for further research into the explanation of the self containment of South Shields and Sunderland, particularly in contrast with the (now almost extinct) South West Durham coal-field which is shown as part of the Durham labour market area. Again, housing tenure may be a partial explanation; NRST(62) Appendix Y show that there is a higher probability of a working class household being in an owner-occupied dwelling in S.W. Durham.

Detailed consideration of the results for S.W. Durham is contained in Appendix 4.1 but the main conclusion which is relevant

to Smart's system is that it is unable to reveal some of the most interesting economic (and sociological) cases of small local labour markets. Local studies appear to be the only answer to this problem.

We must register some surprise at the aggregation of Washington U.D. with Tyneside and not Sunderland since the Department of Employment includes Washington in its definition of Sunderland for the purpose of the monthly Area Statistics of Unemployment (Department of Employment Gazette).⁽¹¹⁾ The link with Tyneside is weak, but the link with Sunderland is even weaker. There is a case for publishing Washington as part of Tyneside. A re-appraisal of the publication of Chester-le-Street, Birtley and Houghton-le-Spring as one area in the same series may also be worthwhile.

Finally, let us see what the results tell us about our six study areas. We expected Sunderland and Hartlepool to emerge as the most self contained because they are both large centres of employment with only the sea to the East. Hartlepool fulfils these expectations and, to a lesser extent, so does Sunderland. If we ignore the aberration of Easington R.D. (which should be linked with Hartlepool), Sunderland is linked only with Houghton-le-Spring U.D., Hetton U.D. and Seaham UD. but Sunderland C.B., like Hartlepool C.B., was capable of standing as a local labour market in its own right. The amalgamation with the other areas was necessary to recognise the support, in employment terms that Sunderland C.B. affords to the three neighbouring urban districts.

⁽¹¹⁾ See Appendix F to British Labour Statistics Yearbook, 1973.

Cramlington and Washington are part of the Tyneside labour market. This is not unexpected; they are overspill 'New Towns' for the Tyne and Wear conurbation. Cramlington has stronger links than Washington with Tyneside and this may be due to differences between the transport systems although, if anything, the public transport facilities at Cramlington seem to be worse than those at Washington. In the survey there were fewer complaints about public transport from Washington respondents.

Ashington emerges as part of the S.E. Northumberland "mini-conurbation" of towns, as expected, and Newburn is included firmly in the Tyneside labour market.

5. Survey Data

5.1 The Method

Only those questions in the survey which are used to determine job search areas will be discussed in this section. Other questions have a bearing on job search but they are not essential to the discovery of the spatial extent of local labour markets by the job search method; some of these are discussed in Appendix 4.2 . We asked: Q.24 "While you were looking around for a job before you joined this firm, which geographic areas did you consider working in? Why this area?".

This question was deliberately leading in its wording but despite this 18% of respondents refused to be led and replied "Not looking", or words to that effect. It was considered at the drafting stage that there was a greater danger of understatement of job search areas than overstatement. This was because there was no clear incentive for respondents to name

areas in which they did not search but there was a memory problem in asking people about their behaviour of up to three years ago. Five responses to Q.24 were allowed. There was no indication that this number was inadequate; in fact it may have been too generous since only six out of 393 respondents named five areas.

There is a suspicion that a few replies related to job search behaviour at the time of the interview; the explanation may lie in interviewers not adhering strictly to the set wording. Fortunately, for the purposes of determining job search areas any errors of this sort are irrelevant since the process of aggregation covers behaviour over a three year period even if the questions were asked correctly. We also asked:

Q.25 "Will you tell me the names of any factories and other work places at which you seriously considered getting a job? Which of these did you actually contact?"

The name of the firm and its location were given by respondents and recorded. This question was designed to jog the memory of interviewees and so supplement the replies given at Q.24. At the questionnaire design stage there was a great deal of discussion as to whether the replies to Q.25 would simply repeat the answers to Q.24, but the pre-test showed that this was not the case. This tends to confirm that the conception of an area in which to work precedes the identification of job opportunities and further justifies the attention that has been paid to job search areas in this chapter.

About 12% of replies to Q.25 gave the name and location of a firm that had not been contacted. Considering the time lag

since some of the respondents were looking for work and the consequent memory problems this is surprisingly high. It indicates two distinct stages in job search behaviour - a preliminary perusal of several job opportunities, from whatever information source and compilation of a list followed by the selection of a few firms to contact. There is no way of knowing whether the preliminary list would have been exhausted if the respondent had not met with success in his search for a job, or whether some firms were deliberately discarded as unsuitable and would only have been contacted in a state of desperation. These possibilities can probably not be enquired into by using structured interviews.

Four replies to Q.25 were allowed but only three were coded because so few respondents named four firms. Only 39 people gave three replies.

We expect that there will be a difference in job search areas between the sexes and between different grades of labour. An exercise was completed on the replies to Q.24 to determine which was the more important of the two factors. In general there was a greater difference in the proportions of the sample covered by local areas as between male and female than between the semi-skilled and the other socio-economic groups. This can be only a tentative conclusion because the numbers of workers who were not semi-skilled were distributed relatively thinly between the six locations. In addition the sexes were not distributed evenly between the factories - two, at Newburn and Sunderland, had negligible numbers of females. Thus, although we cannot generalise from the conclusion we can accept that further analysis

on this survey will be more fruitful if we concentrate on differences between the sexes rather than skill levels.

Methods of aggregation are discussed fully in Appendix 4.2 but essentially we will look for a "watershed" or clear boundary line which indicates the extent of each labour market. This involves a series of stages of aggregation for each location and the counting of either the number of times each stage was mentioned (Method 1) or the number of respondents included by extending the geographic area through the stages (Method 4). We adopt Method 4 as our main measure of labour markets but the results of Method 1 are also presented and prove to have analytical value.

Some of the replies to Q.24 have not been included in the analysis. In particular responses of a general nature such as "The North-East" and migratory replies have been excluded because they do not pertain to the idea of a local labour market. Despite this about three-quarters of all respondents mentioned areas of a reasonably local nature.

TABLE 4.1

Job Search Area Results

Q.24 & Q.25

Method 4

<u>Stage</u>	<u>Areas</u>	<u>Dis-</u> <u>tance</u>	<u>People</u>		<u>Total</u>	<u>Increment</u>		<u>Total</u>
			<u>M</u>	<u>F</u>		<u>M</u>	<u>F</u>	
<u>Newburn</u>								
I	Newburn, Lemington Denton, Scotswood, Westerhope	1.5			24			24
II	Kenton	3.5			28			4
III	Gateshead, T.V.T.E.*	5.0			32			4
IV	Newcastle Area, St.Nicholas, Heaton, Westgate	5.0			41			9
V	Gosforth	5.0			42			1
VI	Tyneside	5.0			44			2
VII	Walker	7.0			45			1
VIII	Wallsend	8.0			46			1
IX	Consett	9.0			47			1
<u>Cramlington</u>								
I	Cramlington, Dudley	1.5	9	37	46	9	37	46
II	Seaton Delaval	3.0	9	37	46	-	-	-
III	Killingworth	3.5	10	37	47	1	-	1
IV	Blyth, Kitty Brewster Tr.Est.	4.5	10	38	48	-	1	1
V	Bedlington	4.5	11	38	49	1	-	1
VI	Wallsend	6.0	12	38	50	1	-	1
VII	Newcastle & area	6.5	15	40	55	3	2	5
VIII	Tynemouth	7.0	15	40	55	-	-	-
IX	Ashington	7.5	15	41	56	-	1	1
X	Morpeth	7.5	15	41	56	-	-	-
<u>Ashington</u>								
I	Ashington, Jubilee Ind. Est.	1.5	6	12	18	6	12	18
II	Newbiggin, North Seaton	2.0	6	13	19	-	1	1
III	Bedlington	2.0	6	16	22	-	3	3
IV	Lynemouth	3.0	7	16	23	1	-	1
V	Blyth	4.0	8	16	24	1	-	1
VI	Morpeth	5.0	8	16	24	-	-	-
VII	Cramlington Area	6.0	10	17	27	2	1	3
VIII	Newcastle Area	13.0	10	17	27	-	-	-

* T.V.T.E. = Team Valley Trading Estate.

TABLE 4.1 (continued)

Stage	Areas	Dis- tance	People		Total	Increment		Total
			<u>M</u>	<u>F</u>		<u>M</u>	<u>F</u>	
	<u>Sunderland</u>							
I	Sunderland, Pallion, Hendon	1.5			28			28
II	Washington	3.5			28			-
III	Fencehouses	4.5			28			-
IV	Tyneside, Jarrow, Hebburn	5.5			28			-
V	Hartlepool and District	19.0			29			1
	<u>Washington</u>							
I	Washington and Area	1.0	19	43	62	19	43	62
II	Birtley	1.5	21	43	64	2	-	2
III	Felling	3.0	21	44	65	-	1	1
IV	T.V.T.E., Gateshead	4.0	21	45	66	-	1	1
V	Sunderland Area	6.0	22	47	69	1	2	3
VI	Pallion	6.0	22	47	69	-	-	-
VII	Newcastle and Tyneside	7.0	22	47	69	-	-	-
	<u>Hartlepool</u>							
I	Hartlepool, Seaton, Greatham, Stronton	1.5	27	30	57	27	30	57
II	Billingham	5.0	28	31	59	1	1	2
III	Sedgefield District	8.0	29	31	60	1	-	1
IV	Stockton	9.0	29	31	60	-	-	-
V	Durham and District	17.0	29	31	60	-	-	-
VI	Sunderland	19.0	29	31	60	-	-	-
VII	Newcastle	28.0	29	31	60	-	-	-

	<u>Valid Cases</u>			<u>% Covered by Stage I (local areas)</u>			<u>% Covered by all Stages</u>		
	M	F	Total	M	F	Total	M	F	Total
Newburn			70			34%			67%
Cramlington	25	53	78	36%	70%	59%	60%	77%	72%
Ashington	17	20	37	35%	60%	49%	59%	85%	73%
Sunderland			39			72%			74%
Washington	30	56	86	63%	77%	72%	73%	84%	80%
Hartlepool	41	36	77	66%	83%	74%	71%	86%	78%

NOTE: Due to negligible numbers of females at Newburn and Sunderland, analysis by sex is not possible.

TABLE 4.1 (Continued)

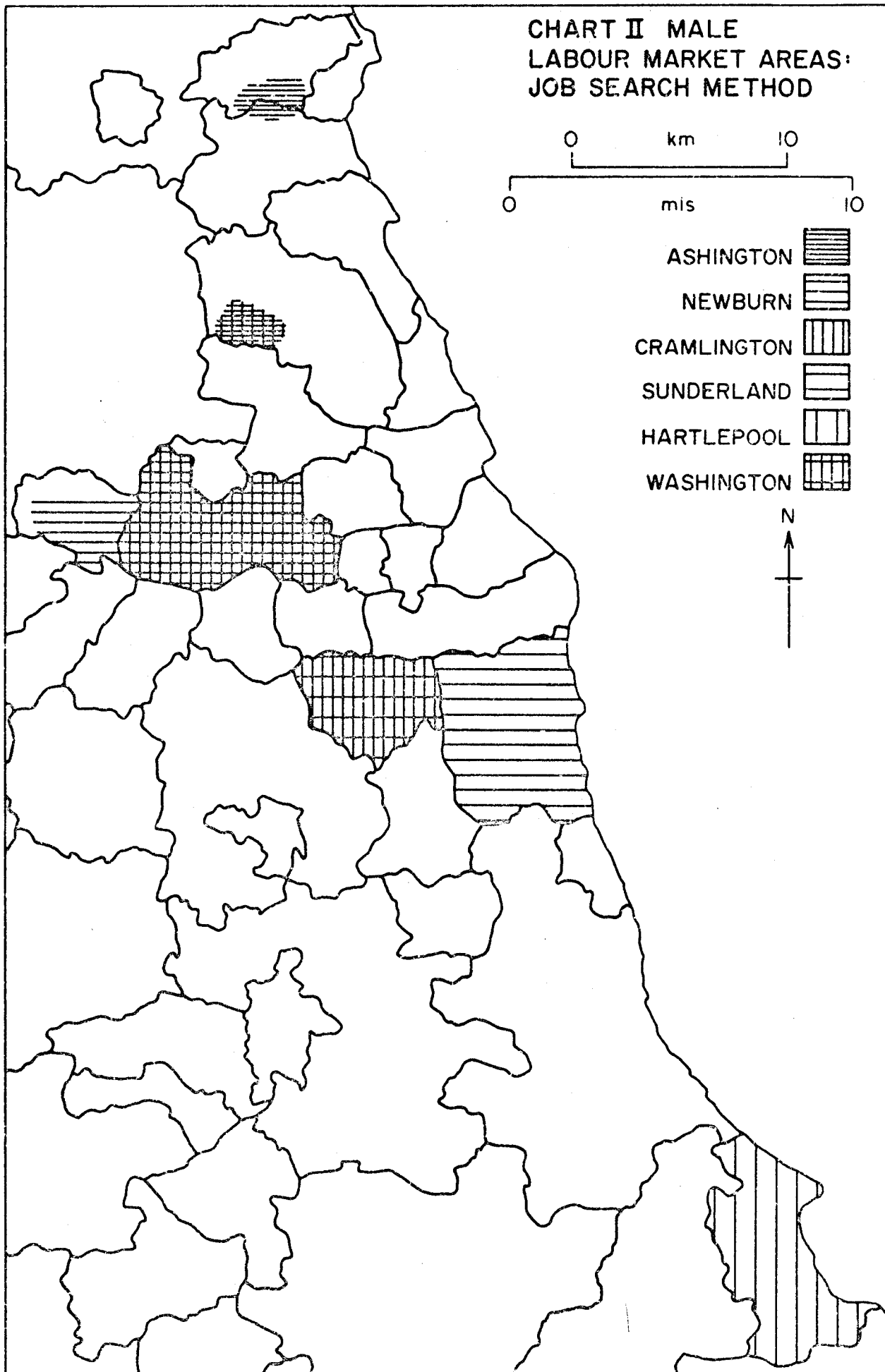
Method 1

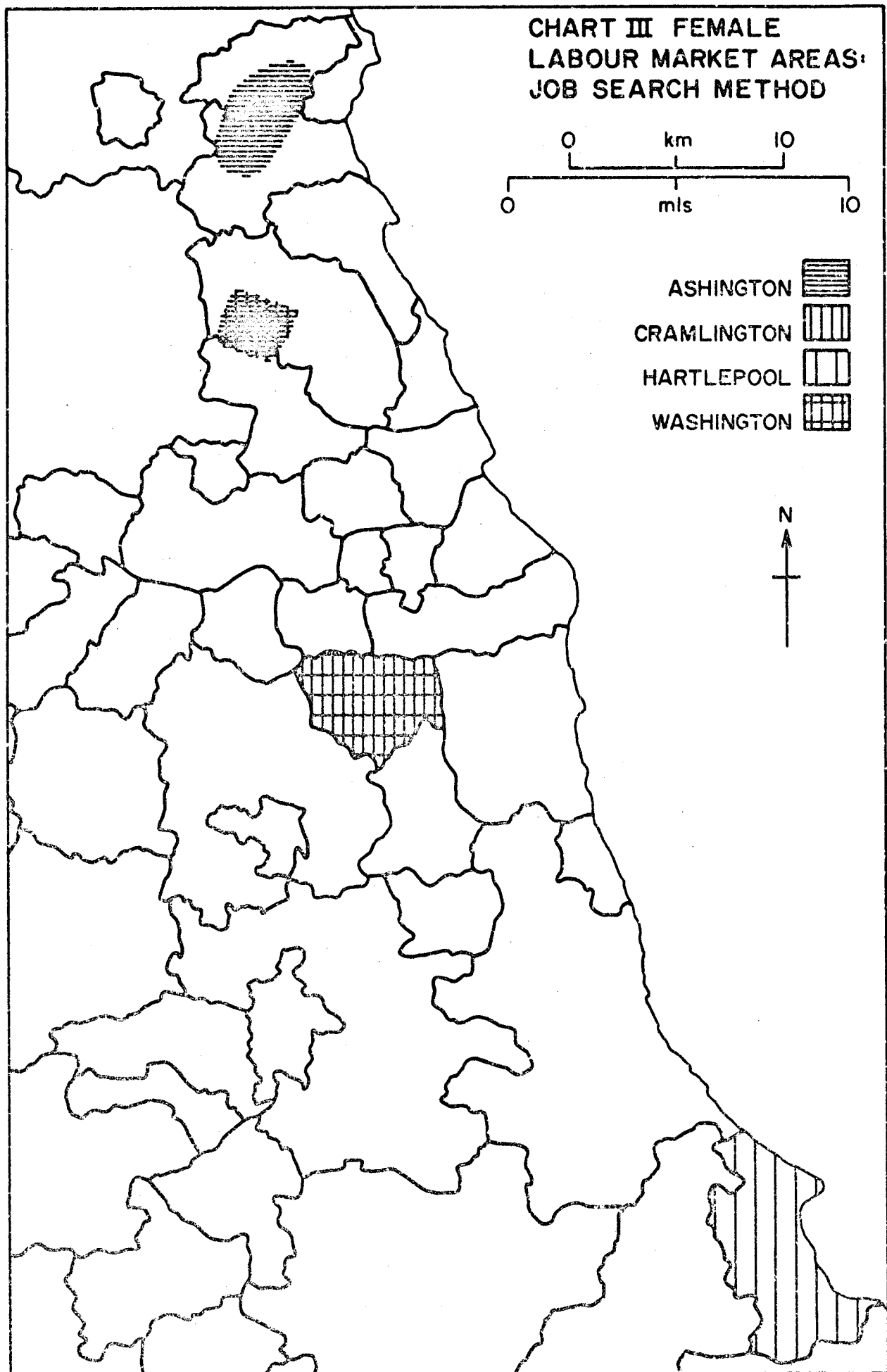
Number of Mentions Received by Each Stage

Q.24 and Q.25

<u>Stage</u>	<u>NEWB</u>	<u>SUND</u>	<u>ASHT</u>		<u>WASH</u>		<u>CRAM</u>		<u>HART</u>	
			<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>	<u>M</u>	<u>F</u>
I	31	42	8	15	39	76	10	53	53	50
II	7	4	1	4	6	-	-	3	1	2
III	7	3	-	9	-	2	3	12	2	-
IV	20	3	2	-	3	4	3	9	1	1
V	2	3	1	2	2	4	1	3	4	-
VI	4	NA	-	5	-	1	2	-	2	1
VII	3	NA	8	14	5	-	11	8	1	1
VIII	3	NA	3	2	NA	NA	1	1	NA	NA
IX	2	NA	NA	NA	NA	NA	-	2	NA	NA
X	NA	NA	NA	NA	NA	NA	2	2	NA	NA

NA = Not applicable





5.2 Results

Q.24 and Q.25 were analysed for each sex by Methods 1 and 4 (see Appendix 4.2). The results are shown at Table 4.1 and Charts II and III. Method 4 provides a good measure of the relative strengths of local labour markets by calculating the proportion of respondents included by extending job search area boundaries. Method 1 indicates the popularity of these areas for job search and this is probably a better guide to identifying the links between areas.

At Newburn 34% of the respondents (almost all of whom were male) were covered by the local areas (Stage I) by Method 4. The link with Newcastle is quite strong, especially in the results for Method 1. This is in line with the pre-conception of the area as a commuter belt. Newburn is the "weakest" of the areas in terms of self containment and relies upon Newcastle to supply job opportunities. In Chart II, therefore, the local areas are associated with Newcastle. All areas cover 67% of respondents.

At Cramlington 59% of respondents are covered by the local areas, 72% by all areas. This gives a superficial appearance of a "strong" area but the self containment level for men is poor. The local areas include only 36% of male respondents, 70% of females. Men depend on Newcastle for employment and this is shown particularly by the Method 1 results so the local areas are combined with Newcastle in Chart II. To include 60% of men aggregation has to extend to areas both to the North and South of Cramlington. The female local labour market is fairly self contained but the Method 1 results show a possible link with another new town - Killingworth. This is not strong enough to include in Chart III however.

At Ashington only 49% of respondents are included by the local areas and aggregation has to extend to Newcastle to achieve 73% inclusion. Cramlington and Bedlington have the strongest links with Ashington; Cramlington being important to men and Bedlington to women. These areas have therefore been associated with the local areas in Charts II and III. Method 1 confirms these results but also shows that Cramlington is seen by females as a source of job opportunities. This area has been added to Chart III on this evidence. Ashington and Cramlington illustrate the overlapping nature of labour markets; Ashington men perceive jobs in Cramlington but Cramlington men look for work in Newcastle. The competition for jobs must be severe where two areas such as this overlap but it is, of course, an ideal location for new employers coming into the region seeking plentiful labour. The local areas at Ashington cover only 35% of men, 60% of women; it is the "weakest" of the female labour markets and indicates the attraction of large employers of women in Bedlington and Cramlington.

At Sunderland, Method 4 shows that the local area includes almost all the job searchers - the one man who looked in Hartlepool can be regarded as an aberration. 72% of respondents - all except one of whom were male - are covered by "Sunderland". This is an excellent example of a truly local labour market and the result tends to be confirmed by Method 1.

At Washington 72% of the sample looked for work locally, 63% of men, 77% of women. Method 4 shows the strongest link to be with Sunderland for females, Birtley for males and this is confirmed by Method 1 although, for females, the Gateshead area also seems to be important. None of these links is strong enough to

include the peripheral areas in Charts II and III, however. In contrast with the other 'New Town' included in the survey, Cramlington, especially for males, the local labour market is "strong".

At Hartlepool we find the strongest local labour market in terms of self containment. Method 4 shows that 66% of men and 83% of women (74% in total) look in their local areas, the only links being with Billingham and Sedgefield; 71% of men and 86% of women are covered by these three areas. Durham and district, for men, emerges from Method 1 as a fourth area but it is linked only very weakly.

In general the results show the feasibility of estimating labour market areas from replies to a questionnaire but, perhaps inevitably, considerable approximations are involved. In particular subjective judgement has been used in associating areas with the immediate locality in which the survey was conducted. By calculating a simple statistic, the proportion of a sample covered by local areas, it is possible to get a crude indication of the relative "strengths" of local labour markets and thus, perhaps, identify areas which are particularly suitable or interesting for research purposes. Further surveys with larger sample sizes may show that it is possible to apply better measurement techniques to the estimation of the spatial limits of labour markets using survey data.

The concept of a local labour market seems to be useful, even in its simplest form, as is illustrated in the cases of Washington, Sunderland and Hartlepool. The overlapping nature of labour markets, which we have seen in two different forms for Ashington and Cramlington and also for Newburn and Cramlington shows that the

local labour market can also be a complex concept and we should not forget that a substantial minority of respondents reported job search in a much wider area such as "The North East". With such complex supply forces in operation it is, perhaps, not surprising that writers should report the labour market as being in an apparently chaotic state.⁽¹²⁾ The results presented in this section suggest that if attention is paid to the spatial dimension we might be more successful in explaining labour market phenomena.

5.3 Comparison with Census Data

Sunderland and Hartlepool emerge as very isolated local labour markets by the job search method. The exercise on Census data also revealed this; the links with other areas were due to the flows of workers to the centres of employment in the two coastal towns. Very few of these workers seem to have been included in the survey, possibly because we were studying only manufacturing employees.

Cramlington and Washington are shown to be part of the Tyneside labour market by Census data. Confirmation of this comes from the sample of Cramlington males but women at both 'New Towns' and men at Washington belong to their own self-contained labour markets. This Washington finding is not surprising because the links of this area with Tyneside were weak in the exercise using Census data, and industrial development in the Washington area since 1971 may have reduced the flows of workers out of the town.

Ashington is a borderline case for women. It is the weakest of the female labour markets we have studied and should probably be linked with Cramlington and Bedlington as shown in Chart III.

(12) See, for example, ROBINSON (79)

This is contrary to the Census findings which associated the area with Morpeth, Newbiggin, Bedlington and Blyth. The local labour market at Ashington for men is very weak and should be associated with Cramlington - again, not in line with the exercise on Census data. It is possible that the link between Ashington and Cramlington is a post 1971 phenomenon.

At Newburn the local labour market is very weak and should be associated with Newcastle. If we add the next two strongest links, Kenton and the Gateshead area, we have broad agreement with Census data.

The overlapping nature of labour markets which we found in studying Newburn, Cramlington and Ashington could not have been revealed by Smart's method. This may be a serious deficiency for research and planning but perhaps not for administrative purposes. There are alternative ways of dealing with Census data, such as gravity models, which would help in this respect but, as we have seen, a limiting factor could be the age of Census material.

The problem of labour market enclaves within Local Authority areas does appear to need an alternative source of data such as a survey. Comparison of Chart I with Charts II and III shows pockets of labour market activity within the Ashington U.D., Bedlington U.D., and Seaton Valley U.D. Local Authority boundaries. In the Census exercise entire Local Authority areas had to be associated. But with a little local knowledge of the distribution of employment opportunities these could have been predicted. It is not possible to dispose of the difficulty in this way but its importance is reduced.

The use of Smart's "principle of contiguity" is probably more important. Our findings cannot be conclusive because the survey was too small but it would appear, for example, that there may be a case, when using Local Authority areas, for associating Seaton Valley U.D. and Ashington U.D. (see Charts II and III). This could only be done in Smart's exercise if Bedlington U.D. and Blyth M.B., were both closely linked with these two areas and this was not true at the time of the 1971 Census. It is a possibility, therefore, that Census data, as used in this chapter, may produce misleading results.

Perhaps the most striking difference between Chart I and Charts II and III is the size of the labour markets mapped. Because the survey replies were interpreted in broad terms and because we interviewed job changers, the job search method tends to overstate labour market areas. We have already noted that the exercise on Census data also errs on the side of overestimation. It is probable, therefore, that Smart's method seriously overstates labour market areas.

6. Conclusions

There is broad agreement between the survey and Census data on labour market areas in the North-East but the evidence from Cramlington and Ashington suggests that it is important to differentiate between the sexes. Women look for work in different places from men and they tend to be more local.

Local labour market boundaries drawn for administrative purposes such as the publication of unemployment statistics or the distribution of unemployment benefit are not necessarily useful for other purposes. For example, Newburn and Cramlington (males)

belong to the Newcastle labour market but men from Newburn do not compete for jobs in Cramlington. The Newcastle market must have an influence on the local sub-markets at the two commuter locations but the effect need not be identical. There is no reason to expect wage-rate equalisation in Newburn, Cramlington and Newcastle.

Local labour markets can overlap in some areas, and this feature is not revealed by Smart's method using Census data. For example, Ashington and Cramlington males compete for jobs in Cramlington. Identification of such sites for the development of new factories should be very popular with employers thinking of moving into the region because it ensures a plentiful labour supply. It may be possible to create overlap areas but the failure at Washington indicates both the risk in doing this and the possible need for transport investment and planning. Furthermore, if Ashington males have to travel to Cramlington under duress this growth pole does not necessarily increase welfare.

We have found some evidence of labour market enclaves within Local Authority boundaries but this deficiency in Smart's method may not be important.

The survey results did not give conclusive evidence that the strict application of the contiguity rule in the Census exercise seriously affected the results but note that the association between Ashington and Cramlington may not have been possible by Smart's method.

Both Smart's method and the job search area method tend to overstate labour market boundaries but the latter produces smaller areas. It is probable, therefore, that Smart's method seriously

overstates local labour market areas.

The local labour market appears to be a useful concept and we have seen that it is possible to approximate spatial limits from survey data. The accuracy needed in the measurement of an area depends upon the purpose for which it is to be used. It is perhaps more important to be accurate in testing economic theory than in publishing unemployment statistics or locating new factories - but there is room for considerable improvement in all uses. In particular, the standard areas used for the monthly Area Statistics of Unemployment, Department of Employment Gazette, may need revision.

Chapter 5

The Training Decision

The Training Decision

1. Introduction

In this chapter we will study attitudes towards further training and re-training. In particular we will be looking for reasons why some workers appear to be interested in training opportunities and why others are not.

The Industrial Development Act 1966 gave special assistance to help firms in the developing Regions with their training expenditures with a view to speeding the process of redeployment of labour from declining industries to firms wishing to recruit trained or trainable labour. The Industrial Training Act 1964 perceived a national problem and sought to increase the overall proportion of trained workers. To try to achieve this end Industrial Training Boards have adopted a policy of co-operation between industry and government and since 1974 their work has been co-ordinated by the Training Services Agency (TSA). Training, or rather the lack of it is therefore both a national and regional problem and, to the extent that the difficulties of developing Regions are centred on unemployment black spots, it is also a local problem. All our firms were located in Special Development Areas at the time of the survey so the findings may be relevant at all three levels.

The TSA, like most of the economics literature, seems to stress the training problems of firms rather than those facing workers yet one of the declared aims is

"To help people fulfil their needs and aspirations in their jobs".

It appears to be assumed implicitly that training labour to fill job vacancies will provide a solution to the difficulties on both the demand and supply side but it is possible that meeting the requirements of firms will not result in the fulfilment of workers. Yet if this restriction is recognised as a constraint, workers may be 'content' without being 'happy'. If trained workers are more content than untrained workers this represents an incentive to undertake training and we will try to answer this empirical question in this chapter.

The incidence of unemployment is higher among unskilled and semi-skilled workers than among skilled workers. Training may change, therefore the constraints facing a less skilled worker and improve his employment chances. We will try to test the strength of this incentive to undertake training but note that it depends, in many cases, on the ability of the TSA to match courses to job opportunities.⁽¹⁾ Experience of unemployment turns out to be a major determinant of female interest in training courses.

Perhaps the most obvious incentive to undertake training is financial. Training often implies occupational mobility and skilled workers usually earn more than unskilled or semi-skilled employees. We will compare the earnings of trained and untrained workers to try to estimate the size of this incentive.

Incentives also have a role to play in the field of information. Even efficient information systems will not persuade workers to undertake training courses if there is no inducement

(1) There is some evidence to show that this is recognised by the TSA, see MORLEY (56) p.105.

to absorb and retain the necessary details. In this chapter we will look at the knowledge of our respondents about training opportunities and find it to be relatively unimportant as a determinant of interest in training.

The training experience and education of the interviewees is diverse. A study of the records of one firm prior to the survey revealed that only some 15% had any paper qualifications which could be used for analytical purposes and the content of each was so different that general conclusions were not feasible. It was decided, therefore, not to include questions relating to paper qualifications in the questionnaire. Instead, we concentrated on the training courses and 'on-the-job' training undertaken by each respondent but the current use of such training was found to be limited. In Chapter 3 we saw that it was not uncommon for a worker trained in one skill to be doing an entirely different job. We also saw the training and experience of semi-skilled workers being was not / utilized in the survey firms because the overall pattern of the industries of the previous jobs of these respondents was approximately proportional to the industrial mix of the local labour market.⁽²⁾ It follows that restriction of our study to workers who were reaping the benefits of earlier training would give an inaccurate view of training and the labour market; we will therefore examine the replies of all respondents. Similarly, a detailed study of earlier training is unlikely to yield useful results for the particular task in hand so we will not attempt this.

(2) For exceptions to this see Chapter 3.

We will study, however, the extent of previous training and education in general terms and infer that the aspirations and expectations of recipients are influenced by the experience. This process turns out to be an important determinant of male interest in further training and re-training.

There might also be social reasons for training or not training. Some men might consider the prospect of attending a formal course a threat to self respect; 'going back to school', despite generous financial allowances, may be a humbling alternative to even a low paid, low status job. (Interestingly this might not apply to "on-the-job" training.) A contrasting view is that training courses may be a path to higher status through upward social mobility.

Social pressures may also influence the training decision. Wishing to conform to the norms of a peer group or social group at work could act either way; in addition the pressures on the young may be severe:-

"The young worker who flits between numerous short lived unskilled jobs is thought to be in need of vocational advice and guidance, if not psychologically disturbed in general" ROBERTS (78) Family responsibilities later in life may exert pressure not to train, since the reduced income during the course and the uncertainty of getting a job in the new occupation constitute a financial threat to the family unit. We will find, however, that this appears to be unimportant.

We will not be able to assess the effect of other factors, such as the unwillingness of a school 'failure' to expose himself

to ridicule once more despite his possible success in a work environment and the constraint this places on his life chance. An alternative example is the school 'success' who seems to regard training courses as a consumption good for which he has an almost insatiable appetite. We shall also not be able to study experience, for which training may be a poor substitute although it should be noted that in modern industry some training is often a necessary condition for acquiring experience. The manager of the ASHT plant considered experience to be more important than training but his was one of the few factories which had set up a small training school.

In general terms, the analysis we shall conduct will relate to the short run decision whether or not to embark on a further training or re-training course but we must bear in mind the usual economic approach to training which is essentially long run. In the process of occupational choice, which may continue beyond initial entry into the labour force, the individual will choose typically between employment opportunities and training chances which themselves imply some form of employment, no matter how general. In the capital theoretic view decisions are made as if individuals choose that alternative which maximises the rate of return from the stream of private net benefits involved. We shall try to assess whether this approach is useful in the context of further training and re-training for our respondents, who are workers and not trainees and we shall find that only a broader view of economic rationality can be supported.

We will be able to offer explanations of why some workers train but many others do not. The behaviour and attitudes of the latter group are particularly difficult to explain by reference to the human capital approach since if an incentive exists for one worker it exists for all yet all workers are not interested in training opportunities. We will also see that the behaviour and attitudes of the respondents are consistent with the existence of a market for labour services.

2. Representativeness and Characteristics

This chapter deals with two groups of our respondents, those who said they were interested in further training or re-training and those who said they were not. We will be seeking to answer the specific questions "Why are so many workers not interested in training courses?" and "Why are many others interested?"

This will involve an examination of the characteristics, attitudes, knowledge and behaviour of the two groups and we will endeavour to discover their perception of the benefits of training. But the generality of any conclusions may be in doubt.

2.1 Representativeness

A survey of workers employed at only one or two firms in a local labour market cannot claim to be representative of all workers in that market, especially when the firms were not randomly selected. Despite this, in chapter 3 we found little evidence of any bias in the occupational or industrial dimensions which might be due to self selection or the hiring policy of the firms. This is re-assuring in the field of training because BECKER's (3) analysis reveals that the relationship between training

at work and labour mobility is of central importance. The results of this chapter might, therefore, approximate to manufacturing employees in Special Development Areas in the North East - which form a substantial part of the industrial North East in terms of population.

It is less likely that our conclusions will hold for all new or expanding firms in the region, although there is conflicting evidence on this. For example, TOWNROE'S (92) 1972 survey revealed that over half of new plants brought 'key workers' to the new location but our survey revealed very few people who could be so classified. On the other hand, our firms confirmed Townroe's finding that little use is made by new plants of special programmes in Government Skillcentres or local colleges. To be safe, in the context of the firm the conclusions should be regarded as the aggregation of seven case studies.

2.2 Characteristics

We will distinguish our two groups by the replies to the question:

Q.28b "Have you ever considered getting any (further) training or re-training?"

For the sake of brevity we will term 'Yes' replies 'Trainees' and 'No' replies 'Non-Trainees'. Thus a 'Trainee' is a respondent who, at the time of the survey had considered further training or retraining but had not necessarily undertaken it. The question was only asked of respondents who had not undertaken further training or re-training; we will count the people who had been on such courses as 'Yes' replies. It is possible that some of these respondents were not interested in going on another course but

this is not thought to be a severe problem although it will be a source of approximation in the results. Our measure of whether respondents had attended a further training course will be replies to the question:

Q.28 "Have you ever undertaken any further training or retraining which you haven't mentioned so far?"

Clearly some respondents would answer 'No' to this and they will have attended a further training course but mentioned it earlier in the questionnaire. This is a further source of approximation but most of the courses we are interested in were revealed by this question. The advantage of using this method is that the respondents themselves classify their training as either initial, further or re-training, a difficult task for a research worker.

Some of the 'No' replies to question 28b may have indicated a lack of knowledge of training opportunities but we tested the awareness of the respondents of three types of training schemes. Government Skillcentres, Training Opportunities Scheme (TOPS) and Technical Colleges and found that almost as many Non-Trainees as Trainees of both sexes had heard of these facilities. It is probable, therefore, that most respondents reported whether or not they had deliberated over further training or re-training and we can take a 'Yes' reply as indicative of interest in further training and a 'No' reply as meaning disinterest. Thus, a Non-Trainee is assumed to have at least a vague awareness of training courses but he has never been sufficiently interested either to absorb and retain detailed information about them or make further enquiries.

More men than women said they were interested in formal training courses, 71% of men are Trainees, 42% of women.

TABLE 5.1

<u>Interest in Training Courses by Sex</u>			
	Male	Female	Row Total
Trainees	131	54	185
Non-Trainees	85	116	201
	216	170	386

Table significant at less than 0.01%, chi-squared test.

We must be careful to distinguish between the sexes in the analysis that follows and seek an explanation for the different attitudes of males and females.

There is one possible explanation for lack of interest in training courses which is common to both sexes, Non-Trainees are older than Trainees.

TABLE 5.2

Interest in Training Courses by Age of Respondents (Mean years)

	Male	Female	All
Trainees	31	32	31
Non-Trainees	36	34	35
	33	33	33

Differences at the means for 'All' and males only significant at less than 0.1%, two tail t-test; for females differences significant only at the 27% level.

It is not surprising to find that those people who had not considered training courses were older. The feeling of being 'past it' or 'too old to learn' finds voice in the adage 'You cannot teach an old dog new tricks'. Some of our respondents

expressed this view. It is less easy to understand in terms of rational economic behaviour. Most government training courses have a duration of months rather than years and the pay back period, using an appropriate discount rate, is often less than four years (see, for example, ZIDERMAN(101)) If we say a total of five years for training and securing the benefits this only rules out men over 60 and women over 55 as being 'too old' to ensure a return from training. Closer analysis of the ages of the respondents reveals that only some 6% were in the age band 55 to 64. The other 94% could, presumably, benefit from formal training. In addition 33% of men aged under 30 and 61% of women below that age said they were not interested in training courses. 66% of the respondents in the age band 16 to 20 said they had not considered training courses. This might highlight a possible failing on the part of the Youth Advisory Service and the Training Services Agency. It might also indicate that any parental and social pressures to undertake training which operate on the young are rather weak in their effect, or that the narrowing of skill differentials in earnings in recent years under incomes policies may have deterred young respondents from demanding training. It is not reasonable to suppose that people under 30 are too old to benefit from training so we must seek a further explanation for their lack of interest. It is also possible that older people are using their age as an excuse to themselves for not training because it is more socially acceptable than the more fundamental, underlying reasons.

Age may be an intervening variable and the reason for not considering training courses might stem from the financial

pressures of bringing up a family. The reasoning here is that the costs of training, in terms of foregone income and perhaps the anxiety caused by the uncertainty of success in completing the course and finding an appropriate job, may be too high for a parent with children at school. The necessary expenditure involved in feeding and clothing children in the near future may exceed the diminished income paid during the training period. These are all real costs in the short run which have a bearing on the decision whether to train and which, at a subjective discount rate, may outweigh the implied net present value of the future benefits of training. Thus it may be quite reasonable for a family man with few financial reserves to express disinterest in formal training. We must also remember that the loans market for training is badly organised.

Cross-tabulation of our two groups by marital status revealed little association for either sex however and Trainees tend to have slightly more children at school or below school age than Non-Trainees. For males, Trainees averaged 1.08 children, Non-Trainees 1.00; female Trainees reported an average of 1.20 children below the age of leaving school, female Non-Trainees averaged only 1.03 children.

Perhaps those people who have no interest in formal training consider themselves fully trained and are content to continue at their present skill level? If this is the case we should find an over-representation of Non-Trainees among the white collar and skilled manual workers. In fact, for men, the tendency seems to be in the opposite direction.

TABLE 5.3

<u>Males</u>	<u>Interest in Training Courses by Socio-Economic Group</u>				Row Total
	White Collar	Skilled Manual	Semi-skilled	Unskilled	
Trainees	32 (76)	48 (62)	43 (53)	6 (46)	129 (61)
Non-Trainees	10 (24)	29 (38)	38 (47)	7 (54)	84 (39)
	42(100)	77(100)	81(100)	13(100)	213(100)

Table significant at the 6% level, chi-squared test. Percentages in parenthesis.

More members of the semi-skilled and unskilled classifications than any other socio-economic classification are not interested in training courses. From the point of view of government and the needs of the economy, it is precisely these groups who should be willing to undertake training.

Most of the white collar and skilled manual respondents achieved their skill level through courses and apprenticeships undertaken in the early years of their working lives. Such training cannot be classed as further training or re-training; in fact only 35% of white collar and skilled manual men said they had undertaken such a course (28% of all men said this). It appears, therefore, that actually having been trained is an important determinant of interest in further training. Presumably the people who are achieving a return on their training investment find this a constant reminder of the benefits of training courses. In contrast, untrained workers, never having experienced these benefits would seem to need to have the full implications of training courses pointed out to them before their interest can be stimulated.

This argument does not appear to hold for females, however. Only white collar women seem at all interested in training courses. This is a further difference between the sexes which we must try to explain.

TABLE 5.4

Interest in Training Courses by Socio-Economic Group

<u>Females</u>	White Collar	Skilled Manual	Semi-Skilled	Unskilled	Row Total
Trainees	10 (53)	3 (27)	39 (29)	1 (25)	53 (32)
Non-Trainees	9 (47)	8 (73)	94 (71)	3 (75)	114 (68)
	19(100)	11(100)	133(100)	4(100)	167(100)

The numbers in this table are too small for a chi-squared test.

Conclusion

We have found that many more men than women are interested in further training. Male Trainees tend to be younger than male Non-Trainees but the age difference is not significant for females. Male Non-Trainees may be using age as a rationalisation for not considering training courses but family responsibilities are not the real reason which they may be hiding from themselves - this applies to both sexes. Previous involvement in training seems to be an important determinant of interest in further training for men but not for women. Because more males than females have been trained this is a partial explanation of the difference between the sexes.

3. Aspirations in the Work Environment

Lack of aspirations among workers is a frequent complaint by managers of new plant moving into the North East. They see the problem as a general one of non-response to any form of income

incentive, usually drawing their comparisons with the South East of England. If disinterest in training is part of this general 'malaise' (as seen by the managers) then our Non-Trainees should not be keen on working overtime. In fact there is little to choose between the groups on whether overtime is worked or not, whether respondents would like to work overtime or on the overtime hours worked.

Aspiration levels can also be tested by examining attitudes towards promotion. This is perhaps a better test than questions relating to overtime since some workers have domestic circumstances which do not allow them to extend their hours beyond the normal working week but do not interfere with promotion; this is especially true of females. If interest in training courses is stimulated by the financial benefits it affords then we expect Trainees to respond to the financial incentive of promotion and give an affirmative reply to the question:

"Would you like to get promotion in this firm?"

The results for females tend to confirm this expectation.

TABLE 5.5.

<u>Interest in Training Courses by Would you Like Promotion?</u>			
			Row
<u>Males</u>	Yes	No	Total
Trainees	87 (73)	33 (27)	120 (100)
Non-Trainees	49 (64)	28 (36)	77 (100)
	136 (69)	61 (31)	197 (100)
<u>Females</u>			
Trainees	24 (55)	20 (45)	44 (100)
Non-Trainees	27 (25)	80 (75)	107 (100)
	51 (34)	100 (66)	151 (100)

The table for males is significant only at the 25% level, chi-squared test; table for females significant at 0.11%.

The tendency for both sexes is in the same direction but only the female table is statistically significant. 75% of the female Non-Trainee group are not interested in promotion but for men a majority of Non-Trainees said they would like promotion (64%).

There is one difficulty in using this question as a measure of aspirations: if there were people who wanted promotion in a general sense, but simply did not like their present firm they would be obliged to reply 'No'. Thus, aspirations might be higher than they appear from Table 5.5. This is probably only a source of approximation, however, and does not invalidate the results. Thus we can conclude that aspiration levels are a partial explanation of lack of interest in formal training for females only. It should be noted that female disinterest in promotion in their firm may be based on their perception of opportunities for advancement. The manager of the WASH 2 plant said that in his factory there was 'no chance' of a woman being promoted, he 'did not believe in it'. If this is typical of most female employing firms it is not surprising to find many females not wanting promotion.

There is a further aspect of promotion and training courses which may be important to aspiration levels. It is quite common for friendships made during work on the factory floor not to survive the up-grading of one of the friends. No matter how justified management might be in selecting a particular shop floor worker for promotion to supervisor, there is a reasonable chance of generating jealousy among the workmates of the individual. As a result social (but not work) relationships can breakdown. There was some evidence of this among female workers at the WASH 1 plant.

Training courses can have a similar effect because they are almost invariably organised, like promotion, on an individual basis. Attending a training course is perhaps even worse than promotion from a social viewpoint because the person will be overtly seen to be seeking advancement.

Thus the strength of existing social relationships can act as an inhibitor to aspiration levels. Not wishing to fall out with friends at work, the individual worker may studiously avoid any behaviour which may involve him in being considered for promotion. It also follows that he will not be interested in formal training.

It is difficult to find a suitable test of this hypothesis because social relationships are difficult to detect by the questionnaire method of research and it is almost impossible to measure their strength. We can, however, get a guide to the relative importance of friendships to each of our groups in aggregate from the replies to the question:

"What things do you like about working here?"

The most frequent reply from all respondents was 'The girls', 'The lads', 'Colleagues' or similar. If social relationships are more important to Non-Trainees than Trainees, which we might suspect from the hypothesis outlined above, then this type of reply will have been given by more Non-trainees than Trainees. The evidence from the first replies to the question tends to confirm this; for males, 26% Trainees said 'Colleagues' or something similar while 37% of Non-Trainees gave such a reply. Amongst the female respondents social relationships seem altogether more important with 46% of Trainees saying something like 'The girls' and 56% of Non-Trainees responding in this fashion.

Thus, it would seem that the importance of social relationships can partly explain lower aspiration levels and consequent dis-interest in formal training among Non-Trainees. It can also help us to understand the difference between the sexes.

But the result is not as clear-cut as it might seem. If we look at the second replies to this question, although we again find that females consider social relationships more important than males, we now discover that a larger proportion of Trainees than Non-Trainees said 'Colleagues' or similar. For males, 20% of the Trainees who answered gave this as their second reply, 14% of Non-Trainees. Amongst the women's second replies, 31% of Trainees mentioned 'The girls' or something indicating workmates, 30% of Non-Trainees said this.

In general, first responses to this type of question tend to be more reliable as an indicator of what the respondents really think but we cannot disregard the second replies completely. We must conclude that there is probably some truth in the hypothesis, that it partly explains lack of interest in training courses, especially for females through aspiration levels and goes some way towards understanding the different attitudes of males and females but some of the evidence is conflicting.

Conclusion

Aspirations in the work environment can partially explain why female Trainees and not Non-Trainees are interested in further training. Whether respondents said they wanted promotion seems to be a good indicator of aspiration levels for females but not for males and overtime is a poor indicator for both sexes. There is some evidence to show that social relationships at work can act as

an inhibitor to aspirations, especially for females and they go some way towards explaining why more men than women consider undertaking further training.

4. Incentives

4.1 Financial Incentives

Perhaps the best indicator of aspiration levels is the response of individuals to incentives, especially financial. This is so important in the capital theoretic approach to training that it deserves separate treatment. Even when inflation levels are very high and the value of the pound in terms of goods is difficult to predict from week to week the benefits of an increase in income or a reduction in expenditure are easy to understand. This is not necessarily true when the currency ceases to be the common medium of exchange, as might happen in a hyper-inflation situation but we have not (at 1975) reached this situation in the United Kingdom. We will assume, therefore, that at the time of the survey the respondents were not financially dis-orientated by the prevailing rates of inflation. There is evidence from the replies to the questions on travel to work patterns that this is correct.

Expenditure on daily travel to work is a cost on the business of working for a living. In the same way that it is rational for a worker seeking employment to try to achieve the best possible wage rate for his labour - provided other conditions attached to the employments under consideration are equal (income maximization), so it is perfectly rational to seek a job which involves the least daily expenditure on travel - again, other things being equal. The latter is cost minimizing behaviour. In the months preceding 1975 all forms of transport costs to the consumer were rising rapidly and it seems that many of our respondents took the opportunity of

changing their job to minimize their travel to work expenditure. They did this by reducing the distance they travelled, comparing the job they held at the time of the survey with their previous job. At the mean this reduction was 1.4 miles to a mean daily distance travelled of 3.6 miles. On average the respondents were travelling a distance which was some 30% less than in their previous job. (Distance and cost are highly positively correlated; the use of distance instead of cost is justified because it avoids the use of an index to convert costs given for differing dates into real terms.)

Most of the people who answered the travel to work questions revealed themselves to respond to a financial incentive; they were not disorientated by the rate of inflation and appeared to react intelligently.

Perhaps Non-Trainees do not respond to financial incentives as well as Trainees because, for example, they do not perceive or are not informed about all the opportunities? If this is the case we expect Trainees to have reduced their travel to work distance by more than Non-Trainees. In fact, Table 5.6 shows little difference between the groups but, if anything, female Non-Trainees reduced their daily journey by more than female Trainees.

Table 5.6

Interest in Training Courses by Reduction in Travel to Work Distance
Comparing Previous Job with Job Held at the Time of the Survey

	Male	Female	All	(Mean Distances in miles)
Trainees	2.0	0.4	1.5	
Non-Trainees	<u>1.0</u>	<u>1.3</u>	<u>1.2</u>	
	1.6	1.0	1.4	
Significance level of t-test	38%	14%	61%	

Thus, lack of interest in training courses cannot be explained in terms of irrational non-response to the benefits of training unless this is also associated with inconsistency. The conclusion from Table 5.6 is not affected by looking at the proportionate distance reductions rather than absolute mileages.

If workers are consistent and respond to financial incentives, the negative training decision of Non-Trainees might be explained by a lack of incentive to acquire skills. We know that skilled workers tend to earn more than less skilled workers but, although some government training schemes are recognised as equivalent to apprenticeships this is by no means true in all cases. Yet the capital theoretic approach to training relies upon some financial benefit accruing from completing a course so we should find that respondents who have been on a training scheme earn more than those who have not. By studying these two groups we can determine whether a financial incentive exists. We will also concentrate our attention on these groups when we later examine the possible incentives of a reduction in unemployment and an increase in contentment. The problem with this approach, which we will not be able to solve, is the extent to which differentials in income, unemployment and contentment can be attributed to further training rather than initial periods of training such as apprenticeships. This multicollinearity problem is most acute for males, as revealed by the following table.

Table 5.7

<u>Males</u>	<u>Training Course Undertaken by Socio-Economic Group</u>				Row
	White Collar	Skilled Manual	Semi-Skilled	Unskilled	TOTAL
Course Under-taken	17 (28)	26 (43)	15 (24)	3 (5)	61 (100)
Course Not Undertaken	25 (16)	55 (35)	68 (43)	10 (6)	158 (100)
	42 (19)	81 (37)	83 (38)	13 (6)	219 (100)

Table significant at the 5% level, chi-squared test. Cells with expected values below 5 constitute less than 20% of the table.

White collar and skilled manual males tend to have undertaken further training. The table for females has numbers which are too small for a chi-squared test but the tendency is in the same direction.

This issue does not seriously affect the arguments in the rest of this section, however, because most of the discussion will centre around the perception that workers have of the people who have been on further training courses. Workers will have the same problem as the researcher - an inability to distinguish between the effects of further and initial training in the characteristics, behaviour and attitudes of the people who have attended courses. Even the people themselves are likely to have difficulty. It is necessary, therefore, to assume that the findings for the group who have completed training courses are attributable to this period of instruction and not to initial training. This is not too unreasonable since there are, after all, substantial numbers of white collar and skilled manual workers in the other group, who have not been on training courses. to help offset the bias.

We find that a financial incentive to undertake further training or re-training may exist for men but not for women.

Table 5.8

Training Course Undertaken by Normal Gross and Take Home Pay (£ pw)

	<u>Mean Normal</u>			<u>Mean Normal</u>		
	<u>Gross Pay</u>			<u>Take Home Pay</u>		
	Males	Females	All	Males	Females	All
Course Undertaken	55	30	50	42	24	39
Course Not Undertaken	52	34	43	38	25	32
	53	34	44	39	25	33
Significance level of t-test	23%	21%	0.2%	1%	64%	0.1%

For males, normal take home pay for those who had undertaken a course is significantly higher, at the means, than that for respondents who had not undertaken a course; the significance level for normal gross pay is poor, however. For females this incentive does not appear to exist and workers who had not taken further training courses have higher mean normal gross pay and take home earnings above those of their more highly trained colleagues. This strange result is not explained by the relative ages of the groups but it may be a consequence of the low numbers of females who had undertaken further training. Only 11 out of 158 female respondents fall into this group and it is therefore unlikely that they are representative of the general picture.

Yet this small number may partly explain why so many women were not interested in further training or re-training. If the perception of workers in the field of training is restricted to their own work environment then females will observe very few of

their own sex actually having attended a training course. They might consider that this is a fair indication that such courses are not a very good idea. If they delve further their suspicions will be confirmed because they will find that the females who have attended a course do not tend to earn more than themselves. Thus rational behaviour involves not being interested in further training or re-training for females.

In contrast, for males, 61 men out of 219 who answered the question said they had attended a further training course. The proportion is still low but men might think that such courses are a reasonable possibility and further investigation will reveal some evidence of a financial incentive.

This argument is couched in terms of the perception of numbers of workers and for this reason it might be considered that the medians of the distributions are better measures of centrality than the means. Closer examination reveals that all the distributions are positively skewed and have medians up to £4 below the means and the differences between the medians are similar to the differences between the means. This does not affect our conclusions.

A more serious threat to the analysis might be the problem of adjusting the relative earnings to take account of ability. Higher earnings might be due to differential natural abilities, reflected in bonus payments for example, and only partly due to differences in training. This would serve to reduce the (already small) financial incentive for males but it also implies some process of self selection, with the more able males volunteering for formal training courses; there is no evidence to support this suggestion.

One curious feature of Table 5.8 is the way taxation (income tax and national insurance contribution) operates to increase the incentive to train. Analysis of the tax rates implied by the reported normal gross and take home pay of male respondents shows that men who have undertaken a course of training pay an average rate of tax of 22% and men who have not attended a course pay an average rate of 25%. Thus the size of the financial incentive implied by the normal take home pay figures in Table 5.8 is an overstatement. Dealing with the means, a man considering training and earning £52 per week gross has the prospect of £55 per week gross after training but this will be reduced to less than £42 per week after tax because he has a higher tax rate than the group who have already trained. He still has a financial incentive but it is weaker than it might appear at first sight. We can see this even more clearly by realizing that the increment to gross earnings our man would achieve by training would probably be taxed at a marginal rate of 40.5% (1975 level of income tax and national insurance contributions). This would increase the average tax rate to some level above 25% if personal circumstances were unchanged.

However, personal circumstances might be altered for a typical man joining the group who have undertaken further training or re-training. Deeper analysis reveals that the differences in average tax rate between the groups reported above is not explained by number of dependants but seems to be due to differential incidence of home ownership.

In addition to higher gross earnings, a trained man has a higher social status than an untrained man. This tends to induce

building societies to be more willing to lend money and higher gross earnings increases the amount they are willing to lend. If a man considering training can perceive these possibilities and realises that securing a mortgage will reduce his average tax rate, he may see this as an additional incentive to embark upon further training. Table 5.9 indicates that the men who have already attended courses have recognised this argument.

TABLE 5.9

Training Course Undertaken by House Tenure

<u>Males</u>	<u>Rented</u>	<u>Owner Occupied</u>	<u>Row Total</u>
Course Undertaken	26 (45)	32 (55)	58 (100)
Course Not Undertaken	114 (73)	43 (27)	157 (100)
	140 (65)	75 (35)	215 (100)

Table significant at the 0.03% level, chi-squared test.

The taxation incentive to secure a mortgage is more effective the higher is the average tax rate of the individual. If undertaking training tends to lead to owner occupation we should find that of the male respondents who had not engaged in further training or re-training, the group who said that they had considered courses should have reported a higher average tax rate than the men who declared lack of interest in further training. The results are as expected with the former group reporting an average tax rate of 26%, at the means, the latter 23%.

The argument surrounding the taxation incentive to indulge in training does not apply to females because the decision to lend a family the funds to buy a house still tends to be taken on the basis of the man's income and status.

4.2 Avoidance of Unemployment

A further incentive to undertake formal training might be to avoid periods of unemployment; this aspect is often stressed in training publicity. The argument seems to depend on the unequal incidence of unemployment between skilled and less skilled workers. The shortage of skilled labour appears to ensure continuing employment for these workers even at the low point of the business cycle. On the other hand semi-skilled and unskilled workers are in plentiful supply, at least in the North East, even in time of boom and these grades are likely to be the first to be rendered redundant after the downturn with a relatively low probability of finding alternative employment.

As in the case of increased earnings, however, we cannot be sure that this argument relating to skilled workers applies to workers who had attended further training courses. The demand for Skillcentre graduates, for example, may not be similar to the demand for time-served workers. In fact, for males, 20% of the group who had done a further training course were made redundant from their previous job compared with only 14% of the group who had not attended such a course. For females there is little difference between the groups. This suggests that further training need not help workers to avoid redundancy.

Similarly, further training seems to make little difference to the incidence of unemployment among our male respondents for the period between their previous job and the job they held at the time of the survey. For females the table is significant but being trained seems to increase the probability of suffering economic inactivity.

TABLE 5.10

Training Course Undertaken by Reportage of Inactivity Prior to Job
Held at the Time of the Survey

<u>Males</u>	<u>Gap Between Jobs</u>	<u>No Gap</u>	<u>Row Total</u>
Course Undertaken	20 (33)	41 (67)	61 (100)
Course Not Undertaken	60 (38)	97 (62)	157 (100)
	80 (37)	138 (63)	218 (100)
<u>Females</u>			
Course Undertaken	9 (69)	4 (31)	13 (100)
Course Not Undertaken	62 (41)	90 (59)	152 (100)
	71 (43)	94 (57)	165 (100)

Table for males not significant at the 55% level, chi-squared test; table for females significant at the 9% level. All expected values exceed 5.

From this evidence of the incidence of unemployment there is no incentive to train. It should be noted that female inactivity is often not unemployment; pregnancy or other family reasons are possibly more frequent. Thus the significance of Table 5.10 for females may be spurious. Excluding those women who gave reasons other than unemployment for their inactivity renders the numbers too small for analytical purposes.

If training does not help to avoid unemployment it may make it easier to get work and thus reduce the duration of inactivity. For women who reported unemployment (rather than family reasons for being out of work) prior to their current job, those who had undertaken further training gave a mean duration of 18 weeks while for those women who had not been involved in a training course the figure is 12 weeks. Thus, avoiding unemployment does not

constitute an incentive to undertake further training or re-training for females. For men who had been out of work prior to their present job, those who had undertaken further training reported a mean time unemployed of 18 weeks; those who had not attended such a course gave replies which yielded a mean time out of work of 37 weeks. The difference is not significant at the 45% level on a t-test, however, so the incentive for men of avoiding longer periods of unemployment by training is only weak.

4.3 Contentment

Another incentive to venture on a further training course might be the non-pecuniary benefits it endows. White collar and skilled manual workers can expect to achieve fulfilment and satisfaction from the intrinsic nature of their work. They might be interested in further training in order to secure even more responsible and interesting jobs. Less skilled workers may perceive that their more highly trained colleagues are more satisfied than themselves and aspire to this contentment, seeing training as the main method of achieving it. The respondents who said they were not interested in further training or re-training may lack this perception or they may be quite content doing their present job. If the people who said they had been on a further training course are more content than those who had not undertaken such training this suggests that fulfilment constitutes a real incentive.

Many respondents chose to sum up their views of the job and the firm when they replied to the question:

"If someone asked you what this firm was like what would you say?"

Table 5.11 shows the proportions who gave their various types of judgment of the firm on their first replies by whether further training had been undertaken.

TABLE 5.11

Training Course Undertaken by Judgment of the Firm (Percentages)

<u>Males</u>	<u>Favourable or Very Favourable</u>	<u>Average</u>	<u>Unfavourable or Very Unfavourable</u>	<u>Row Total</u>
Course Undertaken	59	10	31	100
Course Not Undertaken	53	13	34	100
	55	12	33	100
<u>Females</u>				
Course Undertaken	85	-	15	100
Course Not Undertaken	66	15	19	100
	67	14	19	100

For males, 59% of those who had done further training said something favourable or very favourable compared with 53% of men who had not undertaken a training course. The figures for females indicate an even larger difference in the satisfaction of the two groups but the proportions for women who had engaged in further training are misleading because the absolute numbers are small. It would appear, however, on this measure of contentment that there might be some incentive to participate in formal training for both sexes.

Perhaps general contentment is not the best guide to non-pecuniary benefit, however. The argument that training improves a worker's sense of fulfilment and satisfaction usually relates to the work task itself but we did not ask a question specifically on this topic. Instead, because we did not wish to lead the respondents, we enquired:

"What things do you like about working here?"

and allowed the interviewee to decide what was sufficiently important to mention. Replies which could be categorised as 'job interest, satisfaction' were the second most frequent response after 'friendliness of colleagues', showing that this question might be a good indication of the relative contentment of our two groups with regard to the work task. Because 'friendliness of colleagues' was the overwhelming first reply we will aggregate both responses in analysing this question. We will also aggregate with 'job interest, satisfaction', the answers which were coded as 'job easy', 'job variety' and 'lack of pressure' because all relate to what the respondents liked about the work task.

The results for both sexes turn out to be remarkably similar and tend to confirm the finding that there is a non-pecuniary benefit of satisfaction in doing the job to be gained from indulging in further training. For men, 32% of the replies of the workers who had undertaken a training course mentioned something that they liked about the work task, for women the equivalent figure was 33%. For each sex, 24% of the responses from people who had not done a course related to the job itself.

It is argued in other chapters that the respondents' judgments of the jobs they held at the time of the survey compared with previous jobs constitute good measures of contentment. Replies to the question:

"Compared with other places where you have worked, do you think that work here is organised efficiently?"

might also be used for this purpose as might comparison of pay with other local factories. Cross-tabulation of whether a further training course has been completed with any these variables does

not reveal an association for either sex, however. It would appear, therefore, that the differences in contentment we have found are not conclusive.

Evidence to contradict the findings for males comes from the replies on whether the respondents had thought of leaving the firm.

TABLE 5.12

Training Course Undertaken by "Have you ever seriously thought of leaving here?"

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Course Undertaken	40 (66)	21 (34)	61 (100)
Course Not Undertaken	70 (44)	90 (56)	160 (100)
	110 (50)	111 (50)	221 (100)

The table is significant at 1%, chi-squared test.

The tendency in Table 5.12 is for those men who had undertaken a further training course to be thinking of leaving their firm. This does not seem to be an indication of contentment although another view of this result might be that those males who have been trained feel they can leave the firm for another job more easily than untrained men and therefore are less likely to feel 'trapped' by their dependency for employment on one employer. This could be interpreted as a form of contentment. For females the equivalent table is not significant at the 70% level.

4.4. Conclusions

We have looked at three possible incentives to undertake further training or re-training and have found that females have no clear inducement on grounds of income, reduced unemployment or contentment but the results must be tentative because of the low numbers of females who had undertaken further training. Males have

the lure of some increase in earnings but it appears to be weak and the same comment applies to the incentive of reducing the length of possible periods of unemployment. As for females, the evidence on the possibility of improving contentedness by training is inconclusive. Men paying high average tax rates have an incentive to secure a mortgage and one way of achieving this might be by undertaking further training.

Both sexes have been shown to be responsive to incentives and the existence of some inducement for men, which apparently does not apply to women, can be seen as a possible partial explanation of the greater interest men have in training courses.

This conclusion depends upon the perception of workers being restricted to the workplace unless the results are representative of the work force as a whole. We have seen that the low numbers of females who had undertaken further training courses itself explains female disinterest in training if there is restricted perception so this assumption may be true for the shared experiences of income and contentment which are associated with the workplace. Unemployment experience might involve wider social groups, however.

Several factors might depress the differential between the earnings of trained workers and untrained workers. These include drop-outs from the courses, failures and trained workers who choose not to do a job appropriate to their skills - one estimate puts 'wastage' of the latter type at a rate of about 6% (see MORLEY (56) p.103). None of these workers will secure a return on their investment. These phenomena might explain the weakness of the

financial incentive for males but not the figures for females. It is possible, therefore, that the results for men, but not women, are representative of the labour force.

It follows that we have advanced very little in our search for explanations of the attitudes of Trainees and Non-Trainees. We will look next at the possibility of information flows providing an answer and at the explanations the two groups gave in the survey.

5. Information and the Respondents' Explanations

If, as has been suggested, the perception of workers is restricted to their own factory, one reason for disinterest in formal training might be the type of training course or the type of job towards which a course is directed. If knowledge is limited to the experience of workmates and the training which has been undertaken by them provides skills which most workers either find unattractive or think are beyond their capabilities, they are likely to declare a lack of interest in all further training and re-training. There might be other courses, offered by the TSA for example, which they would find attractive but if they do not know about them they cannot be interested in them. This is a problem of information networks.

We have already noted, however that there was little difference between the group who had considered further training and the people who had not when we tested their knowledge of training schemes. This is true of both sexes but there is a difference between the sexes. 94% of men had heard of Government Skillcentres but only 72% of women claimed to have this knowledge; for the Training Opportunities Scheme (TOPS), 33% of males and 28% of women said they knew about it; and information about

Technical Colleges was known by 75% of men, 65% of women. The low figures for both sexes relating to TOPS are probably due to the limited publicity of the scheme at the time of the survey (mid-1975). It is clear from these figures that men are better informed than women about training possibilities and this may be a further partial explanation of the differential interest in further training and re-training. Another possibility is that the difference in interest in training courses between the sexes leads to differential retention of information. But there certainly seems to be an association between knowledge of Government Skillcentres and interest in training.

TABLE 5.13

Interest in Training by 'Heard of Government Skillcentres?'

<u>Males and Females</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Trainees	163 (89)	20 (11)	183 (100)
Non-Trainees	158 (79)	42 (21)	200 (100)
	321 (84)	62 (16)	383 (100)

Table significant at the 1% level, chi-squared test.

The significance of Table 5.13 is almost entirely due to the difference between the sexes and on this particular question the tendency is not unexpected. Government Skillcentres do provide some courses for females but they are strongly male-orientated in general. Thus we suspect a relationship between knowledge and potential opportunities for the individual. Knowledge is retained information and a woman who heard of Government Skillcentres and became aware of the male domination in the courses offered, would have no incentive to commit the information to memory because she would consider the establishments as having little relevance to

herself. Despite this more women said they had heard of Government Skillcentres than either of the other two schemes we enquired about. One interpretation of this is that TOPS and schemes at Technical Colleges are even less relevant than the courses at Skillcentres. We might suspect that there is a latent demand for training leading to manual jobs since, for women, Technical Colleges especially offer clerical and commercial courses. This does not seem unreasonable when we remember that most female respondents were manual workers and might neither wish to do office work, nor think themselves capable of it.

This argument is tenuous but there is a hint of corroboration from the further training which females had actually done. 46% of those who had been on a course had studied typing or office work, 15% G.C.E. 'O' or 'A' levels, a further 15% had been to evening classes and 8% had studied on day release. The majority of these courses will have been at a Technical College or similar further education establishment. Many of the female respondents, although they will be aware of the training of their colleagues, will not have retained the information because they did not consider it relevant to themselves.

How did they hear of Government Skillcentres? Probably through advertisements, husbands, friends or family or male workmates. 18% of the men who had been on further training courses had done them at Skillcentres. Even more men, 29% had studied for City and Guilds examinations, ONC, HNC, HND or a degree and many of these courses will have been at Technical Colleges. An additional 14% had studied for GCE 'O' and 'A' levels, or on day release or at evening classes, again, probably

at a Technical College. Thus, as for women, the probability of having information about these colleges was greater than that of knowing about Skillcentres but 94% of men said they had heard of the latter and only 75% knew about Technical College schemes. We must conclude again that the information gleaned from workmates about Skillcentres was considered more relevant to most workers than other training schemes and therefore retained. There seems to be a demand from both males and females for Skillcentre places but, judging from the less than 100% take-up of these places, the demand is ineffective and many of the respondents themselves have declared their lack of interest in all further training.

How do the respondents explain this contradiction? We asked the people who said they had not considered getting any further training or retraining 'Why not?' Of the interviewees who replied 18% of women and 9% of men indicated that some personal constraint prevented the demand for training from becoming effective - this, at least, is one interpretation of the replies 'no time', 'got a family', 'practical difficulties' or similar. We have no way of knowing whether these people will undertake training when the constraints no longer exist or whether they will then reply 'too old' - 18% of males and 16% of females said this. We have already seen that, viewed objectively, very few of the respondents were too old to benefit from training. Perhaps they do not know this or perhaps the replies we have seen so far are simply post hoc rationalisations.

A possible information problem also lies behind the replies 'never thought of it' and 'training would not be useful'; 21% of

both men and women gave these responses. The most frequent replies from both sexes were 'happy as I am' and 'already sufficiently qualified'. It is difficult to know whether these indicate contentment or apathy. Whichever it is we need to enquire into what has induced the state, why these people do not have the same aspirations or such high expectations as their workmates. By enquiring into expectations, as we will in the next sub-section, we might hope to discover more fundamental and convincing reasons why training seems relevant to many people but they remain disinterested.

Conclusion

Information relating to training opportunities does not seem to be a problem to our respondents; many had a knowledge of Skillcentres and Technical Colleges. But there does seem to be some relationship between information and interest in training and it might explain why more men than women had considered courses. Both sexes seem to consider Skillcentres as most relevant to themselves and this is inconsistent with the high numbers who declared their lack of interest in further training and re-training. The reasons the respondents gave to explain their lack of interest may be only rationalisations; personal constraints, contentment and lack of knowledge were the most frequent replies - 'lack of knowledge' is a further contradiction of their declared awareness of Skillcentres.

6. Expectations

We saw in section 3 above that aspirations in the work environment were a partial explanation of the interest of female Trainees in further training and that social relationships at work

could influence such aspirations. In this section we will look at aspirations in a more general context and in particular consider the influence of expectations on aspiration levels.

If a worker expects to be fulfilled in his job but finds the tasks demanded of him menial he will be dissatisfied and may aspire to a more rewarding position. Similarly, if a man expects to be able to buy his house and a car of the latest design but cannot afford to do so on his present income, he will aspire to a better paid job. The experience of unemployment may reduce a man's expectations from thinking in terms of a career to hoping only for some form of work.

One important determinant of expectations might be family commitments and relationships but we have already seen that number of dependant children and marriage are not important to the distinction between Trainees and Non-Trainees (see 2.2 above). Further analysis reveals that there is little difference between the groups, for males, in the number of children below school age in the household but for females, Trainees are more likely to have young children at home. This is unexpected since the demands of young children on their mother might have been a constraint to attending a training course; it is explained by the number of children under school age acting as an intervening variable between the age of the respondent and interest in further training.

We also saw age as a significant variable in 2.2 above for males. How can we understand its influence? Younger people will have clearer memories of their schooling and any initial training they undertook; this schooling and training is also likely to be

of a different type from that received by older workers, being perhaps broader in scope and consisting of more general than vocational education. This may result in differing orientations to and expectations of work between younger and older workers. We anticipate that this hypothesis is more relevant to the male groups than to females because there was no significant difference between the mean ages of the female groups. But it might constitute a partial explanation of the greater interest of males in training because schooling can either instigate or re-inforce different work orientations between the sexes. Even in the modern education system many girls are directed towards subjects which will prepare them for domestic life while boys are encouraged to learn skills which might prepare them for work.

In addition, education, in its broadest sense, is supposed to widen the horizons of those who benefit from it. Minds which were previously constrained by the pressures of primary and reference groups are freed to participate in creativity and so enrich all aspects of life. In the field of work, people are enabled to see possibilities beyond their own job or their own factory and relate these opportunities to themselves. New reference groups are joined and bring an influence to bear on the goal-orientation of the individual. People who previously had working class goals now adopt middle class goals and expect to achieve them. Perhaps the most frequent way of meeting these expectations is by changing job - usually more than once. Each job becomes a step on the career ladder which is an integral part of the process of upward social mobility. Training might be seen as one way of moving onto the next 'career-rung' and we have already noted that the respondents,

especially females who were interested in formal training also tended to say that they would like promotion in their firm. (see section 3 above).

We hypothesise, from this argument, that interest in formal training is a symptom of 'career-mindedness' instigated by benefiting from education and operating through the raising of expectations and aspiration levels in respect of the whole spectrum of life. Non-Trainees have lower expectations than Trainees and neither perceive nor seek the same social goals; Non-Trainees are more likely to be content at their present level and therefore see little point in further training or re-training. Because they have not received the benefits of education Non-Trainees may still be constrained by the attitudes of their reference group, many members of which may work at the same factory and at the same level in the hierarchy as themselves.

Assessing who has benefited from education is very difficult. Because abilities differ, a class of pupils who have all been potential recipients of the same quantity and quality of schooling may have absorbed varying 'amounts of education'. In addition, teachers and schools vary in quality. Measuring education in terms of time, therefore can be only a poor surrogate for the benefits of the educative process. For example, a Non-Trainee may have absorbed less education than a Trainee even though he has been exposed to more; the probability, however, is that longer periods of education will be associated with deriving more benefits. Thus, we find that male Trainees tend to have received more schooling than Non-Trainees.

TABLE 5.14

Interest in Training Courses by Age Left School (Years)

<u>Males</u>	<u>12 to 16</u>	<u>Over 16</u>	<u>Row Total</u>
Trainees	112 (86)	18 (14)	130 (100)
Non-Trainees	82 (97)	3 (3)	85 (100)
	194 (90)	21 (10)	215 (100)

Table significant at the 3% level, chi-squared test. All expected values exceed 5.

The numbers of females who left school after 16 are too small to permit a chi-squared test and this is also a difficulty with the table for males; only 10% received education beyond the school leaving age and many of these are probably white collar workers. But the benefits of education we have been discussing might also apply to 'general' training and particularly formal training courses. If formal training is of use to more than one firm it must give the students an appreciation of all the problems they are likely to face, irrespective of their employer. This is usually done by stressing general principles and concepts and by helping the trainee to learn for himself. Thus a skilled man who abandons his trade does not constitute total wastage since he can apply his skills of learning in any job. We have already seen (Table 5.3) that there seems to be some relationship between having been trained and interest in further training for males. We can now see that the training already undertaken may have raised the expectations of Trainees and stimulated their interest in further training as a means to enhancing their social status. For white collar workers both additional schooling and initial

training may have brought about this effect; for manual workers it is likely to be initial training only.

This point, for manual workers especially, can be illustrated by the length of the longest single period of training.

TABLE 5.15

Interest in Training Courses by Length of Longest Training Period
(mean weeks)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Trainees	90	24	71
Non-Trainees	<u>57</u>	<u>16</u>	<u>33</u>
	77	19	51

Trainees have experienced longer periods of training than Non-Trainees and the difference between the means for males is significant at the 2% level on a two tail t-test. The significance level for the female figures is only 26%, showing that the hypothesis is less relevant to women.

If Trainees have higher social aspirations than Non-Trainees they will be more willing to change their job since a better employment is an important method of meeting the expectations of the socially mobile. Thus we find that Trainees tend to have thought of leaving their firm amongst males but, again there is no difference between the groups for females.

TABLE 5.16

Interest in Training Courses by "Have you ever thought of leaving here?"

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Trainees	74 (57)	56 (43)	130 (100)
Non-Trainees	<u>32 (38)</u>	<u>53 (62)</u>	<u>85 (100)</u>
	106 (49)	109 (51)	215 (100)

Table significant at the 1% level, chi-squared test.

Also amongst males, Trainees can be shown to have more determination to leave their firm as judged by cross-tabulation against whether or not contact had actually been made with another employer. The tendency for male Trainees to have made such a contact is significant at the 4% level, chi-squared test but the equivalent table for females is not significant. The determination of male Trainees to leave is also revealed by their tendency to answer 'Yes' to the question:

"Do you think that you will leave then?"

It appears, therefore, that there is a strong relationship, for males, between labour turnover rates and interest in further training or re-training and we interpret this as stemming from higher social expectations and aspirations among Trainees.

People who wish to advance their careers by changing job are likely to try to find out whether a potential job opportunity actually constitutes an improvement before they take it. They will therefore make a search for information by enquiring both at the firm and through any employees that they happen to know; details of promotion prospects, bonus payments and the like will be especially relevant and this tends to fall into the category of 'intensive' information. We asked respondents what they knew about the job and the firm before they applied and the male replies show that Trainees tended to know something while Non-Trainees appear totally ignorant. This is a further support of our hypothesis for males but there is no difference between the female groups.

TABLE 5.17

Interest in Training Courses by Prior Knowledge of Job or Firm

<u>Males</u>	<u>Something</u>	<u>Nothing</u>	<u>Row Total</u>
Trainees	58 (44)	73 (56)	131 (100)
Non-Trainees	26 (31)	59 (69)	85 (100)
	84 (39)	132 (61)	216 (100)

Table significant at the 6% level, chi-squared test.

Table 5.17 is reassuring from another point of view. The relationship between labour turnover rates and interest in training may be due simply to the significance of age. Younger workers (male Trainees) tend to do several jobs before they settle down, in later life to more permanent employment (male Non-Trainees). Deeper analysis reveals that Trainees have significantly shorter average job lengths, from their work histories, than Non-Trainees and this is due entirely to the age difference. It is difficult to see, however, why a search for intensive information should be associated with younger workers, except in the context of our hypothesis. Similarly there does not appear to be a satisfactory reason, attributable directly to age, for Trainees making an extensive information search for a job by trying several firms; yet this is what we find from analysis of the number of firms which respondents contacted before they took their current job.

TABLE 5.18

Interest in Training by Other Firms which Respondents Tried for Work

<u>Males</u>	<u>At Least 1 Named</u>	<u>None Named</u>	<u>Row Total</u>
Trainees	77 (59)	54 (41)	131 (100)
Non-Trainees	40 (47)	45 (53)	85 (100)
	117 (54)	99 (46)	216 (100)

TABLE 5.18 (Continued)

<u>Females</u>	<u>At Least 1 Named</u>	<u>None Named</u>	<u>Row Total</u>
Trainees	31 (57)	23 (43)	54 (100)
Non-Trainees	47 (41)	69 (59)	116 (100)
	78 (46)	92 (54)	170 (100)

Table for males significant at the 12% level, chi-squared test;
table for females significant at the 6% level.

Thus, in addition to ensuring that a job opportunity offers that combination of advantages which will ensure social advancement, Trainees seem to require information about as many job offers as possible so that they can select the most advantageous in terms of enhancing their social position. This argument applies to males but for females the significance of Table 5.18 is due probably to other factors because the other evidence we have seen in support of our hypothesis applied only to males.

What might these other factors be? The most obvious is experience of unemployment. Perhaps because family commitments restrict the job search area of females to rather narrow spatial limits, females may find it difficult to get work in areas to which they are willing to travel. Unemployment might result and induce a search for a job at several firms; the same behaviour might be brought about by the fear of unemployment. The prospect or experience of being out of work might also produce an interest in further training or re-training in the belief that acquiring a skill will reduce the risk. As mentioned in 4.2 above this is a frequent theme of TSA publicity. It should also be remembered that section 4.2 was inconclusive, because of small numbers, on whether this incentive to train was real for females;

for males it was only weak. We now hypothesise that it is a reality in the minds of our female Trainees whether or not it exists objectively.

If this hypothesis is correct we should find that female Trainees have a higher incidence of unemployment than Non-Trainees, excluding family reasons for economic inactivity, such as 'pregnancy' and 'housewife' from the analysis. Table 5.19 shows a strong association consistent with our expectations; the same relationship does not exist for males.

TABLE 5.19

Interest in Training Courses by Reportage of Unemployment Prior to
Job Held at the Time of the Survey

<u>Females</u>	<u>Gap Between Jobs</u>	<u>No Gap</u>	<u>Row Total</u>
Trainees	20 (48)	22 (52)	42 (100)
Non-Trainees	<u>17 (19)</u>	<u>72 (81)</u>	<u>89 (100)</u>
	37 (28)	94 (72)	131 (100)

Table significant at the 0.2% level, chi-squared test.

Thus it seems that the experience of unemployment for female Trainees in terms of loss of income and the psychological effects of feelings of despair and rejection induced an interest in training to avoid similar suffering in the future. Avoidance of unemployment might be also the motive for female Trainees seeking promotion in their firm; supervisors might be thought less liable to redundancy. It should be noted that there is no significant difference between the lengths of time unemployed, at the means, which were reported by our two groups so it would seem that the important experience is not being able to sell labour services, irrespective of duration of time out of work.

Part of our argument on incentives in section 4 above surrounded the restriction of the perception of workers to their work place and we also saw that in the case of unemployment such perception might lead to the conclusion that further training or re-training does not lead to a reduced incidence of unemployment for females, although the numbers were small. How can we reconcile this with the conclusions from Table 5.19?

The simplest explanation is that unemployment is experienced outside the work environment and is more likely to be associated, in the minds of workers, with the friend and kinship groups in the home locality. Income and contentment, on the other hand are experienced in the workplace. We must suppose therefore that friends and family offer evidence of a link between training and reducing unemployment, at least for females.

Conclusions

It would appear that the main explanation for the attitudes of our groups differs between the sexes. For men social expectations and aspirations, derived from education and training especially among younger workers seem to determine the attitudes and consequential behaviour of Trainees and these might result in an increase in labour turnover rates; Non-Trainees have different orientations towards work and life because they have not received the same benefits of education. Thus it is Trainees who indulge in intensive and extensive search. For females, recent experience of unemployment has produced a willingness to consider further training, apparently in the hope that it will obviate economic inactivity in the future; Non-Trainees are less likely to have

been unemployed and do not suffer, therefore, the same psychological consequences.

A partial explanation for the greater male interest in training, compared to females, is that they have received more education and training and therefore have higher expectations of upward social mobility. It is not true, however, that men have a higher incidence of unemployment than women so the link between interest in training and experience of being out of work we established for women does not appear to hold for men. Why should this be?

Perhaps the incentive of reduced unemployment by undertaking further training exists for females but not for males? We have no conclusive objective evidence on this but it is not impossible because the labour markets for each sex are very different. There are also differences between the employment conditions prevailing in the local labour markets from which our respondents are drawn. Males come mainly from the unemployment black spots of Sunderland, Hartlepool and Newburn; females mainly from Cramlington and Washington where their employment prospects seem rather better than for our male respondents. In an area of high unemployment even trained workers may find it difficult to get a job so the incentive may exist for females but not for males because of geographical differences.

A further reason might lie in the extent of the job search area for each sex. Typically men travel further to work than women; faced with the prospect of unemployment a man is prepared to lengthen his daily journey to get a job but women are constrained

by their family commitments. Thus a man may choose between geographical mobility and occupational mobility but the latter may be the only feasible alternative for a woman. (We saw the possible substitutability between geographical and occupational mobility earlier in Chapter 3). It would seem from the results of this section that men might prefer extending their job search area to training (perhaps because it requires less mental effort) but they are interested in training for other reasons connected with expectations. It should be noted, however that, depending on local job vacancies, a worker who chooses to undergo training may find that he has to travel further to work in his new occupation because skilled vacancies tend to be more thinly dispersed than less skilled jobs.

7. General Conclusions

We have found that men are more likely to be interested in further training and re-training than women and have found a variety of reasons for the different attitudes between the sexes and between the Trainee and Non-Trainee groups within each sex.

The explanations given by the respondents for disinterest in training are probably post hoc rationalisations but for what they are worth they fall mainly into the categories of personal constraints, contentment and lack of knowledge. This last is inconsistent with the reported knowledge of the groups which, although it might be a partial explanation of the different interest of the sexes in further training, does not appear to be important to the distinction between Trainees and Non-Trainees for each sex considered separately.

The hypothesis that family responsibilities might influence the decision to train was rejected after analysis of several variables.

We examined the evidence for the existence of three possible incentives to undertake further training; increased earnings, avoiding unemployment and improved contentedness. The evidence was inconclusive on contentedness for both sexes and the numbers were too small for any firm conclusion on the incentive of increased earnings for females. Males, however, appear to have a slight earnings incentive and this may be a further partial explanation of the difference between the sexes. Both males and females were shown to make rational responses to financial incentives.

We saw that men paying high average tax rates seem to perceive that training will give them a higher status, better paid job leading to an improved probability of securing a mortgage and consequently reducing their tax liability. The argument is not sufficiently strong to recommend more tax relief for home owners to increase the supply of trained labour but it should be noted that increasing the incentive to own a house may have this effect as a 'spin-off'; the reverse could also apply so any restriction on council house rent increases might reduce the supply of trainees to Skillcentres.

The evidence on the contentment and earnings incentives depends on the restriction of the perception of the workers to their workplace. If this is true the low numbers of females who had undertaken further training and the slightly larger number of males may partly explain the differential interest between the sexes.

Objective evidence on the existence of an incentive to avoid unemployment by undertaking further training is inconclusive for either sex despite the fact that it is stressed by TSA publicity.

Nevertheless, we found that recent experience of unemployment was the most important determinant of female interest in training; Non-Trainees tended not to have suffered unemployment. This was an unexpected result since most emphasis is often laid on the problems of unemployment for men and, especially in the North East, women have been thought of as being reluctant to enter the work force for fear of depriving a man of a job. It now seems that the increase in female activity rates in the North East in recent years has led to greater family dependence on two regular incomes such that severance of either leads to hardship. The psychological consequences of feeling rejected seem to stimulate action to avoid economic inactivity in the future and this includes seeking promotion and considering further training. This does not seem to apply to men, perhaps because the male respondents to the survey were drawn from unemployment blackspots where training might not help to ward off being out of work. Another possibility is that men may choose geographical mobility in preference to occupational mobility, a solution to the unemployment problem which may not be available to women.

If the incentive of avoiding unemployment by training does not exist, TSA publicity is misleading. Even if it does exist it will probably not appeal to males and among females only those who have recent experience of unemployment are likely to react to it. Perhaps greater stress should be laid on the financial benefits of training and steps taken to increase these and reduce the

training costs of foregone income. Stressing financial benefits may be considered an anathema by the TSA, however, since their view, and that of at least one Skillcentre manager seems to be to select recruits who indicate an interest in doing the job well and not just the financial reward it offers. This is similar to the attempts of personnel managers in firms to recruit workers who want to make a contribution to the firm and can be justified in the same way: both managers are operating at the margin, the personnel manager dealing with small increments to the firm's work force, the Skillcentre manager with small increments to the stock of trained labour available to the economy.

Instead of unemployment, the most important determinant of male interest in training courses was found to be educational and training experience. This is hypothesised to increase expectations, change social aspirations and produce differing orientations to work and life which lead Trainees to seek a better job through training. It constitutes a partial explanation of the difference between the sexes and the age difference between the male, but not the female groups.

Males not interested in further training seem not to have had the benefit of effective education and initial training. The dilemma for policy makers seeking to increase the supply of trained manpower is how to break into this circle. One possibility might be to increase the number of courses of a very general nature, not directed at a job - such as home car maintenance, home electrics or other 'do-it-yourself' pursuits. Successful attendance at such courses could lead to the derivation of satisfaction from doing

the tasks and induce a man to expect more from his job. He might then see that training, which has helped to solve some of his problems in the home could also be the solution to dissatisfaction at work. In the long run benefits would accrue to the worker in terms of standards of living. The problem with this idea is that the courses might become over-subscribed rapidly by people who are already very well trained. One way round this would be to make the entry qualifications 'no qualifications at all' or allow only low paid workers to attend. The policing of the system may become a difficulty, but not one that is insurmountable.

We have analysed the short run training decision and have found that both long and short run variables bring their influences to bear; the former seem more important to males, through previous education and training and the latter, through recent unemployment experience, to females. All have long-run consequences since it is in the long period that the full benefits of further training and re-training are realised.

Our findings constitute a challenge, in the context of further training and re-training, to the long-run capital theoretic approach to training which cannot explain adequately why some workers respond to the supposed incentives to train while others do not. We have offered such an explanation. For males the costs and benefits of further training do not seem important to the individual's decision; for females the cost of unemployment may be significant but it seems that the psychological effects of actually suffering economic inactivity instigate consideration of whether or not to undertake training. The questionable existence of the

incentives to attend further training or re-training courses indicates that our respondents behave in a manner which is consistent with a broader view of economic rationality than is usually associated with the human capital argument.

In a similar way the attitudes and behaviour we have seen are not inconsistent with the existence of a labour market. Workers seem to seek their best advantage in selling their labour services and if this involves supplementing their ability with further training they are prepared to undertake courses. The decision is taken in the light of their own values and benefits are assessed by reference to their personal experience.

Chapter 6

General and Specific Training

General and Specific Training

1. Introduction

Many respondents (209) received training when they started the job they held at the time of the survey. There are seven firms and a diversity of jobs within each firm so detailed analysis of each job and the training given for it will not yield general conclusions.

BECKER's (3) interesting distinction between general and specific training may help our understanding at a different level, however. Becker deals only with 'on-the-job' training by which he means instruction given in connection with the work of an employee. It includes day release or block release and instruction given while the work is done but not full time education such as a University degree course. We will reserve the term 'on-the-job' training for its more usual meaning in the U.K. of training given while work is carried out.

'Specific' training is that which raises the marginal productivity of the worker in one firm more than in other firms. 'General' training raises marginal productivity equally in many firms. Since, under competitive conditions, wage rates are determined by workers' marginal productivities in other firms, a worker with specific training would be expected to receive a wage less than his actual marginal revenue product but more than his alternative productivity.

A general trainee pays for his training himself through income foregone - for example an apprentice can earn, usually, more as an operative while he is serving his time but is prepared to pay this cost to gain the benefits of higher wages once he is

a skilled man. In the case of specific training the firms invests in the trainee, paying him only slightly less than the trained rate during the training period, thus providing an incentive to the trainee and restricting the demand for training. The firm obtains its return from the differential between the trained rate and the marginal product of the trained worker. The slightly reduced wage rate for trainees undertaking specific on-the-job training (our sense) can be seen as a compensation to the firm for mistakes and production below the eventual marginal product since in this case goods and training are joint products. The manager of the WASH 2 plant saw the reduced wage rate as a psychological weapon to make employees realise they had to put in additional effort before they could receive the full benefits of the job.

Once trained, an employee with specific training has less incentive to leave a firm than a worker with general training because he is earning more than he could achieve in any alternative employment. A generally trained worker may be able to earn a greater return on his investment at another firm and he may leave for this reason. It is also true that, given equal demand conditions, the firm is more likely to sever the employment of a worker with general training than one with specific training because only in the latter case will the firm be concerned to recoup its investment. It follows that inter-job mobility will be higher amongst generally trained workers; in addition these workers are more likely to have wider geographical mobility as they search for the best paid job in their occupation. Specifically trained workers are more likely to be occupationally mobile than workers

with general training because, almost by definition, when they do change job they also change occupation.

It is clear that Becker's distinction is part of the human capital approach to training which we saw in the previous chapter as having limited explanatory power. In this chapter, by looking at general and specific training from the viewpoint of sellers of labour services instead of the more usual perspective of the firm we shall find that Becker's work has limited analytical value. In particular, we will argue that the relatively low pay of apprentices is not necessarily evidence in support of Becker's hypothesis but that it is consistent with a more institutional explanation. We will also question the direction of causation in the association between geographical mobility and type of training. If type of training does not determine geographical mobility, what does? We shall try to answer this question and will find that domestic responsibilities are important. The workers' perception of training as an investment in himself may be also significant and firms may seek to impress employees to this effect by the level of training payments. These factors are likely to interact with general training to produce geographically mobile workers.

Type of training might be also a surrogate for occupational mobility. We shall see that a man who does only one type of work, but in many firms, can be said to be using his general training; a man who is able and willing to do many types of work, in one or many firms can be considered as having specific training. Thus the specifically trained worker is relatively more mobile occupationally.

To the extent that general training does induce geographical mobility, we will see, seemingly paradoxically, that more training (which is needed for occupational mobility) may lead to less movement between occupations. This paradox is resolved by recognising that the attendance of semi-skilled and unskilled workers at formal training courses will induce workers to stay in their (new) occupations and reduce specific training and occupational mobility because fewer less skilled workers will be changing jobs.

The conclusions mentioned above may hold only for male workers; it transpires that the number of general trained female workers among the respondents is too small for analytical purposes.

2. Identification of the Groups

We will conduct the analysis of this chapter by identifying, comparing and contrasting workers who have general training with workers who have specific training. There are several conceptual problems involved in the identification of these workers.

In practice most training consists of general and specific elements. An apprenticeship is often seen as an example of general training but the work the trainee does on capital equipment which is peculiar to his firm will not help him in another job with a firm with different technology. The more specific the technology is to the training establishment the less general will be the training. Similarly, a semi-skilled operative can be seen to be receiving specific training in respect of one part of the production process in his firm but if the technology is similar in other local firms, he may pick up information about a class of

machinery which could be useful elsewhere - general training.

Thus skill level is not considered to be an appropriate classificatory device. There may also be important differences between the trades of skilled manual workers. The training of a fitter in a shipyard may be more specific than that of a bricklayer if there is only one shipyard in the local area but many building firms. If the fitter is prepared to travel to other parts of the country to work he can make his training general; the geographical mobility of the bricklayer is irrelevant. Thus we have the general points that the structure of the local labour market may determine training type; what is general in one area might be specific in another. Also, geographical and inter-job mobility may be crucial; training which is general to a mobile worker may be specific to a man who ^{is} not prepared to change either his job or the area in which he works.

It also follows from this analysis that past mobility or potential mobility cannot be used to identify our groups because these variables are important to Becker's hypothesis and might constitute one of the differences between generally and specifically trained workers. We will avoid this tautology.

Further, by not using skill level to classify respondents we avoid the problem of those workers who, although apprenticeship-served, were doing semi-skilled jobs at the time of the survey (see Chapter 3). Instead we will use a method which identifies workers by whether or not they were receiving the benefit of their general or specific training when they were interviewed.

We will identify the groups from their replies to the question:

"Did you get any training on starting your present job?"

A 'Yes' reply will indicate a specifically trained person, a 'No' reply a generally trained person and, for simplicity, we will term the groups 'Specific' and 'General' respectively.

The implication is that the survey firms provided only specific training for our respondents. The overall impression from visiting the factories and from the questionnaires is that this is true; furthermore no respondent was serving an apprenticeship and 95% of the training was on-the-job. It is thought that the small size of the survey firms rather than their newness is the chief determinant of this emphasis on specific training.

We can justify more objectively the assertion that the survey firms only gave specific training from analysis of the Standard Industrial Classification (SIC) Order totals of the firms which respondents had approached for a job after they had received the training. At WASH 2, HART and NEWB none of the respondents had tried for a job with a firm in the same SIC Order total as the firm at which they were interviewed. At ASHT and CRAM the proportion is 7% of the Specific group, at WASH 1 4% and at SUND 23%. If the technology of the survey firms is repeated elsewhere in the local labour market then even simple on-the-job instruction might be considered general training. Technology and product, the basis of the SIC tend to be associated so if any of the Specific group consider their training to be general we should find a disproportionate number of them approaching firms in the same SIC Order total as the survey firm for a job. It seems that only in

Sunderland might this be the case where there are many mechanical engineering plants. The bias does not seem to be great, however, and we should regard it as a source of approximation in the results.

How do we know that the respondents who said 'No' to our identifying question have general training? There are only two possibilities, either the respondents learnt their skill at another firm and did not require further training (generally trained by definition) or their job at the survey firm was so simple that no training of any description was needed. In fact only 4% of all respondents can be classified as unskilled so we must regard the inclusion of the latter group among our 'General' workers as a further source of approximation. It transpires that although this problem seems insignificant for males, for females a large proportion of the General group turn out to be unskilled despite falling into the sem-skilled category of the OPCS Classification of Occupations.

There are two other sources of approximation which seem to be minor. Firstly, some workers had worked at their firm before and did not need a repeat of the training; those who answered 'No' to our identifying question will be classified, incorrectly, as General. Secondly, even generally trained workers might require a short initiation period on joining a new firm with unfamiliar machines and as a result might be classified as Specific. Most workers of this type did not seem to regard the initiation as genuine training, however and tended to classify themselves, correctly, as General.

Table 6.1 shows how the respondents, classified by socio-economic group, allocate themselves between Specific and General.

Table 6.1

Training Type by Socio-Economic Group (Proportions)

	<u>Managers</u>	<u>Admin.</u>	<u>Clerical</u>	<u>Skilled Manual</u>	<u>Semi-skilled</u>	<u>Unskilled</u>
Specific	12	7	46	48	64	18
General	88	93	54	52	36	82
	100	100	100	100	100	100
Numbers of Respondents	8	14	39	92	217	17

A majority of white collar workers are found in the General group but skilled manual workers, who also tend to be regarded as having general skills divide themselves almost equally between Specific and General. Semi-skilled manual workers tend to fall in the Specific group as expected and, as we argued above, unskilled workers classify themselves as General but there are too few to affect seriously our results. Local labour market structure, differences in demand for the various skills and mobility considerations affecting the individual supply decision, which we discussed above, render the results plausible. They become, perhaps, even more understandable when we consider training as a potential barrier to inter-job mobility.

If a worker perceives other jobs, which he can get and is prepared to accept and in which he can use his skills his training is general. A man who did not consider he received any training on starting his current job, whom we have classified as General is likely to think this way. In contrast, a worker who sees training as a barrier to inter-job mobility because he does

not feel he could do any other job without an initial training period, has specific training. A man who answered 'Yes' to our identifying question is likely to fall into this category. Thus a worker's perception of his skills and those required in other jobs may determine the type of his training.

3. Payment During the Training Period

We will look first at the earnings of workers of the Specific group during the training period compared with their earnings when fully trained. In Becker's hypothesis the general trainee pays for his own training through foregone earnings but the firm pays in the case of the specific trainee. Despite this the specific trainee earns slightly more once he is trained and becomes eligible for the fully trained rate of pay.

There are two reasons for this, one is to provide an incentive to the trainee to complete the course and incidentally restrict the demand for specific training and the other, in the case of 'on-the-job' training, to compensate the firm for mistakes and production below the eventual marginal product.

Since most training involves both general and specific elements neither the firm nor the worker should be found, typically, to be paying all the costs of training.

All respondents were asked if they would give the survey team permission to consult the records of the firm in respect of previous earnings. For those that agreed, we asked each firm to give details of their gross and net earnings for their first pay week with the firm and the first pay week after the initial training period. Three of the survey firms complied. Comparison of the gross earnings for each of these weeks is shown in Table 6.2.

Table 6.2

Average Gross Earnings After and At the Start of
Initial Training Period.

<u>Firm</u>	<u>First Pay</u> <u>Week</u>	<u>First Pay Week</u> <u>After Training</u>	<u>% Reduction</u> <u>during Training</u>	<u>Numbers of</u> <u>Respondents</u>
WASH 2	£24	£27	10.8	24
ASHT	£19	£22	12.6	23
SUND	£30	£34	13.7	25
	£25	£28	12.5	72

Because starting dates differed between respondents the earnings figures relate to a variety of pay weeks over a three year period. They have not been adjusted by the use of an index. Inflation in wage rates since 1972 means that there is substantial variation in the gross earnings figures between individuals. There is also variation in earnings because of overtime, payment of bonus and piece-rates and attendance. Thus there were some individuals who earned more for their first pay week than for their first pay week after the training period. Despite this the overall proportionate reduction in pay by virtue of undergoing training seems fairly typical of the experience of our respondents. The size of this reduction is not large and tends to corroborate the view that our firms gave only specific training.

Inter-firm comparison of the proportionate reductions is interesting because, despite considerable differences in sex composition and technology between the three firms, there is little variation in the percentages. SUND is a predominantly male employing mechanical engineering plant, at WASH 2 females outnumber males by about 3 to 1 and, although it also falls into the mechanical engineering SIC Order total, it produces a very different product.

ASHT is an electrical engineering plant with a male-female split of about fifty-fifty.

Other determinants of the proportionate reductions in earnings during the training period are labour turnover, whether a plant is high or low wage and the structure of the local labour market. These factors can be seen as producing variations in the degree of specificity of the training given by each firm. The more specific the training the more the firm pays and the less should be the earnings reduction during training.

We have already seen in section 2 above that some workers at SUND with specific training have tried for jobs at other mechanical engineering establishments locally. These workers constitute a minority but a larger proportion than at WASH 2, indicating the possibility of greater competition for labour with experience in mechanical engineering at Sunderland than at Washington and even the existence of a form of industrial labour market. Seen in this light the 13.7% reduction in earnings during training at SUND might reflect less specificity in the instruction given in this plant compared with WASH 2 where the figure is 10.8%.

We do not have a measure of the influence of other factors on the specificity of training, however, so this is by no means a firm conclusion but we can conclude that the similarity of the percentage reductions in Table 6.2 leads to the suspicion that the level of specific training rates relative to trained rates is determined more by convention and for administrative simplicity than by economic factors. We might be able to examine the effect that the structure of the local labour market has on the training

of respondents by looking at the distribution of our 'General' and 'Specific' groups by firm. The technology of the individual firm and the extent to which it is repeated in other local firms are important determinants of the generality of the training of workers. In Washington, for example, we have two mechanical engineering establishments but WASH 1 undertakes assembly work while WASH 2 concentrates on manufacturing components. We expect more repetition of assembly work locally than the relatively specialized tasks of manufacture at WASH 2. The workers at WASH 1 should therefore class themselves predominantly as 'General' and we should find more 'Specific' respondents at WASH 2. Table 6.3 confirms this but the example highlights a possible problem.

Assembly work not only provides experience which is of general use to other firms, it can also be seen as unskilled work, requiring no training at all. Our system of classification includes unskilled workers with employees who have general training. If there are substantial numbers of females who are really unskilled and few truly 'generally' trained then we will be contrasting semi-skilled females with unskilled females in the analysis that follows. This problem does not apply to males.

Table 6.3

Training Type by Firm

<u>Males</u>	<u>WASH 1</u>		<u>WASH 2</u>		<u>ASHT</u>		<u>SUND</u>		<u>CRAM</u>		<u>HART</u>		<u>NEWB</u>		<u>Row total</u>
Specific	9	(41)	8	(89)	6	(35)	17	(45)	7	(28)	20	(48)	30	(44)	97 (44)
General	13	(59)	1	(11)	11	(65)	21	(55)	18	(72)	22	(52)	39	(56)	125 (56)
	22	(100)	9	(100)	17	(100)	38	(100)	25	(100)	42	(100)	69	(100)	222(100)

<u>Females</u>	<u>WASH 1</u>	<u>WASH 2</u>	<u>ASHT</u>	<u>SUND</u>	<u>CRAM</u>	<u>HART</u>	<u>NEWB</u>	<u>Row Total</u>
Specific	15 (39)	12 (67)	18 (90)	1 (100)	37 (70)	29 (76)	- (-)	112 (66)
General	24 (61)	6 (33)	2 (10)	- (-)	16 (30)	9 (24)	2 (100)	59 (34)
	39 (100)	18 (100)	20 (100)	1 (100)	53 (100)	38 (100)	2 (100)	171 (100)

Table for males is significant at the 10% level, chi-squared test, cells with expected values below 5 constitute less than 25% of the table. Excluding SUND and NEWB from the table for females gives a significance level of 1%.

There is a slight tendency for both males and females at WASH 1 to be 'generally' trained and an opposite tendency at WASH 2. ASHT males tend to be General, as do the CRAM males but the females at both these plants are disproportionately Specific. HART females are predominantly 'specifically' trained.

The similarity of the findings for the two electrical engineering plants, ASHT and CRAM and their geographical proximity to each other might be taken to indicate the similarity of their technologies. The study of the spatial limits of labour markets showed that the local markets of Ashington and Cramlington might overlap. (see Chapter 4). However, closer analysis for males shows that over half the men at CRAM are white collar workers while 53% of men at ASHT are semi-skilled. Even in the same labour market there will be little competition for the same jobs between white collar and semi-skilled manual workers. The similarity between these two firms is probably, therefore, superficial and, for men, reflects the marketability of the different skills. The females at ASHT and CRAM, who are predominantly semi-skilled, have non-marketable specific training.

The disproportionate number of Specific females at HART is not surprising; there is little repetition of the technology of this firm in Hartlepool. But the same argument applies to HART men and the NEWB plant and we do not find a tendency for the men there to classify themselves as Specific. The solution to this as far as the NEWB factory is concerned probably lies in the relatively large numbers of white collar and skilled manual workers employed by the firm - their general skills more than offsetting the specific training of their less skilled workmates. In the HART plant there is a particular problem of unskilled males who, as we have seen, tend to be included in the General group.

We have seen evidence that the training of workers at the SUND plant might be disproportionately general because mechanical engineering firms are large employers locally yet this does not emerge from Table 6.3. The explanation here lies in the very low percentage of white collar workers at the plant. The marketability of the training of semi-skilled manual workers makes up for this deficit.

A general conclusion from the level of significance of Table 6.3. is that the method we have used to identify the General and Specific groups is important. It also appears that the sources of approximation do not interfere too seriously with the results for males. If the distinction were irrelevant then we might have expected the respondents to distribute themselves randomly between the groups. For females we have found only one firm (WASH 1) with a majority of General workers. Even if they are truly 'generally' trained and not unskilled, they may not have enough in common with the other General females, because technologies differ, to yield

significant results in the analysis which follows. We have no way of knowing whether this shows that Becker's hypothesis is irrelevant to females or whether it is a peculiarity of our survey.

Finally we have seen in the analysis of Table 6.3 and in Table 6.1, Training Type by Socio-Economic Group, that the presence or absence of white collar males, who tend to classify themselves as 'generally' trained, can make an important difference to the conclusions which may be drawn from the data. In the following paragraphs we will draw attention to significance which is due solely to the inclusion of these workers.

4. Geographical Mobility and Inter-Job Mobility

In this section we will study the important variables of geographical and inter-job mobility.

One reason for moving between jobs is redundancy. Firms have an incentive to reap the full benefits of their training investment by keeping specifically trained workers in their employ. They will be reluctant, therefore, to make workers with specific training redundant, even in an economic downturn and, provided the recession is not too severe, they may 'hoard' this labour until the recovery. Becker argues in this way.

An alternative is that, if generally trained workers are mainly skilled manual employees, because there is a shortage of this grade of labour firms may hoard these workers and render specifically trained workers redundant. The rationale for this is that a worker with general training, because he can use his skill in other firms is unlikely to return once employment has been severed and the firm may then experience a shortage of skilled

labour; a specifically trained worker can only use his training at one firm and may return to the firm after an intervening period of unemployment if he is made redundant.

We have already seen, however, that our General group are not made up predominantly of skilled manual workers. We might suppose, therefore, that Becker's argument is more likely to be confirmed by the experience of our respondents. Confirmation of the view comes from 20% of the male General group having left their previous job for reason of redundancy, 9% of the male Specific group. For females the figures are similar: 14% General, 7% Specific.

Just as firms have an incentive not to make specifically trained workers redundant, the workers themselves have some incentive not to leave since the earnings they can achieve in alternative employment should be slightly less than the trained rate. Thus, for the firm, labour turnover rates should be inversely related to the amount of specific training they provide. If this is true of all firms, then for the workers, the mobility rates between jobs should be less for specifically trained workers. One measure of mobility rates is the average length of time a worker stayed at each job in his work history.

Table 6.4

Training Type by Average Length of Job in Work History
(Mean Years)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Specific	2.9	2.7	2.8
General	3.8	2.6	3.4
	3.3	2.6	3.1
Significance level of t-test	6%	87%	5%

Table 6.4 reveals no significant difference between the group for females but for males, the General group have spent more time at each job, on average, than the Specific group. Excluding white collar males increases the significance to the 0.6% level. We will see in the next sub-section that the males in the Specific group are significantly younger, however, and workers tend to try several jobs and occupations early in their careers. Thus age is an intervening variable in Table 6.4, but we should also note that there is no unwillingness to change jobs on the part of either group and this probably means a high rate of occupational mobility among Specific workers.

We can standardise for age by dividing the average length of job in each work history by total employable time since each respondent left school. Expressing the results as a percentage gives a crude Stability Index with high numbers indicating more stability, and therefore less mobility.

Table 6.5

Training Type by Stability Index (100 = 1 employer since leaving school)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Specific	19.1	15.0	17.2
General	<u>17.1</u>	<u>15.5</u>	<u>16.6</u>
	18.1	15.2	16.9
Significance level of t-test.	22%	77%	66%

Table 6.5 shows no significant difference between the female groups and the significance of the differences for males is only at the 22% level. Excluding white collar males reduces this to the 32% level. The General male group is now shown to be (if anything)

more mobile than the Specific group and this is in line with expectations from Becker's analysis but clearly there are other important factors, apart from training, influencing mobility. In the case of females we can suppose that these include pregnancy and periods of time spent as a housewife. A further reason for lack of significance in the results, which applies to both males and females, might be the point in the work histories when training was acquired. A worker who is 'specifically' trained and has low mobility might undertake general training in a new job and thereafter demonstrate high mobility. His score on the stability index will not differ greatly from that of a worker who abandons general training and high mobility in favour of specific training and low mobility.

This difficulty is also present when we examine the experience of workers in jobs outside the North East. Wide geographic mobility and high inter-job mobility do not necessarily go together. It is quite plausible for one man to have had many jobs within the same local labour market and another worker to have had only a handful of employers scattered all over the world. But we expect the General group to demonstrate wider geographic mobility because this opens up more job opportunities to him and ensures that his training is general.

Table 6.6

Training Type by 'Have you Ever Had a Job Outside the North East?'

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Specific	39 (41)	56 (59)	95 (100)
General	70 (57)	53 (43)	123 (100)
	109 (50)	109 (50)	218 (100)
<u>Females</u>			
Specific	36 (32)	76 (68)	112 (100)
General	13 (22)	46 (78)	59 (100)
	49 (29)	122 (71)	171 (100)

Table for males significant at the 3% level, chi-squared test, table for females significant only at the 23% level.

For males the results are as expected. the General group tend to have worked outside the North East, the Specific group have not and the table is acceptably significant. It is significant at the 4% level if white collar males are excluded. Note that some of the jobs outside the North East may have been taken without moving house, with the man perhaps returning to his family at weekends. It is probable, however, that the majority of jobs in other regions did involve a change of residence and we will assume this. For females the table is not significant and the tendency that does exist is in the wrong direction. The region in which a woman works is dependent, to some extent, on where her husband has a job so the result for females is not a serious challenge to the hypothesis.

We also asked the respondents who had not worked outside the North East whether they had ever considered it. Cross-tabulation

of the replies gives results which are similar to those presented in Table 6.6 but they are insignificant for both males and females.

Responses to the question:

"Have you ever had a job outside your home area?"

did not produce any significant cross-tabulations while we might have expected further confirmation of the wider geographic mobility of the General group. For this question, however, the definition of 'home area' was left up to the respondent so the replies are probably not a good measure of geographic mobility to workplaces within daily travelling distance. A better indicator might be the distance travelled to work at the time of the survey.

Table 6.7

Training Type by Travel to Work Distance at the Time of the Survey
(Mean Miles)

	<u>Males</u>		<u>Females</u>	<u>All</u>
	(a)	(b)		
Specific	3.6	3.3	2.2	2.9
General	5.4	3.8	2.1	4.4
	4.6	3.6	2.2	3.6
Significance level of t-test	1%	31%	87%	0.1%

(a) All males

(b) Excluding white collar males

For males, the General group travel further than the Specific group and the difference at the means is highly significant. This seems to be strong confirmation of the view that geographic mobility is an important feature of the generality of training for men. But the significance is almost entirely due to the inclusion of white collar males. Thus Tables 6.6 and 6.7 yield an important conclusion for men. White collar workers are

prepared to generalise their training by geographic mobility in the form of long daily journeys and by moving house. Manual workers seem prepared to move house but not spend long periods in the day travelling.

Other research, by TAYLOR and TOWNSEND (90) has revealed a similar difference between white collar and manual workers in the North East: manual workers have a greater sense of attachment to their local area.

For females there is no significant difference between the groups.

Conclusion

The evidence presented in this section should have eliminated any remaining doubts as to the validity of the system we have adopted to identify our groups. From the viewpoint of labour supply, differential mobilities is, perhaps, the most important implication of Becker's hypothesis and this has been shown to be relevant to the male groups. Geographical mobility is much more significant than inter-job mobility. Thus, OATEY's (63) suggestion that a firm might reduce, in effect, the generality of the training it provides by selecting trainees who demonstrate low inter-job mobility in their work histories would seem to be in doubt. Firms might do better to concentrate on workers with low geographical mobility records, both in terms of daily travel and moving house for white collar workers but only the latter for manual workers.

This cannot be a firm conclusion, however, because we do not know the direction of causation. For Becker the acquisition of

general training leads to greater mobility as the worker seeks the best earnings available to him in order to maximize the return on his investment. We have argued, however, that apparently specific training can be converted into general training by wider geographical mobility; mobility patterns can determine training type.

If training type, defined by course content, is a cause of patterns of geographical mobility then the firm will not be able to influence the generality of the training it provides by discriminatory selection of trainees; this might apply to white collar workers. Alternatively, geographical mobility may determine the generality of training and if such mobility patterns are stable the firm could reduce the risk of high labour turnover amongst its trained workers by selecting trainees with records of narrow geographical mobility; this could be the case for manual workers. This analysis questions the usefulness of Becker's distinction between general and specific training. Welfare implications follow from the possible conclusion that only geographically immobile workers should be trained by firms. Individual workers who have been prepared to travel or move house to secure a job and so may be thought of as demonstrating initiative and willingness to work would be deprived, relative to immobile workers, of the full benefits of training. The possible conclusion may be also a source of economic inefficiency because there is no reason to suppose that mobile workers are less able to benefit from training than immobile workers and they are either just as likely or more likely to use training they have undertaken in subsequent jobs. Denying mobile workers the opportunity of training in a

firm, therefore, would be making less than optional use of the human resources in the economy.

Interestingly, we can see the greater geographical mobility of white collar workers reflected in the different extent to which internal labour markets are developed for the different socio-economic groups. Seniority rules and incremental scales may be employer devices designed to counteract the mobility of workers and consequent 'generalization' of their training. Internal labour markets may tie workers to a firm and increase their dependence on the organisation, acting as a substitute for specific training. These devices are less well developed for manual workers, perhaps because the narrower geographical mobility patterns of such employees obviate the necessity for them.

5. Characteristics of the Groups

In this section we will examine the characteristics of the Specific and General groups. In particular we will look for clues to the direction of causation between geographical mobility and the generality of training and suggest alternative explanations of the source of differential geographical mobility.

Table 6.8

Training Type by Sex of Respondent

	<u>Male</u>	<u>Female</u>	<u>Row Total</u>
Specific	97 (44)	112 (66)	209 (53)
General	125 (56)	59 (34)	184 (47)
	222 (100)	171 (100)	393 (100)

Table significant at less than 0.01%, chi-squared test.

Table 6.8 shows that females tend to be specifically trained and males tend to be generally trained. This is entirely expected from the analysis of the groups by firm. We also expect women to travel much shorter distances than men and therefore have fewer job opportunities in which they are able to use any training they have acquired. Men are more likely to find a job using their existing training because they are prepared to travel further. Thus, men are more likely to 'generalize' their training. Differential geographical mobility between the sexes is usually explained in terms of domestic responsibilities; if this is correct it suggests that mobility patterns determine training type and not the reverse.

In the preceding section we saw that the relative youth of the male Specific group could explain their greater inter-job mobility (Table 6.4 above). Table 6.9 shows the difference between the mean ages of the groups.

Table 6.9

Training Type by Age of Respondent (Mean Years)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Specific	30	33	32
General	35	34	34
	33	33	33
Significance level of t-test.	0.2%	78%	2%

The significance level of the t-test for males is increased to less than 0.1% by the exclusion of white collar workers. One possible explanation of the difference for males is that older men, having the prospect of a shorter working life ahead of them,

are more determined to reap the benefit of their investment in training and to do this they are prepared to travel further or move house to take a suitable job and thus ensure the generality of their training.

An additional reason for seeking to maximize the return on training investment might be family responsibilities. Older men are more likely to be married and have children to support; in addition the financial commitments of a mortgage and car might pressure a worker into being geographically mobile in order to get the best paid job available. Evidence from the survey shows that the male General group tend to be married while the Specific group tend to be single. General males have an average of 1.21 dependent children, Specific males 0.86 dependent children. This is support for the view that family responsibilities, and not training type, determine geographical mobility.

Further support comes from house tenure, General males are more likely to have the relatively greater financial commitment of owner occupation than Specific males.

Table 6.10

<u>Training Type by Tenure of House</u>			
Males	<u>Rented</u>	<u>Owner Occupied</u>	<u>Row Total</u>
Specific	71 (74)	25 (26)	96 (100)
General	69 (58)	50 (42)	119 (100)
	140 (65)	75 (35)	215 (100)

Table significant at the 2% level, chi-squared test.

Much of the significance of Table 6.10 is due to white collar workers, however; excluding these males reduces the significance level to 27%. It would appear that the tendency of the General group to have had a job outside the North East (Table 6.6) is not due to a higher incidence of council housing among Specific males - this is thought often to be a barrier to mobility of a permanent nature. This type of mobility among white collar workers can be thought of as either a cause or result of a high proportion living in owner occupied housing.

The importance of socio-economic grouping is shown by Table 6.11.

Table 6.11

Training Type by Socio-Economic Group

<u>Males</u>	<u>White Collar</u>	<u>Skilled Manual</u>	<u>Semi-Skilled</u>	<u>Unskilled</u>	<u>Row Total</u>
Specific	8 (9)	37 (39)	47 (50)	2 (2)	94 (100)
General	34 (27)	44 (35)	36 (29)	11 (9)	125 (100)
	42 (19)	81 (37)	83 (38)	12 (6)	219 (100)

Table significant at the 0.01% level, chi-squared test; all expected values exceed 5.

White collar and unskilled manual workers are disproportionately represented in the male General group; semi-skilled manual employees are over-represented in the Specific group.

The influence of white collar males can also be seen strongly in Table 6.12.

Table 6.12

Training Type by Age Left School

<u>Males</u>	<u>16 or less</u>	<u>Over 16</u>	<u>Row Total</u>
Specific	94 (97)	3 (3)	97 (100)
General	<u>106 (85)</u>	<u>18 (15)</u>	<u>124 (100)</u>
	200 (91)	21 (9)	221 (100)

Table significant at the 1% level, chi-squared test; all expected values exceed 5.

General males tend to have had more school education than Specific males but 17 of the 21 respondents who stayed at school beyond 16 years of age turn out to be white collar workers. This might be taken as evidence that schooling (a form of general training) is a cause of the wider geographical mobility of white collar workers since the reverse can hardly be the case and this is persuasive in view of the influence of education on expectations and aspirations we found in Chapter 5. Thus, Becker's view might have some truth in it for white collar workers but another possibility is that an additional factor, perhaps parental socio-economic group, is a cause both of staying on at school and of wide geographical mobility.

If education is the cause of a wide job search area for white collar workers then we might expect training during working life to have a similar influence for manual workers. In Chapter 5 we found that the length of the longest single period of training was a significant determinant of expectations and aspirations for non-white collar workers (Table 5.15). The survey data do not bear this out, however.

Table 6.13

Training Type by Length of Longest Training Period
(Mean Weeks)

	<u>Males</u>		<u>Females</u>	<u>All</u>
	(a)	(b)		
Specific	88	87	20	51
General	67	61	16	51
	76	74	19	51
Significance Level of t-test	12%	8%	61%	95%

(a) All males

(b) Excluding white collar males

The male Specific group tend to have had more training, by this measure, than the male General group and this is true whether or not white collar males are included. This is evidence against the view that training type determines spatial mobility patterns.

We now seem to have three possible explanations of the association between geographical mobility/^{and training} type. Firstly, Becker's view that the course content, which defines training type, induces differential mobility between the different recipients. The only evidence to support this came for white collar workers from their additional years of schooling.

Secondly, that wide or narrow geographical mobility can determine whether training is general or specific. This implies that we must look to alternative factors for causes of differential mobility patterns between our groups and it allows us to incorporate, as at least part of this explanation, the greater family responsibilities we have found for the male General group. An additional factor might be that General males, because of

personality differences have a greater sense of self investment, stemming from reduced earnings during the training period, than Specific males and are therefore more determined to achieve the best return; one way of doing this is to search a wider spatial area for job opportunities. On this rationalisation, white collar males become a special case of the group who have and accept family responsibilities and have a feeling of investing in themselves through training.

Thirdly, a common factor - family responsibilities and/or the extent of a sense of self investment - may determine both geographical mobility and training type. Having a wife and family to support may persuade a man that his best advantage lies in being prepared to travel long distances or to move house for a well paid job and in seeking to reap the rewards of his earlier training.

Similar behaviour might be induced by a strong feeling of self investment with respect to initial periods of training with differences between the groups arising because of personality or character variations. Whatever the instigating factor, we can see mobility and training type interacting to re-inforce each other and for white collar workers this effect might be stronger than for manual workers because they received additional years of schooling.

This third explanation is, perhaps, more acceptable than either of the other two because we have been able to incorporate more of the variables on which we have found a significant

difference between our groups. It is also preferable to, and more plausible than an alternative view that for white collar males the direction of causation runs from training (schooling) to mobility and for manual workers in the opposite direction.

Conclusion

We have seen that men tend to fall into the General group, women into the Specific group and this probably affects their different geographical mobilities which stem from family commitments. For males the family also seems to be important to our groups with the older, General group more likely to be married and have more children. The General group is also more likely to have a mortgage than the Specific group but the significance is due to white collar males who were also shown to be more likely to have had additional years of schooling. Manual workers in the General group have not had longer periods of training than Specific males.

The most plausible explanation of these findings and the association between geographical mobility and training type is that a more fundamental factor is the cause of both, and the association is re-inforced by the interaction of the mobility and training variables. This indicates that the view that training type can determine geographical mobility is, at best, only part of the truth.

6. Income and Job Search

If males in the General group are seeking the best return on their training investment we should find this reflected in their job search behaviour and the earnings they achieved as a result

of this search. This will be true irrespective of the explanation of the association between training and mobility.

Maximising income is not exclusive to any group of workers, however, and geographic immobility is not necessarily inconsistent with this behaviour but we do expect workers with wider mobility to earn more than immobile workers because they have a wider distribution of job offers open to them. Table 6.14 confirms this to some extent.

Table 6.14

Training Type by Normal Earnings

	<u>Gross</u>				<u>Take Home Pay</u>			
	<u>Males</u>		<u>Females</u>	<u>All</u>	<u>Males</u>		<u>Females</u>	<u>All</u>
	(a)	(b)			(a)	(b)		
Specific	51	51	35	42	37	37	26	31
General	54	54	32	47	41	40	24	35
	53	53	34	43	39	39	25	33
Significance level of t-test	10%	21%	5%	0.4%	2%	5%	9%	0.1%

(a) All Males (b) Excluding white collar males

For all males the General group earns significantly more than the Specific group but part of this significance is due to the earnings of white collar workers. For male manual workers the marginal differential in gross earnings of the General group over the Specific group becomes significantly different in terms of take home pay when the additional family responsibilities of General males are taken into account in tax allowances. We can see this either as a poor return for workers who are prepared to move house for a job or as a reason for seeking work outside the

region: financial responsibilities might induce a General male to take a more highly paid job elsewhere, but the reason for his return is unknown.

The results for females show that the Specific group are more highly paid than the General group. This indicates that our suspicion that General females were, in fact, predominantly unskilled workers probably had some truth in it. We are contrasting semi-skilled females (Specific) with unskilled females (General) and find that the semi-skilled tend to earn more. This is a reasonable explanation of the lack of significance for females in some of the important variables we have analysed.

It should be noted that most of the unskilled females in the General group were classified as semi-skilled by the OPCS Classification of Occupations, indicating a possible shortcoming in the system.

We get further evidence of our revised interpretation of the results for females from an examination of the search behaviour of the groups prior to taking a job with the survey firms. We asked:

"Did you feel you had a real chance of getting a job with any other firm when you took this job?"

For males we expect the more mobile General group to reply 'Yes' because they should have a wider choice of jobs. One of the problems with this question is that some respondents seemed to think we were asking "Are you employable?" where the reply 'No' would have meant "I am an unemployable, it was either this job or staying in the dole queue!" Few people would think this

of themselves so the 'No' replies may be an underestimate. Despite this the results are as expected for males. For females Table 6.15 is in line with what we might anticipate following our re-definition of the groups with the General (unskilled) group tending to reply 'No'.

Table 6.15

Training Type by 'Chance of Another Job?'

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Specific	41 (46)	48 (54)	89 (100)
General	75 (65)	41 (35)	116 (100)
	116 (57)	89 (43)	205 (100)
<u>Females</u>			
Specific	60 (64)	34 (36)	94 (100)
General	18 (35)	33 (65)	51 (100)
	78 (54)	67 (46)	145 (100)

Table for males significant at the 2% level, chi-squared test.

Table for females significant at the 0.2% level.

The male General group were more likely to consider that they had a chance of getting another job. This can be attributed to their greater mobility and thus a wider distribution of job offers. The result for females shows the Specific group as more likely to consider they had a chance of another job. If these are semi-skilled females and the General group are mainly unskilled we can understand the finding in terms of the women with some training having more marketable labour services and a greater belief in themselves than the women with no training.

In other chapters replies to this question, in conjunction with others have been interpreted as evidence of extensive job

search. Responses to other indicators in this case are not significant, although it can be shown that, amongst males the General group were more likely to try the service sector for work while the Specific Group tended not to search at all. The significance of this finding is due entirely to white collar males, however, so we must conclude, rather surprisingly, that there is little evidence of extensive job search by our male General group.

Evidence of intensive search comes from replies to the question:

"Is what you do now the kind of thing most people in your trade do?"

We expect the General group, who are seeking the best return on their investment, to have made sure that the job they accepted would make use of their training. This is important not only in an immediate job prospect but also to future employment chances since an employer seeking a worker in a particular craft is more likely to hire one with recent experience than one who has abandoned his trade for a while.

Table 6.16

Training Type by "Is what you do now the kind of thing most people in your trade do?"

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Specific	7 (21)	27 (79)	34 (100)
General	24 (49)	25 (51)	49 (100)
	31 (37)	52 (63)	83 (100)

Table significant at the 2% level, chi-squared test.

Most of the replies came from white collar and skilled manual men but the significance level is unchanged by excluding white collar males. The results are in line with our expectations. It should also be noted that men who have abandoned their skills tend to be captured in the Specific group.

Similar evidence of intensive search comes from the replies to the question whether respondents had done any other jobs, apart from their current job, in the survey firm. A General male, having made an intensive search for a job offering a return on his self investment is unlikely to be willing to accept a different set of work tasks.

Table 6.17 tends to confirm this; the 'Yes' replies relate mainly to jobs on the same grade and do not imply a promotion.

A worker with specific training is likely to display higher occupational mobility than a generally trained employee because, when he changes his job he also changes his occupation. Table 6.17 shows that the Specific group are more willing to change their occupation within the firm in addition to being more likely to change occupation by moving between firms.

Table 6.17

Training Type by "Have you ever done any other jobs in this factory?"

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Specific	50 (52)	47 (48)	97 (100)
General	43 (35)	80 (65)	123 (100)
	93 (42)	127 (58)	220 (100)

Table significant on a chi-squared test at 2% (9% excluding white collar males).

Conclusion

We have seen that General males earn marginally more than Specific males and attribute this to their wider job search for a job maximising the return on their investment although evidence of extensive search was weak. Males in the General group were more likely to think they had a chance of another job at the time of recruitment; this may be evidence of the different views the groups have of the marketability of their skills. Intensive search was shown to be a feature of the behaviour of General males which is directed towards reaping the full benefit of their training investment. In contrast, Specific males are prepared to do many jobs.

For females, we have seen that the General group contains mainly unskilled women. This does not necessarily mean that the system of classification would not be useful with another sample or that Becker's hypothesis is not important to females.

7. General Conclusions

In this chapter we have found significant differences between the two male groups and have developed a hypothesis to explain these. We will now try to pull the threads together to reach a coherent conclusion but we will not refer to females because the number of respondents of this sex who are genuinely generally trained appears to be too small for analytical purposes.

Perhaps the main conclusion is a different interpretation of the terms 'general' and 'specific' training. Becker, using the perspective of the firm sees course content as the distinctive feature. From the viewpoint of labour supply, the use (if any)

to which a worker is willing and able to put his training can have a bearing on its type. Thus, a man who only does one type of work, but in many firms can be said to be using his 'general' training; a man who is willing and able to do many types of work, in one or many firms is 'specifically' trained. Training type can be determined by the behaviour of the man in whom it is vested and the job opportunities in the local labour market.

Inter-job mobility is not significantly different between our General and Specific groups so Oatey's suggestion that the generality of training given by firms might be reduced by selecting trainees with histories of low inter-job mobility does not seem useful. Most workers seem to change job quite frequently but, while General males tend to work at the same occupation, Specific males are more likely to change occupation each time they change job either within a firm or between firms. The association between training type and geographical mobility can be interpreted therefore as a relationship between occupational and geographical mobility. High occupational mobility is associated with narrow geographical mobility, thus providing further evidence of the substitutability we have suggested in previous chapters.

Increasing the supply of trained workers in the economy through more government training schemes seems to imply an increase in occupational mobility. Yet if more workers who possess specific training undertake such courses the overall result may be a decrease in occupational mobility. This is explained by recognising that government courses are likely to

increase the supply of generally trained workers, who tend to stick to their occupation; a reduction in the number of specifically trained workers would decrease the number of job changes which, for these men, implies occupational change.

We have questioned Becker's view that training type can determine geographical mobility but the opposite line, that mobility patterns can influence the generality of training is also in doubt as a comprehensive explanation. Both directions of causation seem to contain an element of truth. We have suggested, therefore that more fundamental factors could induce both the type of training and spatial mobility patterns and that these latter two variables may interact to re-inforce each other. Family responsibilities and/or a sense of self investment through training might induce an attitude of mind which regards the training as being of use to many firms in a wide geographical area - the view of the General group. In contrast the Specific group might consider their training not to be in demand elsewhere and consequently, when changing job, they will only try for jobs in their local area (in different occupations).

In support of this we found that the General group were more likely to be married and have more children than the Specific group. These financial commitments may give a man a sense of responsibility, making him more determined to find the best paid job available, irrespective of location; he may also feel that he must capitalize on his previous training investment because he can no longer afford to undergo another training period. A man in the Specific group is not subject to these pressures, he is

more likely to abandon his skills and will not bother to make an intensive search to ensure that prospective jobs utilize his previous training.

A sense of self investment through training, stemming from personality or character differences might have a similar influence on behaviour patterns and it is possible that the two groups have very different work orientations. These would be reflected in differing strengths of the interaction between training and geographical mobility with, for white collar workers, the predominant direction of causation running from additional years of schooling to mobility. In this special case Becker's view might be seen as an approximation to the truth but in general it seems of limited use and importance.

A sense of self investment has an important role to play in the implications of the analysis for the firm. Part of Becker's work is to suggest that there is no justification for complaints about the 'poaching' of labour since specific training is of no use to other firms and in the case of general training it is the trainee, not the firm, who meets the training costs. This conclusion does not stand if the course content, as we have suggested is not a major determinant of training type. Instead, firms seem to be aware of the link between training and geographical mobility which we argued might be a cause of well developed internal labour markets for the more mobile white collar workers. Firms might also try to imbue a sense of self investment into trainees, hoping that they will remain in the same occupation once they are fully trained. This would increase the probability of workers remaining

at the same firms since there is a wider distribution of employment opportunities in all jobs in the economy at large. Consequent savings in labour turnover costs might result.

One way in which firms might try to give trainees a sense of self investment is by reducing their earnings relative to the trained rate. The higher the cost of training the more important it is to make the trainee realise he is adding to his 'human capital'. Thus, costly apprenticeships will tend to result in a larger reduction in earnings than training for semi-skilled work; the reductions will be related only loosely to the costs of training and empirical studies may reveal a distribution of proportionate reductions which seem to be determined by convention - as we saw for three of the survey firms. Note that on this rationalization firms pay most, but not all, of the training costs of all trainees and complaints about poaching may have some justification.

The success of the firms in trying to make trainees realise they are investing in themselves can be judged from the size of the General group, who tend to stick to the same occupation, as desired by employers. There also seems to be some justification for making trainees pay more if their training is expensive since white collar workers, who have relatively costly training, tend to fall into the General group while semi-skilled men whose training is quite cheap, classified themselves mainly as Specific, the group with high occupational mobility. Firms have only limited success with skilled manual workers, however, and here additional information and education might be provided as to the

nature and value of training - perhaps from the Industrial Training Boards.

The institutional account of the level of remuneration for trainees is not consistent with the existence of a market for training where earnings are the single most important factor but it is in line with the finding of Chapter 5 that financial motivations are not a significant criterion of the training decision. We have seen that the assumption of a market for labour services augmented by training enables us to explain the behaviour of respondents with respect to occupational and geographical mobility. In this market, income maximization in the sense of seeking the best return on training investment or the highest earnings available, for those who do not feel the need to regard their training as an investment, is not incompatible with observed phenomena.

Chapter 7

Information in the Labour Market

1. Introduction

Unlike a street market, where buyers and sellers meet at a spatially defined location in order to trade, labour markets operate over a geographic area rather than a point. At a street market information on price, quantity and quality is exchanged at the time of trading. Much information on jobs and people in a labour market is exchanged in advance of a bargain being struck, because the information requirements are more demanding than for the sale of fruit etc. Information flows through the media - mainly local newspapers; by personal contact of a variety of forms; or through public agencies - usually employment exchanges.⁽¹⁾

We expect a good information system to alleviate the uncertainty attached to the high costs to the individual of changing jobs. It might, for example, reduce the length of the initiation period during which the new recruit discovers unpleasant aspects of the job and finds unexpected rewards. A bad information system may lead to the selection of a totally unsuitable job where, after only a short time, the recruit decides to leave, even if the only alternative is unemployment. In comparison, the lesson from buying rotten fruit is cheaply learnt.

In this chapter we will be looking at four main information systems: direct application at a firm; advertising in newspapers or periodicals; friend and kinship networks; and the employment

(1) 'Employment Exchange' is used as an inclusive term throughout this chapter to cover the Benefit Offices of the Department of Employment and the Employment Offices of the Employment Services Agency because it is believed that most readers are more familiar with the inclusive term.

exchange. In the literature it has been more usual to aggregate direct application and friend and kinship networks into 'Informal' information systems, leaving advertising and public agency methods of recruitment as 'Formal' systems.⁽²⁾ In the context of the survey, and therefore possibly for U.K. data, this simplification would lead to the omission of many theoretical and analytical points so we will not adopt it. We will, however, refer to the Informal-Formal categorisation where it proves useful and in other cases it will emerge as self evident.

The main conclusions of U.S. studies tend to be confirmed by the survey; white collar workers use formal information systems, blue collar use informal. We will also find that sex and age are important distinguishing characteristics between the users of the various systems and that the most essential information relates to pay rates. Both firms and workers can exercise a degree of choice between the various methods of recruitment and there is therefore an obvious identification problem. Perhaps because of this some of the results are inconclusive but some association is found between information systems and contentment; and the choice of jobs afforded to a job seeker. In general, information systems underpin the important individual decisions of leaving a job, taking a job, geographic mobility and training. We might suppose that variations in efficiency between the systems lead to differing success rates in making the right decision but while it would appear that there is some truth in this for females, for males all systems seem roughly equal in their efficiency - or inefficiency.

(2) See, for example, REES (72).

1.1 Comparison Between Firms

Any single firm may use any number of the four above mentioned methods to recruit labour, and preferences will usually depend upon the state of the labour market and the labour force requirements of the individual firm. Workers may also have preferences for some methods of recruitment, especially if the quantity and quality of information conveyed differs between methods. Most of the workers surveyed (78%) were recruited during 1973 and 1974, a period which included a peak of economic activity so if workers have any preferences they should have been able to exercise them. We might find differences between labour markets but not differences between firms in the same labour market if this hypothesis is true. In fact it is not supported by the replies to the question below for WASH 1 and WASH 2.

Table 7.1

Q.22 "How did you first hear about the job you first applied for with this firm?"

	<u>Firm</u>						
	WASH 1	WASH 2	ASHT	SUND	CRAM	HART	NEWB
Direct App'n	3	-	3	8	2	19	4
Advert	9	6	8	13	21	27	22
Network ⁽³⁾	25	18	12	9	34	16	29
Exchange ⁽⁴⁾	22	2	13	8	13	15	9
	59	26	36	38	70	77	64

WASH 1 recruited a much larger proportion of its work force via the employment exchange than WASH 2, which seems to prefer using

(3) 'Friends'; 'family/relatives'; 'personal contact with employee'.

(4) 'Employment exchange'; 'Professional & Executive' Register'.

friend and kinship networks. ASHT recruited a similar percentage to WASH 1 through the employment exchange.

The proportions recruited by direct application at SUND and HART appear to be higher than at the other plants. This might be expected at SUND because the work force is almost entirely male, and the process of speculative application at a factory gate is more often associated with men.⁽⁵⁾ Perhaps it is a phenomenon associated with persistently high male unemployment? Both Sunderland and Hartlepool are male unemployment black spots having experienced rates in excess of 10% since 1970. But this hypothesis is not consistent with the NEWB figure in Table 7.1 and Newburn is also a male unemployment black spot, although the incidence only became severe in this area in 1969.

Newspaper advertising accounted for above average proportions of recruits at SUND, CRAM, HART and NEWB. This appears to be at the expense of recruitment via the employment exchange and may indicate a reluctance among managers stemming from a fear of attracting "unemployables". CRAM and NEWB, in addition to the two WASH plants, make extensive use of friend and kinship networks. If typical this is perhaps surprising in the case of the two New Towns where we might have expected evidence of less well developed social relationships.

1.2 Comparison with Survey of Employers

Comparison with results from a recent survey of employers⁽⁶⁾

(a) shows our firms ((b) Survey of Workers) not to be particularly typical:-

(5) Twelve per cent of men and nine per cent of women in the survey used this method.

(6) Department of Employment Gazette, December, 1975, pp. 1253

Table 7.2

Grade of Labour (%)

Methods of Recruitment	Non-manual		Skilled Manual		Semi-skilled		Unskilled	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
Ad. in newspapers etc.	50	66	42	39	37	18	29	18
Private agency	16	9	1	-	-	-	1	-
Employment Ex. etc.	9	5	13	14	19	27	25	24
Personal Contacts	18	18	26	38	25	44	25	29
Direct Application	7	2	17	9	19	11	18	29
	100	100	99	100	100	100	98	100

(a) Survey of Employers

(b) Survey of Workers

The major discrepancies are in newspaper advertising and personal contacts for semi-skilled and unskilled workers. The survey of employers reported that many firms prefer personal contact methods of recruitment so perhaps the difference is peculiar to the North East where continuing high levels of unemployment enable employers to exercise their own preferences in information channels.

There is no doubt that employers have the opportunity to dominate information flows since they are few in number relative to the numbers of workers seeking jobs. Poor information channels might give employers a degree of monopsony power and enable them to set their own wage levels which, to some extent, would be independent of a 'market' wage rate. Competition for employees might lead to better information flows and smaller inter-firm differences in wages offered. For evidence of this with respect to office clerical workers see DOUTY (19). If a North-East manufacturing employer chose only to recruit workers on the basis of personal recommendation he could possibly fill all his vacancies

quite easily because of excess labour supply in the region. The exceptions to this are skilled manual and white collar workers. Skilled manual workers are in relatively short supply even in the North East, so employers must use all available methods to publicize their vacancies. White collar workers tend to be specialised and relatively small in number in any one factory, so personal recommendation methods are unlikely to attract a suitable quantity or quality of applicants. Analysis by socio-economic groupings confirms these points.

1.3. Analysis by Socio-Economic Groups

Skilled manual workers are recruited by all four methods, the least frequent being direct application. This is an indication of some association between labour supply preferences and methods of recruitment. Applying at factory gates can be a soul-destroying and tiring exercise, to be engaged in as a last resort when other methods have failed. Skilled manual workers in short supply will have little need of humbling themselves in this way.

Table 7.3

Method of Recruitment by Socio Economic Group of Respondent

	<u>White Collar</u>	<u>Skilled</u>	<u>Semi-Skilled</u>	<u>Unskilled</u>
Direct App.	1	8	24	4
Advert	29	35	39	2
Network	8	34	94	5
Exchange	7	13	57	4
	45	90	214	15

Table 7.3 shows that white collar workers tend to use the 'Formal' information systems of 'Advert' and 'Exchange' while blue collar workers predominate in the 'Informal' groupings. The value

of our four-way classification is demonstrated by Table 7.3 : a higher proportion of blue collar workers use the 'Exchange' than white collar workers - who are mainly contacted through the medium of newspaper advertising. There may be an element of privilege in this since 64% of white collar workers used this method, 39% of skilled manual workers, 18% of the semi-skilled and only 13% of the unskilled. These figures correlate positively with expected literacy rates thus giving a progressively lower probability of upward social mobility moving 'down' through the socio-economic groupings. The other 'Formal' grouping, 'Exchange', demonstrates proportions in the reverse direction.

(expected)

Perhaps more convincingly, there also seems to be an/association with travel to work distances. White collar workers are prepared traditionally to travel further to work and the firm's catchment area for this grade of labour is likely to approximate to the circulation area of newspapers. But this seems not to be true of white collar workers only, because the group who heard about their jobs through newspaper advertising, taken as a whole, travel further than other groups although the differences at the means are significant only for males.

Table 7.4

Method of Recruitment by Travel to Work Distance at
time of Survey.

<u>Mean Miles</u>	<u>Males</u>	<u>Females</u>	<u>All</u>
Direct Application	2.8	2.5	2.7
Advertisement	5.6	2.6	4.6
Network	3.3	1.9	2.6
Exchange	3.8	2.4	3.2
Total	4.1	2.2	3.3
Significance Level of F-test Analysis of Variance.	1%	44%	1%

The 'Advert' group is dominated by white collar and skilled manual workers, indicating that, although there may be ample job opportunities for these workers in the region, they are distributed thinly, necessitating longer travel to work distances. This is a further reason for skilled manual (and white collar) workers not to use the factory gate method of job application; with a large geographic area to cover and many plants within its boundaries this method of job search is most inefficient.

This does not seem to be true for females in the 'Direct Application' group, however, and the point is confirmed from the average weekly costs of travel to work reported. These figures also give a small indication of the financial burden of job search at the extensive margin⁽⁷⁾ for each group if ^{members} / were to apply at factory gates.

Table 7.5

Method of Recruitment by Travel to Work Cost at Time
of Survey

<u>Mean, £'s per week</u>	<u>Males</u>	<u>Females</u>	<u>All</u>
Direct Application	0.90	1.16	£0.99
Advertisement	1.44	1.00	£1.29
Network	1.01	0.44	£0.71
Exchange	1.46	0.62	£1.09
Total	1.24	0.67	0.99
Significance level of F-test	5%	1%	1%
Analysis of Variance			

In arguing that the 'Advert' group has to travel further to find relatively thinly distributed job opportunities, we assume

(7) Borrowing the terminology of REES (72) information at the extensive margin relates to further jobs, at the intensive margin to further details of the same jobs.

implicitly that its members want jobs in the occupation for which they have been trained. Our study of occupational mobility⁽⁸⁾ reported by the respondents has shown that this is not necessarily the case but it is true of the majority.

In contrast, we know from our study of industrial mobility that most semi-skilled workers do not obtain jobs in which their previous training is relevant. We expect an association between choice of information channel and the extent of job search areas. If the job search area is so well-defined that it is possible to compile a list of the factories at which a worker is prepared to be employed then it will be simpler and more efficient to spend a day calling at all rather than scanning newspapers or waiting for an agent (friend, family or employment exchange) to provide the same information.

Direct application serves the dual purpose of reducing uncertainty by collecting information and making an application for a job - if a vacancy is found. An unsuccessful direct applicant can adapt his expectations in the light of the additional information gathered and probably revise the boundaries of his job search area. Most importantly, perhaps, this method of looking for work will minimize total search time, defined as the time which elapses between the initiation of the search and securing a suitable job; not the time spent actually searching. Total search time may be synonymous with time spent out of employment and if so there is a high opportunity cost involved, providing the incentive to minimize this time.

(8) See Chapter 3.

The 'Direct Application' group also includes people who used the telephone or postal service to enquire at factories. Similar arguments apply to these methods of search although the relative success rates may be very different, depending upon the inferences managers draw about the applicants. It is not uncommon for a manager to attribute qualities of initiative and resourcefulness to a man who actually turns up at the factory gate. Evidence of this came from the manager of the HART firm.

Having said this we must recognise that most people do not think so clearly as to define exactly the factories at which they would or would not work. They prefer to give a decision on an individual work place when they are confronted with a job opportunity; they may, for example, travel further if they know the wages are high. Thus, it is only a minority of the semi-skilled who used the direct application method, although they dominate this group in terms of numbers. They also dominate the 'Network' and 'Exchange' groups where they use agents to present them with chances of working at particular plants.

It might be argued that newspaper advertising could perform the same function and people could reject or consider jobs on the basis of geographic location; wages; job description; hours; and shifts. Further enquiries through friend and kinship networks about job security; working conditions; job satisfaction; prospects of promotion; the firm's reputation; and potential workmates could be made to rectify deficiencies in advertising. There is evidence that a small minority did this⁽⁹⁾, but there are good reasons why

(9) Four of the 'Advert' group said they got knowledge of the firm 'through an employee'.

it is not common practice among the semi-skilled and unskilled.

Firstly, as we have seen, most semi-skilled workers do not seek jobs they have done before. No matter how complete a job description in an advertisement is, therefore, it will not adequately indicate whether the job is suitable for the potential applicant and he may not even recognise that the job is one for which he could reasonably apply. It follows that the intensive information requirements of semi-skilled workers are far in excess of those of skilled or white collar workers who, at least, have some knowledge of the work task required of them. It is possible that this aspect of work is not important to the semi-skilled but we cannot know this a priori. Further, skilled workers to some extent receive self-identity in their work through their occupations; they also find more interest and fulfilment at work than do semi-skilled and unskilled workers. White collar employees have similar experiences but for this group the work career, especially through promotion and incremental scales, has more importance. Semi-skilled and unskilled workers are relatively more concerned with relationships with colleagues, including supervisors, especially in their own work groups. The intensive information requirements of less skilled workers, prior to taking a job are therefore comprehensive, detailed and pertaining to aspects of the work environment, which can usually only be obtained by word of mouth. In addition, information conveyed by this method may be considered more trustworthy.

A firm recruiting semi-skilled and unskilled workers has to accept that applicants will have little or no previous experience

of doing the job. In assessing applicants, therefore, interest will centre on health, manual abilities (judged from previous jobs, usually) and the personal qualities of appearance, affability and, in general, whether the person will 'fit in' with the existing work force. For this reason, personal recommendation is favoured by employers and it is particularly important for semi-skilled and unskilled workers. On this same point, REES (72) argues that the costless screening of applicants by existing employees and the high probability that such applicants will live in the local neighbourhood, thus reducing time-keeping problems are additional attractions of the system to employers.

The recruitment methods preferred by both the supply and demand side for semi-skilled and unskilled workers are therefore congruent. Almost half the group were recruited through friend and kinship networks and we should only be surprised that the proportion is not larger. The proportion of semi-skilled workers recruited by personal contact methods other than direct application (44%) is well in excess of the proportion reported (25%) in the national survey of employers (see Table 7.2 above)

This difference can be only partly explained by an over-representation of women (131) compared to men (83) in the semi-skilled group. Forty-nine per cent of these women and 36% of the men were recruited by personal contact methods. We expect rather more women than men to be included in the 'Network' group because they traditionally travel shorter distances to work, often only walking distance. Friend and kinship networks can be centred on the home and the workplaces; if these are in close proximity to

each other it is more likely that information on acceptable job vacancies will come to the notice of a job seeker. The wider the separation of home and workplace the weaker will be the lines of communication and although more job opportunities exist in the wider area, fewer are likely to be reported via friend and kinship networks. Thus, for men, alternative information systems assume more importance.

The most likely explanation of the discrepancy between our survey of workers and the national survey of employers is the under-representation of geographic locations in large conurbations. Sunderland and Hartlepool are recognised as self-contained areas with boundaries infrequently crossed by travel to work flows. Newburn, Cramlington and Washington are on the fringes of the Tyneside conurbation⁽¹⁰⁾ and Ashington is one of a group of towns in South-East Northumberland which, taken together, are similar to Sunderland and Hartlepool. It is probable, therefore, that the communities in our areas are more tightly knit than the national average which includes the greater London conurbation.

Summary

We have seen that there are differences in recruitment methods, and therefore information channels, used by the firms, even within the same local labour market. There are also differences between our respondents and the results of a national survey of employers, mainly amongst the semi-skilled. Since both firms and workers can exercise a degree of choice of information system we should not be

(10) Note that Chapter 4 indicates that only Newburn and Cramlington, of these three, are integrated in Tyneside.

surprised at these differences. The group amongst the respondents which was recruited by newspaper advertising is dominated by white collar and skilled manual workers; the other three groups contain mainly semi-skilled workers. There are good reasons why both demand and supply preferences relating to semi-skilled and unskilled workers lead to wide use of personal contact methods of recruitment. A pre-requisite for this is the existence of friend and kinship networks which tend to be found in tightly knit communities.

The analysis which follows cannot be held to be typical of the national picture but it may be representative of the North-East excluding the central areas of the Tyneside and Teesside conurbations. The study attempts to test specific hypotheses in line with positive social science and add to economic knowledge by explaining ex-post observed phenomena. Prediction and explanation are treated as symmetrical virtues in the tradition of behavioural theory.

2. Differences Between Information Channels

2.1 Assumptions

In this and subsequent sections we will look at the ways our respondents differ between the groups who used the four main methods of recruitment : direct application; newspaper advertisement; friend or kinship networks; and employment exchange. Two assumptions must be made.

Firstly, use of one information channel to obtain a job does not imply that any person used the same channel for his previous job or will use it for his next job. Nor does it imply exclusive

use of one channel : the categorisation used so far is based upon question 22 "How did you first hear about the job ... " For example, if a friend reported a vacancy to a respondent it does not necessarily mean that newspaper advertising played no part; the friend may have seen an advertisement in the local paper. It is probably that most people use all four information systems when they are desperate for a job but the emphasis will differ between individuals. A white collar worker is likely to spend much of his search time reading 'situations vacant' columns; a semi-skilled worker will make sure his friends, family and neighbours know he is looking for a job. We must assume that the method reported by each respondent was the method to which the worker devoted most time and effort, and that the methods are mutually exclusive.

Some support for this assumption comes from a study by HERRON (31). In his sample of redundant workers most respondents were found to use two information systems in their job search but it was more likely that a worker would intensify his search, as the unemployment period extended, by contacting more employers rather than increasing the number of information systems. Thus workers seem to be consistent in their use of systems and it is probable that our assumption reflects reality to a large extent but it may introduce approximations into the analysis.

Secondly, in order to draw conclusions about supply preferences we must assume that the preferences of the managers between information channels have a negligible effect on the composition of the overall pattern of respondents. Thus we overcome an identification problem by assuming that we are observing the

results of the exercising of supply preferences. This seems a strong assumption because we have already seen (for example) that a plausible explanation for the above average number of recruits via newspaper advertising at four locations is the employers' reluctance to use employment exchanges. But it does not seem reasonable that managers have preferences for workers with particular characteristics, attitudes or behaviour patterns and particular information channels. Hiring policy is much more likely to be biased in favour of certain characteristics (age, health, training, ability) than methods of recruitment. If such a bias exists it will be revealed by demonstrating no differences on these variables between the four groups defined by use of information channel and we will see that, in general, this is not the case. To see the problem another way, consider the case of a manager on a new trading estate where a tacit agreement exists to prohibit poaching of labour.⁽¹¹⁾ In order not to offend his fellow managers, he recruits only via the employment exchange because this is the only method which guarantees that an applicant is unemployed and not working elsewhere on the estate. Workers will quickly realise that in order to work at the factory they must get the Department of Employment to send them, even if they prefer other methods such as personal contact. Respondents in this manager's factory will report 100% recruitment via the employment exchange and we would learn nothing about supply preferences and information channels by studying their recruitment.

But there is no evidence that any of our firms even approach this extreme, for any information channel. The largest single

(11) For evidence of an agreement of this type see MACLAURIN and MYERS (51)

proportion at any one firm, for any of the recruitment methods is 34% at CRAM for 'Network' recruits. We have already noted the coincidence of demand and supply preferences for personal contact methods for semi-skilled workers, and the probability that females use these methods more than men, so it is no surprise that most of these people are semi-skilled women. There is no evidence in this to suggest hiring policy bias. Note also that all our firms used all four methods, with the exception of WASH 2 which did not reveal any 'Direct Application' people - but at WASH 2 the response is small. Again, this suggests the absence of hiring policy bias.

Seen in this way the assumption that demand preferences between information channels play a negligible role in the composition of the overall pattern of respondents seems quite reasonable.

2.2 Characteristics

We have already seen that the 'Advert' group tend to be white-collar and skilled manual workers. The other three groups are dominated by the semi-skilled. Any differences between the 'Advert' group and the rest will probably, therefore, be attributable to socio-economic groupings. Any differences between the groups which were not recruited via newspaper advertising may enhance our knowledge about the semi-skilled and information channels, but we must take care that sex is not an intervening variable.

Table 7.6

Method of Recruitment by Sex of Respondent

	Male	%	Female	%	<u>Row Total</u>
Direct Application	25	(12)	14	(9)	39
Advertisement	70	(34)	36	(22)	106
Network	67	(32)	76	(47)	143
Exchange	46	(22)	36	(22)	82
	208	(100)	162	(100)	370

The table is significant at 5% level, chi-squared test, with 'Direct Application' people and the 'Advert' group tending to be male, 'Network' tending to be female. The 'Exchange' group is evenly divided between the sexes and this is surprising. We are often led to believe that the Department of Employment sees more men than women because of the failure of the latter to register. The Department's role to intervene in the labour market and reduce imperfections is therefore severely hampered in the case of female labour. Yet this survey evidence shows that the Department is just as good at finding jobs for women as for men. This is despite only 24% registration of those women who were economically inactive immediately before their recruitment. The equivalent rate for men was 64%. The explanation of this lies in the numbers of vacancies notified to the employment exchanges in our areas. In Ashington, Cramlington, Washington and Hartlepool, the areas where we interviewed substantial numbers of females, the female vacancies rate tends to run at a level above or equal to the rate for male vacancies (see Chapter 2).

There is a difference between the ages of the groups at the means which is almost significant at the 5% level. The 'Advert'

group have the highest mean age at 35, then 'Network' people at 33 followed by 'Direct Application' at 32. 'Exchange' people have a mean age of 31. Analysis by age bands provides an explanation of this.

Table 7.7

Method of Recruitment by Age of Respondent. (Age Bands)

	<u>16-20</u>	<u>21-29</u>	<u>30-34</u>	<u>35-39</u>	<u>40-44</u>	<u>45-49</u>	<u>50-64</u>	<u>Row Totals</u>
Direct App.	5	12	5	3	4	1	5	35
Advert.	2	28	16	11	10	14	15	96
Network	11	38	19	13	15	7	17	120
Exchange	3	35	6	6	7	8	4	69
	21	113	46	33	36	30	41	320

Table 7.8

Method of Recruitment by Age of Respondent. (Proportions)

	<u>Below 30</u>	<u>30 to 64</u>	<u>Totals</u>
Direct Application	49	51	100
Advertisement	31	69	100
Network	41	59	100
Exchange	55	45	100
	42	58	100

The interesting feature here is the more than proportionate representation of people over 29 in the 'Advert' group (69%) and a similar tendency which is not as strong (59%) in the 'Network' group. In contrast the 'Direct Application' group has 51% over 29 and the 'Exchange' group only 45%. What we must suspect here is a learning process working in conjunction with upward social mobility. As people progress through their working lives some will move into 'higher' occupations in the white collar and skilled manual groups who tend to seek jobs through advertising. Some of

the younger people who used the other recruitment methods to get their present job will gravitate towards the use of newspaper advertising as their career progresses. This younger group can be seen as aspirants to the 'Advert' group. The others, who remain at much the same level throughout their working lives, will find, through a process of experience and experimentation, that the details about jobs they obtain through friend and family contacts are better tailored to their requirements of an information system - knowledge of working conditions and relationships with colleagues. The younger people in the 'Direct Application' and 'Exchange' groups are still going through this learning process while the older people in these groups are presumably 'deviants'. We can elaborate a hypothesis on these lines and test it against the replies to Q.19. "When you are looking for a job what sorts of things do you consider most important?"

3. Learning Hypothesis

3.1 Hypothesis Elaboration

It was suggested in the introduction that semi-skilled workers may have intensive information requirements in excess of skilled manual or white collar workers because they often have no knowledge of the work task required of them and attach relatively more importance to relationships with colleagues. If people change their information sources in accordance with their previous experience of job search then the semi-skilled workers using the 'Network' will attach more importance to these aspects of a job than people on the same grade who used the direct application or exchange methods.

Let us look in detail at the replies we expect to Q.19.

Pay

Rates of pay are important to white collar, skilled and semi-skilled workers, but for different reasons. The white collar and skilled manual workers, especially those who are upwardly socially mobile (the 'Advert' group) are interested in money because it is a feature of the progression of their work careers; it carries a social status and a reassurance to the worker that his efforts have been worthwhile.

The semi-skilled are interested in money because they are supposed to be 'calculatively involved', having 'instrumental' orientations to work; they require money to support their activities in their non-work lives which hold their 'central life interest'.⁽¹²⁾

We cannot say a priori which group is relatively more interested in rates of pay.

Travel, Hours, Shifts. Because the semi-skilled are more concerned with their non-work lives they should be relatively more interested in getting home quickly. Travel to work and hours/shifts should therefore be more important to the 'Network' group than the 'Advert' group and, because the other two groups are hypothesised to contain aspirants to the 'Advert' group and people learning what is most important to them, they should fall somewhere between the two extremes.

(12) See, for example, MANN (52)

Work task, Satisfaction. Semi-skilled workers usually have little knowledge of the work task involved in a prospective job but this may not be important to them. White collar and skilled manual workers expect to achieve fulfilment and satisfaction from the intrinsic nature of their work. The people in the 'Network' group, we hypothesise, have learnt not to expect satisfaction. A priori we cannot say anything about the relative frequencies of replies pertaining to the work task but we might expect more in the 'Advert' group to mention job satisfaction than in the 'Network' group. The other two groups should mention satisfaction more frequently than the 'Network' group because the 'aspirants' will possibly achieve it and the 'learners' have not yet understood that they are to be deprived of it.

Security. Job security is important to all groups because the absence of it constitutes a threat to income. Perhaps it is more important to the semi-skilled because, without training, their prospects of obtaining another job may be poorer than skilled and trained people. On the other hand, if the 'Network' group have learnt to accept job insecurity it will not be considered important. We cannot make a prediction here.

Colleagues. We have already mentioned that work mates are more important to the semi-skilled than 'higher' occupations. The 'Network' group should have recorded more replies of this nature than the 'Advert' group. The other two groups should fall between these two.

Conditions. It is difficult to predict which way the replies might fall on working conditions because they should split the 'Advert'

group between white collar and skilled manual workers, the latter attaching more importance to working environment. A priori there is no prediction from the hypothesis.

Promotion. We would expect considerable differences between groups in their attitudes to promotion prospects. 'Network' people should have learnt that promotion is not an important factor in their work lives while it is of central interest to the 'Advert' group and to the 'aspirants' in the other groups. The 'learners' probably still have ambitions so the 'Network' group should stand out by non-reportage in this category.

Firm/Management. The final code for Q.19 is impossible to predict because it involves notions associated with promotion prospects, type of work and relationships with supervisors. These operate in different directions in our hypothesis.

3.2 Results

Table 7.9

Males. Q.19⁽¹³⁾ Qualities Sought in a Job by Method
of Recruitment. (First Response)

	<u>% of each group</u>			
	<u>Direct App.</u>	<u>Advert</u>	<u>Network</u>	<u>Exchange</u>
Pay/Wages	72	49	53	59
Travel to work	4	6	6	2
Type of work	-	6	6	5
Working conditions	8	3	6	-
Work interest/satisfaction	4	16	8	16
Hours/shift system	-	1	3	-
Job security	-	6	6	11
Colleagues - good workmates	-	-	3	-
Good prospects, promotion	-	6	2	-
Good firm, management	4	3	2	2
Other	8	4	5	5
	100	100	100	100
Number of respondents	25	69	64	44

(13) "When you are looking for a job what sorts of things do you consider most important?"

The evidence from male responses just tends to corroborate the hypothesis. 'Network' people appear to think that colleagues and hours/shifts are more important than do 'Advert' people, while the 'Advert' group comes out in favour of promotion and job satisfaction. The predictions for the other groups are not so re-assuring. In particular the replies on promotion, hours/shifts and colleagues do not fall between the two extremes.

The predictions of the proportions mentioning travel to work are not confirmed; it is equally important to the 'Advert' group and 'Network' people. This may be because of the large increases in all transport costs in recent years which have promoted the importance of travel in the minds of the 'Advert' group. It may be seen more as a direct drain on income rather than as an inconvenience that had to be tolerated to achieve the benefits of a progressive work career. We have already seen that the 'Advert' group overall tend to spend more and travel further than any other group in their daily journey to work (Tables 7.4 and 7.5) and this is enough not to reject the hypothesis at this stage.

Furthermore, the ranking of distance between the groups taken as a whole is in the expected order with the 'Exchange' and 'Direct Application' groups - 2.7 miles and 3.2 miles respectively - falling between 'Advert' (4.6 miles) and 'Network' (2.6 miles). The same is true for females taken separately but not for males. Nevertheless, we can amend the hypothesis and recognise that a recent event - the oil crisis, is influencing the results. The greatest impact of this has been on the 'Advert' group because they travel furthest and one of the consequences is the higher than expected reporting of the importance of travel to work.

The most significant feature of Table 7.9 is the large proportion of responses in each group who mentioned pay. This is clearly the single most important factor in job search in the minds of the respondents, whatever the reason for it might be - social status or calculative involvement or rational economic man; the table is highly corroborative of the assumption underlying traditional neo-classical economic theory.

It is also interesting to note that the work task ('type of work') seems equally important to both the white collar and skilled manual dominated 'Advert' group and the mainly semi-skilled 'Network' group. Table 7.10 shows that among females it is more important to the former group.

Table 7.10

Q.19 Qualitities Sought in a Job by Method of Recruitment
(First Response)

<u>Females</u>	<u>% of each group</u>			
	<u>Direct App.</u>	<u>Advert</u>	<u>Network</u>	<u>Exchange</u>
Pay/Wages	44	39	34	50
Travel to work	-	14	15	8
Type of work	-	8	4	6
Working conditions	-	11	12	6
Work interest/satisfaction	21	6	5	8
Hours/shift-system	21	8	11	8
Job security	7	-	-	3
Colleagues - good workmates	7	8	14	11
Good prospects, promotion	-	-	-	-
Good firm, management	-	-	1	-
Other	-	6	4	-
	100	100	100	100
Number of people	14	36	74	36

In general, the replies for females are similar to those for males on money, travel to work, colleagues and hours/shifts, so there is some evidence to support the hypothesis. Note that the

high percentages shown under 'Direct Application' can be largely disregarded because there are only 14 women in this group.

The responses for job satisfaction are only just in the 'right' direction between the 'Advert' and the 'Network' group and this is disappointing in view of the fairly strong finding for males. It is probably due to a low proportion of skilled manual female workers in the total of respondents and a preponderance of clerks, typists and telephonists among white collar females. The zero scores for all groups under promotion is a little surprising. It would appear that no office juniors wish to become secretaries to the managing director. The stressing of a progressive work career for white collar and skilled manual females must be modified in the hypothesis.

An interim conclusion is that the evidence is not sufficiently strong either to reject or accept / the hypothesis. We are expecting substantial error terms throughout the analysis and in the context of the learning hypothesis we must anticipate even more because the age differences between the groups were significant only at about the 6% level. Perhaps further tests against other questions aimed specifically at the aspects of working lifewhere we expect most differences will provide conclusive evidence.

One such question is Q.32 "Would you like to get promotion in this firm?" There is no reason to suppose that attitudes to promotion will have changed substantially in any group since they were recruited. The hypothesis suggests a learning period stretching over some 14 years and most of the sample were recruited only one or two years prior to interview.

Table 7.11

Method of Recruitment by Q.32 "Would you like to get
Promotion in this Firm

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Direct Application	15	16	31
Advertisement	62	36	98
Network	60	68	128
Exchange	42	35	77
	179	155	334

63% of the 'Advert' group and 47% of the 'Network' group want promotion. 48% of the 'Direct Application' people and 55% of the 'Exchange' group would like to be promoted. This is in line with expectations but in no sense does the 'Network' group stand out as not wanting promotion; the association is weak being significant only at 10%, chi-squared test. Analysis by sex weakens the relationship even further, significant only at the 20% level for men and totally insignificant for women (95% level). In addition, the expected ranking of each group is not achieved.

Table 7.12

Method of Recruitment by Q.32 "Would you like to get
Promotion in this Firm

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Direct Application	12	9	21
Advertisement	50	16	66
Network	37	24	61
Exchange	31	11	42
	130	60	190
<u>Females</u>			
Direct Application	3	7	10
Advertisement	12	20	32
Network	23	44	67
Exchange	11	24	35
	49	95	144

We might expect Q.23 "What did you know about that job and the firm before you applied?" to provide a test of the hypothesis. In fact there were no replies which mentioned any of the aspects of work for which we have predictions of relative proportions. The most frequent reply was "Nothing". This may be an indication that either all the qualities of a job that we have been discussing are largely irrelevant to most job seekers or all the information systems are very inefficient. A more likely explanation is faulty questionnaire design however, since most respondents having mentioned money in reply to Q.19 will have assumed that the interviewer knew they had knowledge of the wages. On the other hand, taking the question literally, many workers may have been ignorant of the rates of pay before application, being informed at the interview stage of details of remuneration. Possibly because payment systems are so complex, even newspaper advertisements do not mention wages. But this may also be part of the social convention to appear to attach little importance to wage rates. Managers are supposed to prefer employing people who are interested in the job and the part they can play in the organisation, having an aversion to the 'clock-watching' type who only enjoys getting his pay packet at the end of the week. 'Playing this management game' gives a worker a better chance of getting the job but it is unlikely that personnel managers are fooled. They know that most people are interested in money - as we have seen from the replies to Q.19 - but encourage the facade because they are operating on the margin, forever seeking to employ the minority of workers who are genuinely interested in their work task and production targets and not just financial reward.

The arguments we used to derive predictions of the responses to the question about the attractiveness of a job during search (Q.19) can be applied symmetrically to the reasons the respondents gave for leaving their previous job. The expected rankings of the proportions leaving for selected reasons are largely identical.

Table 7.13

Reasons for Leaving Job (Selected Replies) By Method of Recruitment

<u>Males</u>	<u>% of each group</u>			
	<u>Direct App.</u>	<u>Advert</u>	<u>Network</u>	<u>Exchange</u>
Money	35	15	25	18
Travel too far	9	10	3	5
Interesting work elsewhere/ Boring	-	3	3	7
Problems with colleagues/boss	4	3	3	-
Opportunities elsewhere/ promotion	9	10	6	5
Hours/shifts	9	3	2	7
Redundant	9	13	15	21
'Fed-up'	9	9	11	9
Other	16	34	32	28
	100	100	100	100
Number of people	23	68	65	44

Again, we see that money is the single most important category overall. Far more 'Advert' people than 'Network' people moved job because they were travelling too far. This is to be expected. If travel to work is more important to the 'Network' group then they will not have taken jobs involving long daily journeys. The increase in transport costs therefore will have had a relatively minor effect on this group when compared with the 'Advert' group. There is no contradiction to the hypothesis.

The results for work interest, colleagues/boss and hours/shifts are not in line with expectations, however. These factors are just as important to both the 'Advert' and 'Network' groups while for colleagues/boss and hours/shifts we expected the 'Network' group to record a higher proportion than the 'Advert' group. In addition the proportions of the other two groups were expected to fall between the percentages for the 'Advert' and 'Network' groups; in fact they are similar for the colleagues/boss replies and both higher for the hours/shifts responses. The work interest replies were anticipated to be higher for the 'Advert' group than the 'Network' group with both the other groups recording lower percentages; the table shows equal proportions for the 'Advert' and the 'Network' groups, the 'Exchange' group scores relatively more than both, the 'Direct Application' group nil.

The only really satisfactory evidence comes from the promotion category where the ranking of the proportions is as predicted.

Table 7.14

Reasons for Leaving Previous Job (Selected Replies) by
Method of Recruitment

<u>Females</u>	<u>% of each group</u>			
	<u>Direct App.</u>	<u>Advert</u>	<u>Network</u>	<u>Exchange</u>
Money	7	11	14	11
Travel too far	7	11	10	14
Interesting work elsewhere/ boring	-	8	1	6
Problems with colleagues/boss	7	3	3	-
Opportunities elsewhere/ promotion	-	-	3	3
Hours/shifts	7	-	8	3
Redundant	7	6	10	17
'Fed-up'	21	3	11	3
Marriage/pregnant	-	14	11	6
Other	44	44	29	37
	100	100	100	100
Number of people	14	36	74	35

For females the results for promotion are again contradictory to the hypothesis and the scores for travel to work and colleagues are similar to those for males. The relative proportions for hours/shifts and work interest are in line with predictions, however, so there seems to be some merit in the hypothesis. Note the low proportions leaving for financial reasons relative to men.

The final test we will try is to look at the replies to Q.36 and Q.37 "What do you like/dislike about working here?" These questions were not concerned with recruitment but we might be surprised to find that the things which are important to any one group when they are considering job change are dissimilar to the important things in the day-to-day events of work. The danger in these questions is that respondents may, at the time of the interview, have mentioned only trivial matters that had pleased or upset them that day or the previous day. For simplicity we will aggregate the first and second responses and both questions because our interest is in the subject mentioned and not whether the respondent liked or disliked some aspect pertaining to it. The resultant numbers are therefore the number of times the subject was mentioned and not the number of people.

Table 7.15

Q.36 and Q.37: Likes and Dislikes in the Job (Selected Replies) By Method of Recruitment

<u>Males</u>	<u>% of each group</u>			
	<u>Direct App.</u>	<u>Advert</u>	<u>Network</u>	<u>Exchange</u>
Travel to Work	3	5	4	4
Job Satisfaction	4	11	15	13
Colleagues/Boss	19	18	21	17
Hours/Shifts	9	6	8	11
Other	65	60	52	55
	100	100	100	100
Number of mentions	70	193	200	125

The male replies of travel to work show again the effect of the increase in transport costs. The scores on job satisfaction are not in line with the hypothesis - it is more important to the 'Network' group than the 'Advert' group. The colleagues/boss and the hours/shifts replies are reasonably consistent with the learning hypothesis, however but the relative size of the 'Network' proportion saying 'colleagues' or 'boss' is not high enough to be conclusive.

Table 7.16

Q.36 and Q.37: Likes and Dislikes in the Job (Selected Replies) By Method of Recruitment

<u>Females</u>	<u>% of each group</u>			
	<u>Direct App.</u>	<u>Advert</u>	<u>Network</u>	<u>Exchange</u>
Travel to work	-	-	3	2
Job Satisfaction	17	10	14	14
Colleagues/boss	30	34	32	33
Hours/shifts	7	9	3	3
Other	46	47	48	48
	100	100	100	100
Number of mentions	30	98	205	101

None of the female figures support the hypothesis. The travel to work proportions are in line with the original hypothesis but we have revised this in the light of the apparent importance of increased transport costs. The differences between groups on the job satisfaction and the hours/shifts replies are not in the right direction and it seems that everyone considers colleagues/boss to be very important; this is the single most frequent reply for all groups and both sexes amongst the 'Like' replies.

3.3 Conclusion

We have put the learning hypothesis to severe tests but have been unable to show conclusively whether it should be rejected or accepted. It seems to be more relevant to men than women, and in particular white collar females (the 'Advert' group) do not want promotion more than other females and do not, therefore have a progressive work career as their central life interest.

We had to amend the hypothesis substantially to take account of changes in attitudes brought about by the large increases in transport costs in recent years.

The most important policy conclusion arises, not from the learning hypothesis, but from the observation that rates of pay are the single most important factor in the minds of job seekers. The most efficient information systems must convey the price for the job at an early stage to enable job seekers to make decisions on job opportunities. The price signal is an unambiguous piece of information which is clearly understood by all and although it is often included in employment exchange details about a vacancy, it is not uncommon for it to be omitted from newspaper advertisements. Allocative efficiency would be enhanced by comprehensive inclusion but management may object to this proposal, reasoning that they wish to attract people who are primarily interested in the job and not just remuneration.

We will look more closely at efficiency in the next section.

4. Relative Efficiencies of Information Systems.

The efficiency of information systems has been seen as an important consideration in earlier work. In particular informal

methods of recruitment have been thought inefficient although REES(72) has challenged this arguing that they may be effective, but seemingly untidy. We will retain our four-way classification because there are fundamental theoretical differences between each of them.

The direct application method is a 'self-help' information system. It requires a certain amount of local knowledge to determine which work places to contact for a job and a clear idea of the areas in which the user would be prepared to work. Given these prerequisites it is the most economical system in terms of search time expenditure because there is little or no waiting time involved in turning up at a factory gate or telephoning. Direct application by letter involves some waiting time but this is not in common use and may still be quicker than the alternative systems. There is probably a greater quantity of relevant information on vacancies gathered by this method than any other. If a factory has no vacancies this is the only relevant piece of information needed about that particular plant and the inquirer is unlikely to discover wage rates. If there are vacancies then the job seeker can ask in conversation about all the points that interest him, including wages. But the onus is on the job seeker, he must know what questions to ask since detailed information about the work task, supervisors, workmates or working conditions will not be readily volunteered. The information that is given, however, will usually be accurate.

The system has an additional advantage in (usually) combining the process of gathering information and making an application for

a job. Many firms are prepared to interview applicants on the spot and, if they are acceptable, offer a job.

Newspaper advertising is an accessible source of information. It is accurate but of a very limited amount, sometimes restricted only to the briefest job description and the name of the firm. The initiative rests with the employer and a job seeker may have to wait a considerable time before a suitable advertisement appears in the local press. Any delay thereafter is partly in the hands of the applicant. He can turn up at the factory gate, telephone or write in much the same way as a direct applicant and make his further enquiries about the job.

Information gathered through friend and kinship networks is the richest in detail of all the systems but it is of dubious accuracy and available to only a restricted minority. A job seeker may have to wait while his friends or family enquire, at a propitious moment, whether there are any vacancies at their places of work. Personal recommendation is often involved and this may restrict contact between the firm and the potential applicant - he may have to be 'brought along'. Questions about the place of work can be asked at leisure, in a relaxed environment and the job seeker is more likely to satisfy himself about his future work place by this method than any of the others. Unfortunately the information may not be correct because the informant's knowledge will often be restricted to his own work group and the job seeker may be offered a vacancy in a different area of the factory. Paradoxically the user of this channel may place greater trust in the information gained than the users of other systems.

The employment exchange is not as accessible as newspaper advertising, even in areas where the Jobcentre is located in the "High Street". The information available depends upon the details that employers have provided and is usually limited in quantity but accurate. In general, more details are available than through newspaper advertising. A major drawback to the system is that a visit to the employment exchange or Jobcentre is required and social stigma may prevent some people, especially females, from making use of the resources. It is probable that modern Jobcentres are overcoming this problem but they do not exist, as yet, in every area. Any additional information that a job seeker requires usually has to come from the firm at the interview stage, as in the case of direct application and newspaper advertising although, if pressed, an official might disclose details from the exchange dossier on the firm.

4.1 Contentment

An efficient information system will convey all the details necessary to satisfy both employer and job seeker and allocate labour to jobs which provide reasonable contentment to both parties. A job seeker will not be able to distinguish between pertinent facts and a plethora of irrelevant details without a knowledge of the work place under consideration. Too much information may lead to the non-absorption of relevant data by the potential employee. Only the 'Network' system may be guilty of this fault; the other systems probably provide too little information.

If a system is not operating efficiently there will be disproportionate labour turnover amongst the people recruited by that method. A survey of workers cannot reveal this and it might be argued that such a survey will over-represent contented workers because the dissatisfied people will have left the firm and not have been interviewed. There is some truth in this. The examination of personnel records at several factories in the North-East (not all of which were included in the survey) revealed a substantial minority of workers who did not find a permanent place in the records because they left after only a few days (or hours) of starting.⁽¹⁴⁾ None of the interviewed workers represent this group because the sample frame depended upon continuity of employment of more than a few weeks. It may be that this minority found the information systems so bad that their short experience was totally at variance with their expectations. An alternative is that they simply did not place any trust in the system they used and reserved their judgment and decision whether or not to do the job until they had first hand experience.

Unfortunately we do not know the recruitment method used to contact these people but the opinion of some firms is that they were drawn disproportionately from the service sector and had no previous experience of factory work. This is plausible, especially for females who have been used to shop work. It must be difficult for such people to envisage the experience of spending a working day in a factory environment on an assembly line or machine

(14) For further evidence of the existence of such groups see BRYANT (8)

watching. Only the 'Network' system seems capable of coping with this problem. We can see whether the people who survived more than a few days (the respondents) used the 'Network' system if they came from the service sector, from the following table.

Table 7.17

Method of Recruitment by Industrial Sector of Previous Employer

Males

	<u>Manufacturing</u>		<u>Service</u>		<u>Row</u>	<u>Total</u>
	%		%			%
Direct App.	17	(14)	6	(11)	23	(13)
Advert	50	(40)	15	(27)	65	(36)
Network	31	(25)	22	(39)	53	(29)
Exchange	27	(21)	13	(23)	40	(22)
	125	(100)	56	(100)	181	(100)

Only significant at 20% level chi-squared test

Females

	<u>Manufacturing</u>		<u>Service</u>		<u>Row</u>	<u>Total</u>
	%		%			%
Direct App.	13	(12)	1	(2)	14	(9)
Advert	19	(17)	17	(34)	36	(23)
Network	55	(51)	20	(40)	75	(47)
Exchange	22	(20)	12	(24)	34	(21)
	109	(100)	50	(100)	159	(100)

Significant at 5% level chi-squared test.

The table for males is significant only at the 20% level but a disproportionate number of people previously employed in the service sector do use the 'Network' system. For females the table is acceptably significant but the association is not in the expected direction: a disproportionate number of females from the manufacturing sector use the 'Network' system. A relatively large proportion of females recruited by advertising come from the service sector.

This tells us that friend and kinship networks amongst females tend to operate within industrial sectors. It is probable that many friendships are initiated at work and those which begin because of neighbourhood ties are strengthened by a bond of a common working environment. Industrial estates and shopping centres are frequently located in different areas of a town thus segregating the two groups of workers. Sharing similar travel to work patterns, perhaps even the same bus, may lead to friendships and the mutual exchange of information about job opportunities. Females who work in the distributive trades, for example, can only break into friend networks in manufacturing industry by using other information channels, predominantly newspaper advertising.

In contrast, male friend and kinship networks seem more diverse, less reliant upon work, and information on job opportunities is drawn from a variety of sources. The difference is probably due to the travel to work distances which each sex typically journeys.

It would be a mistake to presume that only the people who were satisfied with the quality of their information system were left at the firms to be sampled. The male respondents especially are drawn from high unemployment areas and they may not have been able to obtain another job. In general, a recruit who is not content has the choice of leaving or trying to change those aspects of his work which do not please him from within the firm. The overall pattern of respondents should therefore consist of dissatisfied people, satisfied people and the indifferent. The more efficient information systems will include a disproportionate number of satisfied people.

One way of measuring contentment is to analyse the comparisons between present job and previous job, (Q.20) "How does this job compare with your previous job?" This assumes that contentment is a relative concept, that most people compare the present with their most recent previous experience and that no one is ever completely 'happy'.

Table 7.18

Method of Recruitment by Judgment between present and previous job				
<u>Males</u>	(15)	(16)	(17)	<u>Row Total</u>
	<u>Better</u>	<u>Worse</u>	<u>Indifferent</u>	
Direct App.	10	5	6	21
Advert	31	10	22	63
Network	37	12	17	66
Exchange	22	11	9	42
	100	38	54	192

The table is not significant at the 65% level, chi-squared test, and the table for females is also not significant showing that on this test, there is no difference between the efficiencies of the systems.

But there is a difference, for females, in the quantity of information each system conveys to its users. Q.23 asked the respondents "What did you know about the job and the firm before you applied?" Most people replied 'Nothing' but the employment exchange, for females, was worse than all the others.

-
- (15) 'This job better'; 'Balance of conflicting reasons favours present job'.
- (16) 'This job worse'; 'Balance of conflicting reasons favours previous job'.
- (17) 'No balance apparent'; 'Same'; and 'Different' indicating that the respondent had not made a judgment between the two jobs.

Table 7.19

Method of Recruitment by Knowledge of job/firm before
Application

<u>Females</u>	<u>Something</u>	<u>Nothing</u>	<u>Row Total</u>	<u>% who knew Nothing</u>
Direct App.	5	9	14	64
Advert.	11	25	36	69
Network	21	55	76	72
Exchange	3	33	36	92
	40	122	162	75

Significant at 7% level, chi-squared test.

For males, all the systems were equally poor. It would appear that there is a specific deficiency in the service that employment exchanges give to women. Having a prior knowledge of the job or firm does not seem to have any effect on female contentment, however.

Table 7.20

Knowledge of job/firm before application by Judgment
between present and previous job

<u>Females</u>	<u>Better</u>	<u>Worse</u>	<u>Indifferent</u>	<u>Row Total</u>
Something	28	7	8	43
Nothing	72	26	26	124
	100	33	34	167

Table insignificant on chi-squared test, 70% level.

But prior knowledge does matter to males; those who knew something think their present job is better, those who knew nothing think it worse. Note that this is information at the intensive margin.

Table 7.21

Knowledge of job/firm before application by Judgment
between present and previous job

Males

	<u>Better</u>	<u>Worse</u>	<u>Indifferent</u>	<u>Row Total</u>
Something	50 (61)	8 (10)	24 (29)	82 (100)
Nothing	55 (45)	33 (27)	35 (28)	123 (100)
	105 (51)	41 (20)	59 (29)	205 (100)

Table significant at 1% level, chi-squared test. Percentages in parenthesis.

Thus, although there is a specific deficiency in the information provided by employment exchanges to females, any efforts to rectify this may not result in more contented female labour forces. There is a deficiency in all systems in the quantity of information supplied to males and a remedy for this, even in one system (for example employment exchanges because there is a greater facility for control) will reap rewards in male employee contentment and possibly industrial relations and labour turnover. Men have a clear incentive to ask questions about possible jobs because it makes them more content but employers also have an incentive, because of the cost of bad industrial relations and labour turnover, to supply more information to applicants at an early stage in the recruitment process.

Another means of assessing contentment is to consider rates of pay, the most frequent subject mentioned by respondents when they were asked what things they thought important when they were looking for a job. In Q.50 respondents were asked whether they thought their pay was high, about right or low when compared with

jobs of a similar skill outside the factory:

Q.50 "Compared with other jobs around here of similar skill outside this factory, would you say the pay for the job is: HIGH, ABOUT RIGHT, LOW?"

At a superficial level we can take their replies as an indication of general satisfaction and assume that respondents weighed other factors involved in their work, such as noise, dirt, smells and effort involved, against remuneration and compared the resulting complex against the situation of other workers in neighbouring factories. In this interpretation, 'high' or 'about right' indicates contentment, 'low' indicates dissatisfaction.

Table 7.22

Method of Recruitment by Pay compared with other local factories

Males

	<u>High or About Right</u>	<u>Low</u>	<u>Row Total</u>
Direct App.	11 (79)	3 (21)	14 (100)
Advert	29 (74)	10 (26)	39 (100)
Network	24 (53)	21 (47)	45 (100)
Exchange	16 (52)	15 (48)	31 (100)
	80 (62)	49 (38)	129 (100)

Females

Direct App.	9 (90)	1 (10)	10 (100)
Advert	21 (81)	5 (19)	26 (100)
Network	13 (43)	30 (57)	43 (100)
Exchange	8 (35)	15 (65)	23 (100)
	51 (50)	51 (50)	102 (100)

Table for males significant only at the 20% level, chi-squared test. Table for females significant at less than 1% chi-squared test. Percentages in parenthesis.

The association for females is highly significant with 'Direct Application' and 'Advert' people being content and the 'Network' and 'Exchange' groups tending to discontentment. The association for males is only significant at about the 20% level but the directions of the differences are the same as for females.

Closer analysis makes this result rather more dubious, however. The respondents may have been simply reporting relative pay levels as conveyed to them by the information systems they use and not weighing these against other factors.

In addition, they are not all talking about the same rates of pay since, as we have seen, the 'Advert' group is dominated by white-collar and skilled manual workers, the others by the semi-skilled. The differences between the 'Direct Application' group and the other two semi-skilled groups, do however, show that there is not a pooling of information within the firms and a resulting consensus on pay rates once workers begin their jobs. It is reasonable to suppose that the recruitment method used to obtain their present job, which is assumed to be the main information system used by each group in job search, is the same method that each group has used to obtain details of pay rates outside the factory. We can examine the implications of the replies in the light of this.

The 'Advert' group can continue to read 'situations vacant' columns after they get a job or they may take no further interest in job opportunities. If the former is true then, despite additional knowledge and possible increases in pay in all jobs since they were recruited, they still think their pay is high or about right.

If they no longer read job advertisements then they must be reporting the position as they knew it at the time of recruitment. They were therefore satisfied that the information system they used secured a job with a relatively satisfactory rate of pay. The 'Advert' group is unambiguously content.

It is less likely that the 'Direct Application' group will continue to search for job opportunities by their chosen method and still remain in the job. It is even more unlikely that they will obtain information about pay rates in other plants unless they have vacancies. We have seen that the direct applicant appears decisive and a clear-thinker. If he embarks upon job search and finds a vacancy with a higher rate of pay than his present job he will take it and not remain to be sampled. If he finds lower rates of pay he will stay. If he had found higher rates of pay but could not get a job he would have replied 'low'. If he does not search he will believe that the information he had when he made his decision to join his present firm is still true - and presumably he chose the highest paid job available. We should not, therefore, be surprised at the number of 'high' and 'about right' replies from this group and it is probable that they indicate contentment on the part of the direct applicant.

The 'Network' group will still collect information about other job opportunities and rates of pay by the informal means they used to get their present job. This group probably has more knowledge about other jobs than any other group because they know about vacancies and jobs where there are no vacancies. The accuracy of their knowledge is in question, however. Like all other groups,

the network people will have taken the highest paid job available to them but the number of opportunities will have been strictly limited and they may have accepted the job knowing very well that other factories paid higher wages. Since they have not left, vacancies have presumably not been brought to their notice since recruitment, either. The 'low' replies for this group therefore mean that they are not contented with their pay but this may be a result of mis-information. Wide publication of local rates of pay might come as a surprise to these people and alleviate their dissatisfaction.

It is still open to the 'Exchange' group to visit their local employment exchange or Jobcentre to enquire about vacancies and rates of pay attached to them, after they have taken a job. If they do not do this then their replies indicate the position as they saw it at the time of recruitment; since many said 'low' they were presumably unable to secure the alternative vacancies. Similarly, if they have tried for other jobs with higher pay since recruitment they must have been rejected since they were interviewed in the survey. We believe that employment exchange information is accurate so when these people said 'low' they were probably reporting the truth of the matter but did not add that the high wage firms were able to discriminate in the quality of the workers they hired.

This analysis suggests that the 'Advert' and 'Direct Application' groups tend to be more content than the 'Network' and 'Exchange' groups. We can seek confirmation of this finding from the replies to Q.38 "Have you ever seriously thought of leaving

here?" This is also the nearest we can come in this survey to an analysis of any association between recruitment methods and labour turnover.

Using Q.38 by itself as an indicator of contentment is unsatisfactory because there are many reasons for wishing to leave a firm but here we are seeking confirmation of the result of another question.

Table 7.23

Method of Recruitment, by Q.38 "Have you ever seriously
though of leaving here?"

<u>Females</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>	<u>% who said Yes</u>
Direct Application	2	12	14	14
Advertisement	7	29	36	19
Network	37	39	76	49
Exchange	18	18	36	50
	64	98	162	40

Significant at less than 1% level, chi-squared test (all cells have expected values in excess of 5).

The table for males is not significant at the 40% level, chi-squared test, but the table for females is highly significant and in line with the findings from the question on relative pay rates. 'Direct Application' and 'Advert' people tend not to consider leaving while a more than proportionate number of the other two groups do think about it. This clearly establishes a relationship between labour turnover and recruitment methods for females. For males we can suspect a disturbance to the relationship coming from an intervening variable, possibly unemployment rates.

In an excess labour supply situation it is reasonable to suppose that, even though they may be discontented, men attach

more importance to having a job than to the possibly illusory attractions of other firms.

But we have not yet seen any strong evidence of a link between information systems and male dis-satisfaction while the relationship is established for females. We get further evidence of this from the replies to Q.52, "Compared with other places where you have worked, do you think that work here is organised efficiently?" This is a measure of contentment because the dissatisfied person will tend to be over-critical of shop floor organisation even if the root of the trouble lies in other aspects of the working day. This question is likely to capture, in one variable, grievances about bonus payments, supervisors, management, colleagues and the firm in general. It is no surprise, therefore, to find that 'Direct Application' and 'Advert' females said work was organised efficiently while the other two groups said it was not. The table for females is highly significant. For males there is no association but two thirds considered that work was not organised efficiently, a larger proportion than is found amongst females. It appears that men are not content but there seems to be no association with the formulation of expectations during the recruitment process.

Table 7.24

Method of Recruitment by Q.52 ".... Do you think that
work here is organised efficiently?"

<u>Females</u>	<u>Yes</u>	<u>No</u>	<u>Row Totals</u>	<u>% who said Yes</u>
Direct Application	9	4	13	69
Advert	24	9	33	73
Network	30	37	67	45
Exchange	10	20	30	33
	73	70	143	51

Table significant at less than 1%, chi-squared test.

Dissatisfaction can be remedied by leaving the firm or by working from within to try to change the situation. One way of doing this might be to raise problems with the shop steward.

We asked:

Q.56 "Have you ever asked your shop steward/works committee representative to take up a grievance for you?"

It may be considered that those feeling dissatisfied are more likely to take grievances, even if they are minor, to workers' representatives. For females there is some similarity in the pattern of replies compared with the other measures of contentment we have used.

Table 7.25

Method of Recruitment by Q.56, 'Grievance taken to
workers' representative?'

<u>Females</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Direct Application	1	13	14
Advert	1	31	32
Network	19	54	73
Exchange	5	26	31
	26	124	150

Significant at 5% level, chi-squared test (less than 20% of cells have expected values of less than 5).

The 'Network' group, followed by the 'Exchange' group, have the greatest tendency to complain. The table for males again shows no association.

Conclusion

For female workers we have seen that friend and kinship networks tend to operate within industrial sectors and this may be a result of relatively short work journeys.

We have also established an association between information systems and employee contentment for females: those recruited by direct application or newspaper advertising are happier than women who used friend and kinship networks, or the employment exchange. For male workers we found a link between the quantity of intensive information conveyed by any of the systems and employee contentment. If, for example, employment exchanges improve the quantity and quality of information they pass on to users they are likely to make men more content and benefits will accrue to females and employers of females in terms of reduced labour turnover and better industrial relations. Such an improved employment exchange service might attract more users from the group of people who use friend and kinship networks to obtain jobs because this group are not satisfied with the jobs this system provides.

On the contentment criterion, newspaper advertising and direct application seem more efficient than the other methods but only for females; for males all methods seem inefficient.

4.2 Training

One function of information systems which serve to allocate labour between jobs is to make users aware of longer run opportunities. So far we have discussed the short run functions of information systems, taking the skill levels of workers as given. But at some stage in their working lives workers must train to acquire these skills and before they are prepared to do this they require some knowledge of the job opportunities that will be made available to them on completion of the course. They also require details of remuneration whilst they are training and information relating to course content.

All four systems are capable of providing this but we can expect the 'Direct Application' people to fare badly in measurements of their knowledge of training courses because this system deals with training given in the new job only as an interesting aside in conversations between managers and applicants. The employment exchange has a declared policy of drawing training to the attention of applicants. The Training Services Agency is likely to be the source of newspaper advertisements trying to attract the attention of the 'Advert' group to training courses. Whether or not friend and kinship networks deal with training opportunities depends on the success amongst the 'Exchange' and 'Advert' groups in stimulating interest sufficiently to get people to discuss the possibilities.

The analysis which follows examines the state of knowledge, attitudes and behaviour of the different groups. It is long run only in the sense that it is concerned with the possibility of

variation in the quantity of human capital. The prime concern is to measure the extent that governmental interference in the labour market has succeeded in getting people who are mainly concerned with job opportunities to recognise the relevance of training to a job seeker whose chief concern may be about remuneration and avoiding unemployment. This is the short run problem of the relative efficiencies of the information systems in instigating the first step of thought processes.

Instigating thought processes by publicity seems to be a particularly difficult thing to achieve. Most people seem to decide to change jobs because they are repelled by something in their last job and not because they are attracted to some aspect of their next job. 59% of those who replied gave a reason for leaving (Q.15) or particular leaving reason, (Q.21)⁽¹⁸⁾ in respect of their last job which indicated that some factor related to the job instigated their severance from that firm. These reasons included 'travel too far'; 'job too difficult'; 'working conditions'; 'didn't get on with colleagues or boss'; boring work; hours; redundant or redundancy threat; shifts; 'change in firm's organisation'; 'didn't like it'; 'fed up'. 34% were attracted by some aspect of their next job. These reasons included 'money'; 'more interesting work elsewhere'; 'promotion'. 7% gave answers which could not be categorised in this way.

Crosstabulation of leaving reason by recruitment method did not reveal any association between information system and whether

(18) Where the replies to Q.21 contradicted Q.15, Q.21 was taken as true. Q.21 was "Was there a particular reason for you making up your mind to leave your last job at the time you did?"

the respondents were attracted or repelled, so all systems seem to have equal efficiency in stimulating thought processes.

Respondents were asked whether they had heard of government training or skillcentres, the training opportunities scheme (TOPS) or the schemes available at technical colleges. 93% of men and 72% of women had heard of government training or skillcentres; 33% of men and 27% of women had heard of TOPS and 75% of men and 67% of women had heard of technical college schemes. Men are consistently better informed than women and the only association is between male information systems and knowledge of technical college schemes.

Table 7.26

Method of Recruitment by Q.29 'Heard of Technical College Schemes?'

Males

					<u>Row Totals</u>
Direct Application	17	(68)	8	(32)	25 (100)
Advert	61	(88)	8	(12)	69 (100)
Network	43	(65)	23	(35)	66 (100)
Exchange	33	(72)	13	(28)	46 (100)
	154	(75)	52	(25)	206 (100)

Significant at 5% level, chi-squared test. Percentages shown in parenthesis.

A more than proportionate number of the 'Advert' group have heard of schemes at technical colleges and because this group has a large proportion of skilled manual and white collar workers who have probably attended some of the courses at some time, this is not surprising. It seems unfortunate, if we accept that training is an aid to the efficient working of the economy, that these

people do not pass on their experience of courses to the semi-skilled. Perhaps the different groups do not communicate with each other on any subject.

In general, however, all four systems seem quite efficient in disseminating information about skillcentres and technical colleges. The poor state of knowledge about TOPS is probably due to its being in an early stage of development, with limited advertising at the time of the survey (first half of 1975).

Information systems are not just used for conveying information, they can also change attitudes and persuade people to embark on courses of action, such as attending a further training course. We find an association between actually doing further training and recruitment method used. The 'Advert' group tend to have undertaken further training and the other groups have not. Analysis by sex gives similar results to the table below for both sexes.

Table 7.27

Method of Recruitment by Q.28 "Have you ever undertaken any further training...?"

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Direct Application	7	32	39
Advert	35	71	106
Network	16	126	142
Exchange	13	69	82
	71	298	369

Significant at less than 1%, chi-squared test.

Interpreting Tables 7.26 and 7.27 broadly we see a link between information system, knowledge and undertaking further training. But the evidence is not conclusive because there are

two possibilities. The newspaper advertisements for further training courses may be very effective or they may be preaching to the converted. The 'Advert' group consists of a large number of white collar and skilled manual workers, many of whom (31%) have served an apprenticeship. These people should already be aware of the benefits of training, as we saw in Chapter 5, and newspaper advertising will only re-inforce their beliefs. But almost as many of the 'Exchange' group (28%) have also served an apprenticeship yet they tend not to have done further training. If apprenticeship is not the key to the relationship, the influence must be either in the proportion of white collar workers in the 'Advert' group or differential efficiencies between the advertising and employment exchange methods of disseminating information about further training. It may be a little of each.

Conclusion

There is little evidence to show substantial differences between the efficiencies of the different systems in conveying information about training opportunities. The users of all systems seem to have a reasonable knowledge of training courses. It is possible that newspaper advertising is a little more effective than employment exchange interviews in persuading people to undertake further training but the people who read newspapers may be a more receptive audience.

4.3 Job Search

On the demand side, the employer requires an information system to contact as many qualified people as possible so that the firm can select the most suitable persons for a vacancy. The

best qualified man can, perhaps, only be attracted by an aggressive approach impressing the benefits of higher wages or better conditions upon the mind of the potential applicant. On the supply side, the job seeker may be seriously misled by the signals conveyed by the information system. He may apply for jobs which are beyond his capabilities and waste valuable search time in pursuing well paid jobs that he has little chance of getting.

But the experienced job searcher will be able to recognise which jobs he is capable of doing and will choose to concentrate his efforts on the system which provides him with the greatest number of possibilities for he, like the employer, will wish to make a choice. Whether or not this is possible depends to some extent on the state of the labour market. In a slump the employer is more likely to have a choice, in a boom the worker may have to choose between jobs. In the survey, for our four information systems there is no significant statistical difference by starting date so we do not expect cyclical factors to influence the results. One of the simplest tests of the efficiency of the different systems is to measure the job choice afforded by each.

We expect the 'Exchange' group and the 'Network' group to give the poorest choice of jobs to workers. The 'Network' system is restricted to friend and family ties and the 'Exchange' system does not provide for workers to make a choice in general: workers believe they are expected to take the first job they are offered. The replies to the question (Q.26) "Did you feel you had a real chance of getting a job with any other firm ... when you took this job?" for males are not, therefore, surprising.

Table 7.28

Method of Recruitment by Q.26 Chance of another job?

<u>Males</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>	<u>% who said Yes</u>
Direct Application	14	8	22	64
Advert.	46	21	67	69
Network	29	30	59	49
Exchange	15	29	44	34
	104	88	192	54

Table significant at less than 1%, chi-squared test.

More than half the 'Network' and 'Exchange' groups felt they had no choice while over 60% of the 'Direct Application' and 'Advert' groups considered they had a chance of another job.

We must be careful with this question, however, because some respondents seemed to think the interviewer was asking "Are you employable?" where the reply "No" would have meant "I am an unemployable, it was either this job or staying in the dole queue." Clearly very few people will think this of themselves so the total number of 'No' replies may be an understatement. As a cross check we can look at the replies to Q.25 which asked the respondents to name other firms at which they seriously considered getting a job. Q.25 "Will you tell me the names of any factories and other work places at which you seriously considered getting a job? Which of these did you actually contact?" It is not the same question but we expect similar replies.

Table 7.29

Method of Recruitment by Q.25, name of other firm which
respondent considered

<u>Males</u>				
	<u>Named</u> ⁽¹⁹⁾	<u>Not named</u> ⁽¹⁹⁾	<u>Row Total</u>	<u>% who named a firm</u>
Direct App.	15	10	25	60
Advert	47	23	70	67
Network	28	39	67	42
Exchange	24	22	46	52
	114	94	208	55

Table significant at 5% level, chi-squared test.

Broadly speaking, Table 7.29 confirms the result of Table 7.28, but among the 'Exchange' group there seem to have been a number of people who replied 'No' to Q.26 who had named firms in Q.25. This may stem from the obligation 'Exchange' people feel to take the first job that is offered; presumably they were rejected by the firms they named at Q.25.

For females the replies to Q.26 are not significant on cross-tabulation but the table for Q.25 is significant at 7%, chi-squared test.

Table 7.30

Method of Recruitment by Q.25, name of other firm which
respondent considered

<u>Females</u>				
	<u>Named</u>	<u>Not named</u>	<u>Row Total</u>	<u>% who named a firm</u>
Direct App.	7	7	14	50
Advert.	16	20	36	44
Network	28	48	76	37
Exchange	23	13	36	64
	74	88	162	46

(19) Named = 'contact'; 'no contact'. Not named = 'Don't Know'; 'not applicable'.

The only unambiguous result to emerge from this analysis is that friend and kinship networks do not provide a choice between jobs for either sex, which we expected. For males, newspaper advertising offers a choice of jobs, but not for females. This is presumably a function of excess demand for the skills represented by men in this group.

An important point to note is that employment exchanges do not emerge too badly from this analysis for the semi-skilled manual worker. Amongst men, only the 'Direct Application' people named a greater proportion of other firms and 'Exchange' women named relatively more firms than any of the other recruitment methods.

The employment exchanges also emerge quite well from a more detailed look at the intensity of job search. Three responses to Q.25 were allowed and 22% of men, 8% of women from the 'Exchange' group named three firms. This compares with 8% men, 4% women for the 'Network' group (the poorest, as we might expect) and 17% men, 8% women for the 'Advert' group. 12% of men and 14% of women who were recruited by direct application named three firms. There is a clear incentive here for 'Network' people to change their recruitment method to the employment exchange. Perhaps they do not for the same reason that some employers have an aversion to taking employees from the exchanges: there must be something wrong with the man (job) if he (they) has (have) to resort to the exchange.

Conclusion

The most popular recruitment method, the 'Network' provides the least choice of jobs (extensive information) but this also

means that there are fewer decisions for the users to take and a minimum of effort to expend on job search; most of the effort is, after all, made by friends or relatives on behalf of the job seeker. This does not necessarily mean that there is no competition for jobs, however or that supply forces, selling labour to the highest bidder, are dormant or non-existent. If firms are operating on the margin in labour recruitment then they will be inter-acting with the marginal labour supply group who do seek out the highest wage they can obtain for their skills. The hard work seems to be done by this minority and the benefits accrue to all labour; the minority is well represented in all groups except amongst 'Network' people.

4.4 Geographic Mobility

We can now look at the geographic mobility of each group with a view to determining the efficiency of each system in notifying its users of diversely located job opportunities. It has been held that there is too little geographic mobility for the interests of the national economy; one reason for this might be the ignorance of workers of suitable job vacancies in other areas. It certainly seems that there is some association between choice of information system and job search area since we have already argued that the 'Direct Application' group must search in the local area. We know that the 'Advert' group travels further than the other groups and can hypothesise that the area in which this group has been prepared to work may approximate to the circulation area of newspapers. The extent of search for the 'Network' group will depend on the boundaries of friend and kinship networks and may be similar to the 'Direct Application' group, especially for females who tend to

have only short work journeys. The 'Exchange' group should look for work mainly within the exchange area, which is fairly local in each of our areas but information on jobs in other areas and government schemes to help a worker take one of these will also be available.

Other factors may influence geographic mobility, however. Housing is often held to be a source of labour immobility. Because council houses are in short supply and rationed by queuing on local authority waiting lists, once a family is in residence or can foresee when it will obtain a house, it is very reluctant to move from the area. Poorer prospects of housing in another area are often not compensated for by higher wages. We will find people in this situation in the rented sector of the housing market (usually). We will contrast these people with the more mobile owner occupiers to try to trace any influence of the housing market between our four groups before we look at the extent of previous geographic mobility.

Table 7.31

Method of Recruitment by Tenure of Respondent's Home

	<u>Rented</u>	<u>Owned</u>	<u>Row Total</u>	<u>% of owner occupiers</u>
Direct App.	28	11	39	28
Advert	59	44	103	43
Network	110	31	141	22
Exchange	52	28	80	35
	249	114	363	31

Table is significant at less than 1%, chi-squared test.

The results by sex are similar.

The 'Advert' group and the 'Exchange' group have higher proportions of owner occupiers while the other two tend to rent their homes; we can expect more evidence of immobility from the latter two groups. Note that it is the two 'formal' groups which tend to be owner occupiers.

It is possible that some respondents in the rented sector may be just as mobile as owner occupiers if they are paying high rents to private landlords. Only 10% of the sample were in the privately rented sector, however, including National Coal Board tenants and the numbers are too small to justify separate analysis. The 'Advert' and 'Exchange' group males (again the 'formal' groups) tend to own cars and this makes them potentially more mobile, able to accept jobs in locations that are difficult to reach by public transport. People who cannot afford a car because of low income or family expenditure commitments are unable to take jobs in difficult locations, even if the higher wages would enable them to buy a car. They must have the car before they can accept the job.

Table 7.32

<u>Method of Recruitment by Car Ownership</u>				
<u>Males</u>	<u>Car</u> ⁽²⁰⁾	<u>No Car</u>	<u>Row Total</u>	<u>% car owners</u>
Direct App.	8	16	24	33
Advert	38	25	63	60
Network	24	38	62	39
Exchange	26	17	43	60
	96	96	192	50

Table significant at 5% level, chi-squared test.

The table for females is not significant.

(20) Replies to Q.1, 'Travel to work by own car' plus 'Yes' to Q.8 "Does your household have a car?"

The results of the geographic mobility questions should therefore show the 'Advert' and 'Exchange' groups to be the most mobile.

Q. 17 asked respondents whether they had ever had a job outside their home area. The definition of 'home area' was left to the interviewees. For women the pattern of replies is statistically significant.

Table 7.33

Method of Recruitment by Q.17, "Have you Ever Had a Job
Outside your Home Area?"

Females

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>	<u>% who said Yes</u>
Direct App.	3	11	14	21
Advert.	17	19	36	47
Network	16	60	76	21
Exchange	14	22	36	39
	50	112	162	31

Table significant at 5% level, chi-squared test.

The 'Advert' and 'Exchange' groups tend to have had a job outside their home area, as expected, and the other two groups have not. The table for males is significant only at about 30% which is a little surprising given the reinforcing effects of car and house ownership but the pattern of replies does tend to follow that for females.

The replies to Q.18 "Have you ever had a job outside the North East?" are very similar to those for Q.17 for males but again, the tendency is not significant. The pattern of female replies is contrary to expectations, however.

Table 7.34

Method of Recruitment by Q.18, "Have you ever had a job
outside the North East?"

Females

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>	<u>% who said Yes</u>
Direct App.	5	9	14	36
Advert.	16	20	36	44
Network	17	59	76	22
Exchange	8	28	36	22
	46	116	162	28

Table significant at 8% level, chi-squared test.

The tendency here is for a dis-proportionate number of workers from the 'Direct Application' and 'Advert' groups to have worked outside the North-East and for rather more of the other two groups not to have had a job in other parts of the country. It is difficult to draw firm conclusions from this result because we do not know the domestic circumstances of the respondents at the time they worked outside the North East. We can suppose that the 'Advert' and 'Network' group females have been consistent in their attitudes to long distance migration; the 'Advert' group consisting mainly of white collar workers seeking to further their careers or their husband's careers, by willingness to move house and the 'Network' group having greater attachment to their local area. This is confirmed by the replies to Q.18b "Have you ever seriously considered taking a job outside the North East?"

Table 7.35

Method of Recruitment by Q.18b, "Ever Considered taking a
Job outside the North East?"

Females

	<u>Yes</u> ⁽²¹⁾	<u>No</u>	<u>Row Total</u>	<u>% who said Yes</u>
Direct App.	5	9	14	36
Advert.	21	15	36	58
Network	27	49	76	36
Exchange	<u>11</u>	<u>25</u>	<u>36</u>	<u>31</u>
	64	98	162	40

Table significant at 7% level, chi-squared test.

The 'Network' group is now joined by a disproportionate number of both 'Exchange' and 'Direct Application' people who demonstrate immobility. But these results for women may be a reflection of their husband's opinion of moving house to get a job. A woman is rarely considered the breadwinner of a family and she must get work in the area in which the family live, as determined by the husband's place of work.

Yet the tendencies we observed for females are repeated amongst males.

Table 7.36

Method of Recruitment by Q.18b, "Ever considered taking a
Job outside the North East?"

Males

	<u>Yes</u>	<u>No</u>	<u>Row Totals</u>	<u>% who said Yes</u>
Direct App.	12	13	25	48
Advert.	56	14	70	80
Network	43	22	65	66
Exchange	<u>30</u>	<u>14</u>	<u>44</u>	<u>68</u>
	141	63	204	69

Table significant at 5% level, chi-squared test.

(21) Includes people who replied 'Yes' to Q.18.

The 'Advert' group is likely to consider working in other parts of the country while the other three groups are more likely to look for work in the North East. This suggests that the most important variable in geographic mobility is skill level, since all but the 'Advert' group are dominated by the semi-skilled and we have already seen evidence of this in Chapter 6.

Conclusion

The direction of causation seems to run from skill level to delineation of job search area boundaries through to choice of information system. We therefore have no evidence on which to base a judgment of the relative efficiencies of each system in informing the users of diversely located job vacancies. We can conclude, however, that if the interests of the national economy demand greater geographically mobile semi-skilled workers then the best point to intervene in the market is at employment exchanges. The people who use these are potentially mobile in that they own houses and cars. Newspaper advertising may only have the effect of reminding readers that opportunities exist outside local areas.

5. General Conclusions

We have noted that information systems facilitate the taking of important labour supply decisions and that variations in their efficiency will determine the success rates in making the right decisions. We have found conflicting evidence on the training and geographic mobility criteria of efficiency but it seems that the 'Network' system provides the least choice of jobs and, for females the 'Exchange' and 'Network' systems lead to relatively less contentment once a job is taken. Thus Rees' contention that

informal channels may be effective is challenged.

Despite the apparent inefficiency of the 'Network' it is used more frequently than any other system among females and semi-skilled males. How can we explain this? Workers may be effort minimizers or they may believe that they are using the best system: we have argued theoretically that more intensive information should be available through the 'Network' than other recruitment methods.

Thus workers may assess the risk of information being inaccurate and decide that it does not outweigh the richness of detail available only from friends and relatives.

A third possibility is that workers may not perceive the 'Network' as a system at all, but merely a collection of individuals. Thus inaccurate information from one person for one job has no association with details of a future job from another person; trust built up in one personal relationship is irrelevant to trust developed in another.

Yet another explanation may be that workers are constrained in their choice of information system. We have argued that employers gain benefits from recruitment via the 'Network'; demand preferences may determine the information channel leaving workers with only a restricted chance of exercising their own preferences.

We have seen that if all information systems conveyed more intensive information males would be more content in their jobs and benefits would probably accrue to the firm and the economy through reduced labour turnover and better industrial relations.

This may also be true for females and if more extensive information were included in such an improvement, allocative efficiency might be served by increasing job choice. The most essential piece of information needed by all workers is rates of pay.

The implication of the analysis is that information flows are far from perfect but this does not preclude the existence of a market. We have argued that the findings are not inconsistent with bargaining at the margin although we are least likely to find this amongst the 'Network' group. In Chapter 8 on Labour Market Strategies we will see that some people 'sample' a variety of jobs, demonstrating behaviour which is a 'try it and see' form of bargaining and a method of alleviating information shortage. In the same chapter the 'sticking' and 'snatching' strategies can be seen as ways of buying time to offset imperfect information.

Chapter 8

Labour Market Strategies

1. Introduction

"The intellectual foundations of labour economics remain those laid down by Adam Smith in 1776. Other branches of economic theory have changed almost beyond recognition since the publication of 'The Wealth of Nations', but the competitive theory of the labour market has no serious rival." MACKAY (46)

There is little doubt that this statement is substantially true. The emphasis on the different aspects of the labour market has changed in economic literature over the years but Smith's principle of net advantage still remains the foundation.

"The whole of the advantages and disadvantages of the different employments of labour ... must, in the same neighbourhood, be either perfectly equal or continually tending to equality" SMITH (86).

The theory has survived despite many abortive attempts at empirical testing and Smith's own recognition that the four requisites that had to be established before the forces of equalization could take effect did not exist in his own time. These can be seen as no restriction to competition; the economy must be in a substantially long run situation; severe cyclical disturbances must be absent; and workers must have principal employments (the theory was not thought to apply to second jobs or 'moonlighting' jobs).

Smith's theory was part of the classical theory of distribution, seeking to explain the determination of prices and quantities of factors of production in terms of market analysis. Of the

various advantages that are attached to jobs, therefore, emphasis was laid upon wages. Neo-classical theory can be viewed as an extension of this, maintaining that wages are sufficiently important to exclude other factors influencing job choice from the central area of labour market studies, at least in the short run. Working conditions, conditions of employment (excluding hours) and the type of work are used as factors to explain the absence of wage rate equalization. Training is a characteristic of the labour supply leading to the definition of non-competing groups. (In the long run training is a variable, assuming great importance in the capital theoretic approach). The existence of market imperfections is also used to defend competitive theory when equal wage rates are not found empirically.

A basic requirement of economic theory is that it should yield hypotheses which are capable, in principle, of being refuted by confrontation with facts. A failure of classical theory seems to be that it does not appear to be capable of refutation in practice.

"... if we set out to test labour market theory we find that it is so malleable that it can 'explain' virtually any set of observations. It is difficult to refute (or confirm) by reference to empirical data" MACKAY (46).

"Conventional theory itself was not couched in probability terms ... but in terms of construct-precise (zero order error) correlation, other things being equal and multi-collinearity absent. So it is usually plausible to claim that unless all the

conditions are shown to be fulfilled in empirical investigation, a refutation would be invalid" CORINA (12).

For a strong condemnation of classical theory see LAMPMAN (44) which is a reply to ROTTENBERG (82) upholding the classical view.

The concentration of effort (following the ground rules of positive social science) on attempts at refutation of competitive theory has diverted attention from relevant economic behaviour in the labour market which has no place in classical economics. An example of this behaviour is the phenomenon of job search and one of the tasks of this chapter will be to try to show that economic analysis can assist in understanding the behavioural patterns of certain groups of job seekers in the labour market.

In particular we will find an explanation for differing durations and incidences of unemployment between individuals and consider why so many workers are prepared to take a reduction in earnings by virtue of changing job. This latter point is especially difficult to explain in terms of conventional theory; in the survey the index-adjusted normal gross earnings of 39% of respondents were lower in the job they held at the time of interviewing when compared with their previous job (see Appendix 8.1).

We will assume the same goal for workers as classical theory: that they seek, in the long run, a job offering that combination of pecuniary and non-pecuniary rewards and costs which is sufficiently attractive to the individual for him to wish to continue in that employment beyond the short run. Thus, all workers seek to maximize their net advantage in the long run. We also assume economic rationality and that economic factors are sufficiently important

to permit the construction of hypotheses which can be tested against observable human behaviour.

Perfect information and knowledge are not assumed; as was shown in Chapter 7 information is not perfect, it is not a free good but must be bought through the expenditures of search, although different groups choose to spend their resources in a variety of ways.

2. Four Groups Identified.

2.1 Definitions

We have already seen in Chapter 7 (section 4.3) an association between the information system used and the intensity of job search, measured by the naming of firms at which respondents tried for a job; this will relate to both intensive and extensive information. The association differed between males and females and we also saw that different socio-economic groups use the information systems in varying proportions. This is enough to suggest that some groups approach the problem of finding a job, under conditions of uncertainty with imperfect information in dissimilar ways to other groups and that this will go beyond the choice of information channel.

We have also seen that one of the extensive pieces of information required by all workers is details of rates of pay. In reply to the question:

"When you are looking for a job what sorts of things do you consider most important?"

the most frequent reply was 'Money'. Thus the pursuit of the particular advantages offered by financial reward is common to

most workers - but the motivations which lie behind their desire for money may be various. A family man in his 30s at the peak of his financial responsibilities may seek high wages simply to feed and clothe his family, pay the mortgage and the garage bills. An older man may be saving for retirement, a girl for fashionable clothes, an expensive holiday or marriage. Other workers may seek highly paid jobs for the status afforded.

These two sets of motivations - for money specifically and for information about all aspects of a job - are hypothesised to combine and produce identifiable behaviour patterns during the process of changing jobs which we will term 'labour market strategies.'

MACKAY (47)^{and}/MACKAY and REID (48) have identified two such strategies amongst redundant workers, most of whom experienced a period of unemployment between jobs; explanation of variation in the length of time unemployed is the major objective of these writers. They find a variable representing alternative strategies significant in regression analysis. We will try to show that it is possible to identify four different strategies amongst workers who are changing jobs for a variety of reasons - not just redundancy - and not all of whom reported a period of unemployment between jobs.

Mackay and Reid's groups are termed 'stickers' and 'snatchers'. Stickers tend to look for a similar job to their last job at a similar or higher wage rate. They are prepared to invest time and effort in searching for such a job, partly financing their period of economic inactivity from their redundancy payments. They

appear to consider themselves suitable for employment in only one type of occupation and regard the investment in job search as a necessary expenditure towards achieving their goal. The benefits of finding a suitable job at an acceptable wage rate even after a long period of unemployment more than offset the costs of search, including the opportunity costs. Once they have such a job, they are unlikely to leave voluntarily.

Snatchers have the same long run goal as stickers but approach the problem of job search differently. They are likely to take the first job that is offered to them, even if it means a substantial reduction in earnings compared to their previous job. They use the new job as a base to search for more remunerative and attractive employment. This group often come from highly paid jobs and have consumption patterns which require a regular income at a level which can only be offered by a job - unemployment or social security benefits are inadequate. They view the opportunity costs of being unemployed during job search as prohibitive, valuing the near future more highly than stickers. The new job is a 'stop-gap' which they will leave voluntarily at the earliest opportunity.

Note that the behaviour of the snatcher seems incompatible with classical theory because he makes 'trades' in the labour market which will not survive into the long run. Such short run tactics are not precluded by classical theory, of course. The snatcher's behaviour also seems to be at variance with the assumption of neo-classical theory, that wages rates are of overwhelming importance, because the snatcher is prepared to accept

a reduction in wages to a level which he recognises to be below the maximum which he could achieve in the market (by indulging in job search and suffering unemployment).

If both stickers and snatchers are represented among our respondents the identifying characteristics/are firstly, whether there was search before taking the job held at the time of the survey and secondly, whether a respondent is considering leaving the job voluntarily. We will take, as an indication of search behaviour, the naming of at least one firm in reply to the question:

"Will you tell me the names of any factories and other work places at which you seriously considered getting a job?"

A sticker will name at least one firm, a snatcher will not name any firms. Clearly it is possible for a sticker to find his ideal job at the first work place he tries, but it is unlikely. Similarly, a snatcher may find the first job he tries for so totally unsuitable that he will not accept it even as a 'stopgap', but most snatchers will not have this experience.

Nevertheless, the system which we will adopt will mis-classify some respondents for these reasons, in addition to the usual approximations stemming from inaccurate reporting.

The second identifying characteristic, whether a respondent is considering leaving the job voluntarily, we will take from the replies to the question:

"Have you ever seriously thought of leaving here?"

Positive replies here indicate a snatcher, negative indicate a sticker. This is thought to be a better indicator of the willingness of respondents to leave the firm than replies to the question:

"Do you think that you will leave then?"

Positive replies to this latter question indicate that the respondent is both willing to leave and has not been discouraged by any lack of other job opportunities in the labour market. Our interest is primarily in the ex ante intentions of labour supply and we require our measurements to be removed, as far as possible, from the influence of demand factors.

Conceptually, two further strategies are suggested. Some respondents may have named other firms at which they considered getting a job (searched) and said that they had thought of leaving their present job. Such a person may be using a highly inefficient information system which conveys either very little about employment opportunities or inaccurate details of jobs. But we have seen in Chapter 7 that all systems are fairly inefficient, although some are better than others, so the distinguishing characteristic of this group is probably that they have above average requirements of information about jobs (mainly intensive). The best way to find out what a job is like is actually to do it. Trying a job does not preclude the search for another job; use of the various information systems may be simply to differentiate between the types of jobs that have been tried before and untried jobs. If this is the case the choice decision as to whether to continue an employment into the long run will be taken once first hand experience of the job has been obtained. We will hypothesise that this 'job shopping' group of workers are continually searching for their 'ideal' long run job by sampling different jobs. We will term these people 'samplers'.

The residual fourth category is the group who did not search prior to their present job and have no intention of moving on to another job. Like stickers, this group appear to have achieved a long run equilibrium or at least believe they are in a long run situation but did not have to invest in job search to find the desired job. It is unlikely that they are stickers who were fortunate enough to find what they wanted at their first attempt because amongst the respondents to the survey this group turns out to be the largest.

This fourth group may be either content or dis-content, not looking for a choice of jobs because all are equally (un)satisfactory. Contentment is an empirical question which we will investigate, but theoretically we expect this group either to have been 'pushed' out of their previous job (for example redundancy) or to have moved to their present job because it offered a few more pounds a week. In this sense the group is the closest approximation of the four to the man described by neo-classical theory; job search is thought unnecessary and workers act as if they had perfect information. We will find other patterns of behaviour which do not agree with the neo-classical model, however.

The terminology we will use for this group will be 'doers' because they act rather than consider the possibilities; if the market mechanism brings another better job opportunity to their attention they will take it if they can but do not consider it worthwhile to search for such opportunities.

The hypothesis is that it is possible to identify all four of these groups from their actions or intentions in the labour market

and that their behaviour is sufficiently different to make analysis by means of this typology a useful exercise. We will find that the characteristics of the groups differ, especially with respect to their position in the life cycle which governs their motivations for seeking financial reward. It is possible therefore that individuals change groups during their working lives but this will be a gradual process; there may be a degree of approximation on this count, however although overall we hypothesise sufficient stability to make the analysis worthwhile.

We must also recognise that dividing the sample into four groups may be an over-simplification. In reality we can imagine that the behaviour, characteristics and attitudes of workers may exist along a continuum and we must also expect a degree of approximation on this count.

The final problem we will come across in the course of the analysis is one of multicollinearity; we will try to deal with it as it arises.

2.2 Summary of the Findings

We will find that all four of our groups are interested in the financial rewards to be gained from a job; they may all be rational maximizers of their streams of income (as the most important part of maximizing net advantage) but the time horizons, implied discount rates and the opportunity costs of being unemployed may differ between the groups. The chief determinants of the time horizons and discount rates turn out to be life cycle variables but we do not attempt any estimation of values because data do not permit. Instead we concentrate on the behaviour of

the groups which are the result of the complex calculus underlying the hypothesis and on the motivations which cause the behaviour.

Samplers have a tendency to be male and their strategy seems to be common amongst men until the second child has started school; only then do the group seem to accept fully the responsibilities of having a family. Females of the group have relatively few dependent children, which follows from over-representation in the under 30s age group which occurs for both sexes. Also because of age the males are prepared to move house to another region to try out a job. Because they will not gain job experience while out of work, male samplers experience short periods of unemployment; this is contrary to the record of females but they may be trying out the 'job' of being a full time housewife. Men suffered small decreases in gross earnings by changing job but females were slightly better off. The group tended to give positive reasons for taking their current job but the reasons for leaving their previous job were varied and this applied to all groups; it seems that taking a job and leaving a job may be separate decisions for many people.

Important aspects of a job to samplers are travel to work (females) and job satisfaction (males). Travel to work seems unimportant to males, who have long daily work journeys. Preferred recruitment methods are newspaper advertising (males) and the employment exchange and friend and kinship networks (females); we expected that the latter method would be best suited to the higher intensive information requirements of samplers. Perhaps because they are relatively highly trained, males have an interest

in further training as do females but for them this seems to be associated with their experience of unemployment. As expected, because they wish to leave their firm, samplers are discontent but they may also try to improve their present position by supporting industrial action within the plant.

Like samplers, snatchers are relatively young being over-represented in the under 45 age group; both males and females tend to have dependent children and this explains much of the financial pressure influencing the behaviour of the group. Age again seems to be the major determinant of the group's tendency to move house. We find it necessary to create two sub-groups among snatchers, those who achieved an increase in gross earnings by changing jobs (mainly females) and those who took a substantial decrease (mainly males) but the basic motivating factors and attitudes towards the respondents' current job remain the same. A highly paid worker may 'snatch' at a low paid job, as a temporary measure, because he cannot afford to be out of work; a low paid worker may snatch at a relatively highly paid job to meet a temporary financial crisis in his personal affairs - again he cannot afford to be out of work for long. Thus it transpires that both male and female snatchers are the least likely to suffer long periods of unemployment.

The interests of the group are job satisfaction (males) and working conditions (both sexes) but we cannot say whether these relate to temporary or 'normal' employment. Both males and females tend to be recruited via friend and kinship networks and males also use direct application but why they leave highly paid jobs, apparently for low paid jobs remains something of a puzzle -

although some were 'pushed' out of their previous jobs others left voluntarily and the most plausible explanation for these snatchers is that some aspect of their highly paid work became intolerable. Like samplers, male snatchers may have their interest in further training stimulated by extensive initial training but females, who tend not to have suffered unemployment are not interested. Also like samplers, the group are discontent but they prefer individual and not concerted action within the firm to rectify grievances. Because they regard their current job as temporary, male snatchers do not want promotion in their firm and this also indicates that their discontentment is not founded solely on financial reasons.

Stickers have fewer family responsibilities than snatchers because the males tend to be over 44; female stickers of this age group seem to be absent from the work force but the residual tends to be between 30 and 44. Males have fewer dependent children than the other groups. As expected, stickers tend to suffer long periods of unemployment in their search for a job in their preferred occupation offering similar earnings to (males) or slightly more than (females) their last job. Females achieve an increase because their current job is relatively highly paid and stickers of both sexes gave positive reasons for taking their current job. We were not able to discover any common job characteristics which made the preferred occupation so attractive, however; all aspects of work seem important but possibly working conditions, the type of work and job satisfaction were mentioned most often. It follows that a wide range of leaving reasons is appropriate to this group. The ensuing search may cover a wide geographic area, as reflected in travel to work distances, perhaps to increase the

number of job offers from a given distribution.

The recruitment methods preferred by female stickers were the employment exchange and direct application; newspaper advertising for males. From the unemployment experience of the females we expected, and found, an interest in further training; we also found that intransigence induced by long periods of (and thus high investment in) training was not an explanation of lack of adaptability in occupational choice. Now that the group have succeeded in achieving their long run goal they claim to be content but it is a possibility that they may support industrial disputes to rectify grievances as a better alternative to leaving the firm.

Doers tend to be female rather than male although the under 30 females, of prime child bearing age, may be absent from the work force; consequently both male and female groups tended to be over 44 and female doers had few dependent children. This adaptable group tend to regard all jobs as equally satisfactory, except perhaps with regard to pay so there is no point in remaining unemployed (and only short periods were experienced) and large increases in gross earnings were achieved by changing job. One reason for the latter for males was relatively low pay in their previous job. The interests of the group include travel to work (both sexes), job security and promotion in the firm (males) and job satisfaction and workmates (females) thus demonstrating that a simple income maximization picture of doers is inappropriate. Interest in job security for males is consistent with their apparent aversion to unemployment. Preferred recruitment methods are friend and kinship networks for both sexes and newspaper advertising for males.

We will begin our analysis by looking at the characteristics of our four groups since life cycle position is posited to be the most important independent variable.

3. Characteristics

3.1 Sex

The sexes are not distributed proportionately between the four groups.

Table 8.1
Strategy by Sex of Respondent

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Samplers	65 (29)	33 (19)	98 (25)
Snatchers	45 (20)	34 (20)	79 (20)
Stickers	57 (26)	46 (27)	103 (26)
Doers	54 (25)	58 (34)	112 (29)
	221 (100)	171 (100)	392 (100)

Table significant at the 8% level, chi-squared test.

Table 8.1 shows males over-represented in the samplers group, females in the doers group; we must be careful to distinguish between the sexes for these groups. The results may be attributable to different attitudes between the sexes to the participation decision. Men have expectations of a lifetime of work or looking for work while women are more likely to regard their job as a means of supplementing the family income which could be abandoned in the event of pregnancy or to become a full-time housewife. The more temporary a job the less likely are workers to distinguish the marginal advantages and disadvantages attached to the work. Thus females have a higher probability of adopting the doers strategy and males the samplers strategy.

3.2 Age

Demand factors discriminate between workers by age; older workers are more likely to suffer unemployment than younger workers. We expect this to influence choice of strategy on the supply side and in particular 'sampling' jobs should be restricted to younger workers. We expect the snatching strategy to be associated with workers who have substantial financial commitments and this often occurs at the time of maximum family responsibilities when parents are in their thirties.

MACKAY (47) predicts that stickers will be older than snatchers because they are more set in their ways and lack the adaptability necessary to do a stop-gap job. Older workers may also adopt the sticking strategy because they have less time, in terms of working life ahead of them and wish to ensure that they recoup their training investment to the full by obtaining the right job; taking a stop-gap job may reduce their chances of doing this because it might be difficult to explain to potential employers. Doers are hypothesised to regard all jobs as much the same, except, perhaps in terms of remuneration - a rather cynical outlook we associate with older workers.

These expectations are corroborated broadly by the results shown in Table 8.2.

Table 8.2

Strategy by Age Bands

<u>Males</u>	<u>Up to 29 yrs.</u>	<u>30-44</u>	<u>Over 44</u>	<u>Row Total</u>
Samplers	32 (62)	14 (27)	6 (11)	52 (100)
Snatchers	20 (53)	16 (42)	2 (5)	38 (100)
Stickers	19 (37)	14 (27)	19 (36)	52 (100)
Doers	20 (40)	16 (32)	14 (28)	50 (100)
	91 (48)	60 (31)	41 (21)	192 (100)
<u>Females</u>				
Samplers	16 (57)	9 (32)	3 (11)	28 (100)
Snatchers	13 (48)	12 (44)	2 (8)	27 (100)
Stickers	15 (37)	19 (46)	7 (17)	41 (100)
Doers	10 (19)	22 (42)	20 (39)	52 (100)
	54 (36)	62 (42)	32 (22)	148 (100)

Tables significant at less than 1%, chi-squared test;
percentages in parenthesis.

Very few older workers adopt the sampling or snatching strategies but a substantial proportion of younger people fall into the other two groups although the majority are older. The differences between the sexes are most marked among younger doers where females who are absent from the work force because of the demands of a young family seem to be drawn disproportionately from this group. We hypothesise that these workers can be attracted by high earnings and this may be a clue to the incentive needed to persuade them to take up employment again.

Similarly females over 44 are under-represented in the stickers group; they may be searching for suitable employment while they are out of the work force or the finding may be evidence of the 'discouraged worker effect'. This refers to suppliers of labour

services who are thrown out of work at a cyclical downturn, cannot find another job and become so disheartened that they cease to look for work altogether. If this is the case, and since we expect stickers to be prepared to undergo long periods of economic inactivity, we have an indication that very long periods of unemployment should be associated with opting out of the labour force for older female workers.

3.3. Socio-Economic Group

The hypothesis does not predict any important differences in the composition of the groups by socio-economic classifications. In this sense it takes a pluralistic view of the labour market. The findings from the survey largely endorse this view.

Table 8.3

<u>Strategy by Socio-Economic Group</u>						
<u>Males</u>	<u>White Collar</u>		<u>Skilled Manual</u>		<u>Semi-skilled and Unskilled</u>	<u>Row Total</u>
Samplers	13	(20)	25	(39)	26 (41)	64 (100)
Snatchers	3	(7)	19	(43)	22 (50)	44 (100)
Stickers	13	(23)	19	(34)	24 (43)	56 (100)
Doers	13	(24)	17	(32)	24 (44)	54 (100)
	42	(19)	80	(37)	96 (44)	218 (100)
<u>Females</u>						
Samplers	2	(7)	2	(7)	27 (86)	31 (100)
Snatchers	3	(9)	-	-	31 (91)	34 (100)
Stickers	9	(20)	2	(4)	35 (76)	46 (100)
Doers	5	(9)	7	(13)	45 (78)	57 (100)
	19	(11)	11	(7)	138 (82)	168 (100)

The only notable disproportionate figures for men lie in the snatchers group where only 7% are white collar workers and this is not unexpected. Changing jobs for white collar workers is often seen as a means of furthering a career, additional income serving both as an indicator of social status and as a reassurance that the effort the

worker puts into his training and job is being rewarded. The reduction in earnings by changing job which is associated with snatching is inconsistent with this orientation to work which seems, from Table 8.3, to be stronger than the pressure of financial commitments although white collar workers may be in a better position by virtue of financial reserves to fund job search during employment. This would imply a disproportionately high number of white collar workers in the stickers group, however and although this seems to be true for females it is not the case for males.

3.4 Dependent Children

It is a central part of our hypothesis that financial commitments influence choice of labour market strategy. Family responsibilities are a major determinant of these and although marital status can be shown to be unimportant, number of dependent children does seem to be significant; we would expect this from the age differences we saw in 3.2 above.

Table 8.4.

Strategy by Number of Dependent Children (Percentages)

<u>Males</u>	<u>NIL</u>	<u>ONE</u>	<u>TWO</u>	<u>MORE THAN TWO</u>	<u>TOTAL</u>
Samplers	42	27	25	6	100
Snatchers	40	31	11	18	100
Stickers	53	18	18	11	100
Doers	37	20	33	10	100
	43	24	22	11	100
<u>Females</u>					
Samples	52	30	15	3	100
Snatchers	35	12	38	15	100
Stickers	41	13	37	9	100
Doers	52	17	17	14	100
	46	18	26	10	100

Snatchers of both sexes are likely to have at least one dependent child and this is to be anticipated. In addition to feeding and clothing a family, the expense of a larger house and often a car are associated with the responsibility of parenthood. Even if the mother works, and we know that many such females are included among our respondents, the pressure of financial commitments may seem so great that the father has to take a stop-gap job while he is looking round for more permanent employment.

In contrast male stickers have relatively few dependent children and do not feel the pressure to take any employment in preference to being out of work. Note that only 41% of female stickers do not have any dependent children and this is disappointingly low for the hypothesis but it may be explained by the absence of older females from the workforce (see 3.2 above).

Amongst men, doers are the most likely to have at least one dependent child and this may be the motivation for changing jobs for increased earnings. This does not apply to the females of this group but their motivation may also be consumer based - for 'pin-money' - especially among the many older women.

Another important difference between the sexes is shown in the samplers group where 42% of men have no children compared with 52% of women. Sampling is a form of 'job-hopping', unpopular with employers and carrying the risk of consequential unemployment.

This matters least to workers without responsibilities so the figure for females is not surprising. Males do not seem to accept their family responsibilities in the same way as do their counterparts in the snatchers and doers groups. Perhaps the key is in the

number of children - very few samplers of either sex have more than two - or in the number of children under school age; 38% of male samplers have at least one child under five compared with 29% and 28% for male snatchers and doers respectively.

This indicates the stability of the groupings we are analysing. Men in the sampling group appear to hold to the strategy they adopted when young and single, through marriage, the first child and even the second child until both are of school age. Only then do they recognise fully the implications of their change of circumstances and adapt to an alternative approach to the labour market.

3.5 Conclusions

Analysis of the four groups by sex has confirmed that male and female respondents need to be dealt with separately. Our hypothesis stresses the importance of the position in the life cycle for the determination of labour market strategy. Age and number of dependent children are the crucial measures of life cycle position. Women in the age band to 29 seem to be absent from the doers group because they are of prime childbearing age; females over 44 from the stickers group appear to have opted out of the labour force. There is virtually no difference between the groups in terms of socio-economic classification so skill level is not an explanatory factor. Marital status has no influence on labour market strategy. Sampling may be a common strategy for men until their second child begins to attend school.

We have found considerable evidence to support the hypothesis that the life cycle position of workers is an important determinant

of their labour market strategy. Although some of the results may be spurious because of demand forces, particularly where age is an important variable, this does not seem to apply to the number of dependent children.

In the next section we will look at two of the key variables which we expect the hypothesis to explain.

4. Key Variables

4.1 Unemployment

MACKAY and REID (48) emphasised the difference in the length of the unemployment period experienced by stickers and snatchers in their sample of redundant workers. We will study this for our respondents and also examine the puzzling uneven incidence of unemployment among workers which is mentioned, for example in OI (65). We will present a plausible supply side explanation of both these phenomena.

Stickers should be out of work longer than snatchers because they use the period of inactivity to search for an acceptable job; snatchers search while they are working at a stopgap employment. This argument applies to those workers who experienced some unemployment between jobs. Similarly we expect the incidence of unemployment to fall more heavily on stickers than snatchers since the latter are more ready to take the first job they are offered.

Among the survey respondents 44% of male stickers reported a gap of some kind between leaving their last job and starting their present job; only 34% of male snatchers had this experience. For females the figures are 26% for stickers and 23% for snatchers,

ignoring inactivity for reasons other than 'unemployment' as reported by respondents because this is the only type of inactivity covered by our hypothesis. These figures are in line with expectations for both males and females.

For those who suffered unemployment the mean length of the period was 13.5 weeks for male snatchers, 26.6 for male stickers. The female figures are 3.3 weeks for snatchers, 12.9 weeks for stickers, again ignoring inactivity which was not unemployment. This is further corroboration of the hypothesis.

Samplers are trying different jobs to broaden their experience, improve their knowledge of job characteristics and ^{they} hope to find their long run ideal. They will not do this in a state of unemployment so we expect the group to minimize their periods out of work. Similarly doers should have no difficulty in finding another job if they are faced with the problem since, apart from remuneration, one ^{job} is much the same as another. They are likely to take the best offer after only a short period of unemployment (if any).

These expectations are met for males but not for females, as shown by Table 8.5.

Table 8.5

Strategy by Length and Incidence of Unemployment

<u>Males</u>	<u>No Gap</u>	<u>Mean Period (Weeks)</u>
Samplers	59%	14.5
Snatchers	66%	13.5
Stickers	56%	26.6
Doers	<u>75%</u>	<u>16.5</u>
	64%	18.6

Females

	<u>No Gap</u>	<u>Mean Period (Weeks)</u>
Samplers	74%	22.9
Snatchers	77%	3.3
Stickers	74%	12.9
Doers	<u>89%</u>	<u>8.3</u>
	79%	12.6

The figure for the mean length of unemployment period for female samplers is the highest of all four female groups; females in the doers group have had fairly short spells out of work, as expected. One possible explanation of the high female samplers figure is that these women regard being a housewife as a job, trying out the experience of looking after the home and family full time with a view to opting out of the labour force permanently. The possibility of substituting non-market work and market work is dealt with, of course by BECKER (2) and this suggestion is on similar lines but it is not probable because we have excluded those women who gave 'housewife' as the reason for their economic inactivity.

Despite this difficulty over the figures for female samplers, the results as a whole are remarkably in line with expectations. But we must enquire into the influence of demand factors.

Nationally the most important determinants of unemployment experience seem to be skill level and age with the less skilled, older workers and school leavers suffering disproportionately. We have already seen in 3.3 above that there is little difference between the groups in terms of skill level as measured by socio-economic classification but 3.2 showed considerable age differences. There are very few workers in their first job among all our

respondents so we are concerned only with a possible association between demand factors and long periods of unemployment for older workers.

For men, older age groups are over-represented among stickers who also experienced the longest unemployment periods. However doers also have a considerable proportion of older workers, a lower mean length of unemployment and 75% of the group had no break between jobs. Female doers have the highest mean age of all four groups but a low incidence and short length of unemployment. It appears that there may be some relationship for men but probably not for women and it should be noted that for the male stickers group the demand factors operate in the same direction as the supply factors posited by the hypothesis.

A more serious problem might be the question of causality. It may be that long unemployment periods make people unwilling to leave the job they find eventually. For men the two groups who said they were not thinking of leaving, stickers and doers, also had the longest periods of unemployment. This cannot be said for females, however, where samplers, who do wish to leave experienced long periods of inactivity. We must also bear in mind that for every group a majority of workers have had no recent experience of unemployment. Thus, although the time spent out of work may influence the willingness to leave in some individual cases, it may not be a significant factor and we should recognise it only as a possible source of approximation in the results.

4.2 Change in Gross Pay Between Jobs

Perhaps one of the central problems in Labour Market Economics is why so many workers seem to change jobs without achieving financial advancement. In the neo-classical approach this is the most important motive for inter-job mobility but studies which find substantial numbers of workers taking even a reduction in earnings by virtue of job change are too common for the neo-classical view to be held with great respect. See, for example JEFFERYS (37) and in our survey 39% of workers changed job without achieving an increase in earnings (see Appendix 8.1). It is possible to resort to the principle of net advantage of SMITH (86) and argue that if earnings have not improved other aspects of the job must have, such as hours, shifts, security or working conditions but this is not totally satisfactory.

If the neo-classical model cannot satisfactorily explain all inter-job mobility it seems to have more success with long distance geographical mobility; see for example LONG and BOWYER (45) and WILKINSON (98) and for a more recent test see the paper of G. J. Evans in WABE (97). Most workers operate in a local labour market, however (see Chapter 4) and it is their behaviour we wish to explain. In this sub-section we will point to a direction of inquiry which may lead possibly to an understanding of job changes involving reductions in earnings in terms of short run supply decisions taken in the framework of longer run strategies.

MACKAY (47) found in his study of redundant workers that snatchers were more likely to take a fall in earnings between their previous job and their new job than stickers, who prefer to

search during unemployment for a job paying similar wages to the last. A snatcher, who has a high opportunity cost of being unemployed, will accept any job, as a stop gap, which will enable him to meet his more substantial financial commitments which he took on in his previous (highly paid) job.

The motivation of the doers group for changing job may be to achieve an increase in earnings, the most important distinguishing factor between jobs for these workers. Samplers, on the other hand, are seeking a particular combination of advantages in a job, both pecuniary and non-pecuniary; for many moves the increment to earnings may seem almost incidental. This group might therefore experience a decrease in earnings between jobs.

Comparison between the previous and present gross pay figures reported by respondents to the survey might be misleading because the previous gross pay figures relate to a variety of dates spread over a three year period when inflation was running at its highest post war level. It was necessary, therefore, to apply an index (see Appendix 8.1) to adjust all gross pay figures to April 1975 earnings levels. The appendix shows the results to be acceptable but too much importance should not be attached to the levels of the results which appear below; the relativities may be approximately correct.

In making the comparison normal gross earnings have been used. The index-adjusted results shown in Table 8.6 are in broad agreement with expectations.

Table 8.6

Strategy by Change in Adjusted Gross Earnings (£ p.w. at the means)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Samplers	-4	3	-1
Snatchers	-12	6	-5
Stickers	-1	7	3
Doers	8	10	9
	-2	7	2
Significance Level of F-test, Analysis of Variance	1%	16%	1%

For males, samplers took a small reduction in earnings, snatchers a large decrease, stickers remained virtually the same while doers achieved quite large increases.

All female groups achieved increases on average but, apart from snatchers the relative positions are as for males. The result for females is a little disturbing from the point of view of the hypothesis because of the low significance level and because we expected a decrease in pay for female snatchers but the index may be introducing an additional variation in the levels of earnings.

Further evidence of this comes from a comparison with a British survey conducted 1953 to 1963, GOVERNMENT SOCIAL SURVEY (27), which reported just over half of a sample of males and less than half of a sample of females changing jobs for more money. Among our respondents the adjusted gross earnings differences reveal 54% of males and 72% of females achieving an increase. Thus our results may overstate the number of females who obtained a positive increment to their gross earnings by virtue of changing jobs and it follows that the increases shown in Table 8.6 for females may be

overstatements. Other possibilities are that there may have been a change in female behaviour patterns in the last ten or fifteen years or that employer behaviour has changed, increasing female wage rates in anticipation of the equal pay legislation due to become operative on 29th December 1975 under the terms of the Equal Pay Act 1970.

Even if the index is totally inadequate for female earnings it should be internally consistent and, as we have seen, the ranking of female snatchers is not in line with expectations. Snatchers are again revealed as the problem group if we use the medians as our measure of centrality.

Table 8.7

Strategy by change in Adjusted Gross Earnings (£ p.w. at the medians)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Samplers	-4	3	-2
Snatchers	-3	8	2
Stickers	4	6	4
Doers	10	10	10

The decrease in earnings for male snatchers is considerably reduced, revealing some very large decreases in gross pay amongst this group - as we expect from the hypothesis. The female snatchers figure is now higher than that for stickers and this is contrary to expectations.

Clearly we need to re-formulate our hypothesis in the light of this evidence but only for the snatchers group because the results for the other groups do not constitute a challenge to the initial thinking.

The difficulty may lie in the application of a strategy formulated for redundant workers to respondents who had changed jobs for a variety of reasons. Indeed, it is hard to imagine why a worker with heavy financial commitments would leave a job voluntarily with only the prospect of a stop gap job, on less pay in the immediate future. It is more likely that such a man would seek an increase in earnings, especially if a crisis in his personal finances was imminent. If a job opportunity like this was drawn to his attention he might take it, but only on a temporary basis if he found other aspects of the job unpalatable. Thus he would say that he had not searched for employment but did intend to leave his present firm when he was interviewed. This argument appears to apply to those snatchers of both sexes, but especially to females, who achieved an increase in earnings by virtue of changing jobs. We will assume that our original formulation of the hypothesis for snatchers applies to the residual of the group, who took a decrease in earnings.

Note that we have retained two essential characteristics of the snatchers group in our reformulation: they are in a job which they regard as temporary and their motivation for adopting the strategy is the pressure of financial commitments. For most purposes, therefore, we can continue to treat them as a single group.

We can show the tendency for females to be included amongst those snatchers who changed job for an increase in pay by studying the index-adjusted gross earnings of respondents in their previous job. Table 8.8 reveals that male snatchers tended to have been

highly paid - in accordance with Mackay's formulation of this group - but female snatchers were low paid relative to other females.

Table 8.8

Strategy by Adjusted Previous Gross Earnings (£ p.w. at the means)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Samplers	54	29	45
Snatchers	62	24	47
Stickers	53	27	42
Doers	<u>47</u>	<u>24</u>	<u>36</u>
	53	26	42
Significance Level of F-test, Analysis of Variance	5%	21%	3%

In their present job none of the male groups could be said to be highly paid and this might be expected from 3.3 above where we saw the various socio-economic classifications distributed proportionately between our groups. We might also expect this result because our respondents are drawn from only seven factories, giving limited opportunity for variation in present gross earnings although the differences at the means for the female groups are significant at the 10% level.

Table 8.9

Strategy by Gross Earnings in Job Held at the Time of the Interview (£ p.w. at the means)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Samplers	51	34	45
Snatchers	50	30	41
Stickers	55	36	46
Doers	<u>54</u>	<u>35</u>	<u>44</u>
	53	34	44
Significance Level of F-test Analysis of Variance	36%	10%	22%

Comparison between Tables 8.8, 8.9 and 8.6 reveals that the significance of Table 8.6 for males is due mainly to differences in previous gross pay and for females to differences in present gross pay.

4.3 Conclusion

We have established that four groups of workers defined by their job search behaviour and their intentions towards leaving their new job have had different experiences with respect to unemployment and increment to gross pay by virtue of changing jobs. The expectations generated by our hypothesis were fulfilled broadly but we had to re-formulate our ideas in respect of the snatchers group by dividing them into two sub-groups; males tend to belong to that sub-group which accepted a decrease in pay, females to the sub-group which achieved an increase in pay. In addition, some of the strong results from the study of unemployment experience may be due to the re-inforcing effect of demand factors. In general, however, the view that the distinction between our four groups, as drawn by the hypothesis, is useful and capable of explaining, by supply factors, differences in two key variables has received support.

Clearly it will be interesting to elaborate the hypothesis to gain a deeper understanding of the implications of thinking of sellers of labour services in terms of the strategies they adopt in a market context. This will be the task of the remainder of this chapter where we will examine the role of labour market strategies in the important areas of recruitment, training, geographical mobility and worker contentment. The differences we

have found between males and females lead us to expect variation between the sexes in other areas of study.

5. The Recruitment Process

The actions of workers in the process of changing jobs is central to our hypothesis which holds that life cycle position and orientation to work are the main determinants of the strategy each worker adopts in seeking to attain his long run objective.

Differences emerge in search behaviour, willingness to move to another job and, we might expect, reasons for taking and leaving a job and choice of information system.

MACKAY (47) considered the possibility of snatchers being stickers who had been very lucky in their job search and found that the first job they tried for was suitable. He dismissed this on the ground that stickers gave positive reasons for taking their new job but snatchers tended to give negative reasons, in line with the new job being simply a stop gap.

In our survey we asked respondents who thought they had a chance of getting a job (other than the one they held at the time of interview) why they had taken their present job; at the questionnaire design stage it did not seem to make sense to ask the question of all respondents. The positive replies were: 'money'; 'travel to work'; 'type of work'; 'factory/working conditions'; 'work interest'; 'hours/shifts'; 'security'; 'prospects'; 'good firm/management'; 'it was recommended'; 'worked here before'; 'done similar work before'; and 'good offer'. The negative reasons were: 'first offered'; 'temporary/stop gap'; and 'something new/needed a change'.

Table 8.10

Strategy by 'Why did you take this job?'

	<u>Positive</u>	<u>Negative</u>	<u>Row Total</u>
Samplers	26 (67)	13 (33)	39 (100)
Snatchers	5 (71)	2 (29)	7 (100)
Stickers	33 (70)	14 (30)	47 (100)
Doers	4 (100)	- (-)	4 (100)
	68 (70)	29 (30)	97 (100)

Unlike Mackay we find little difference between the groups but this may be because few snatchers and doers, the groups who did not indulge in job search, thought they had a chance of getting another job and so did not have the opportunity of answering the question. Nevertheless, 70% of stickers gave positive reasons, in line with expectations and almost the same proportion of samplers did the same. This is to be anticipated since samplers are interested in the experience to be gained from a new job; a positive outlook.

In another question we asked specifically for positive reasons for taking a job; the first reply results are shown in Table 8.11.

Table 8.11

"When you are looking for a job what sorts of things do you consider most important?" by Strategy (Percentages)

<u>Males</u>	<u>Samplers</u>	<u>Snatchers</u>	<u>Stickers</u>	<u>Doers</u>
Pay/wages	42	46	42	37
Travel to work	5	6	9	12
Type of work	5	3	10	7
Working conditions	9	13	12	7
Job satisfaction	19	15	10	9
Hours/shifts	4	4	3	5
Job security	5	4	4	10
Other	11	9	10	13
	100	100	100	100
<u>Females</u>				
Pay/wages	34	40	36	29
Travel to work	17	7	7	20
Type of work	10	11	9	5
Working conditions	8	14	11	9
Job satisfaction	8	4	7	10
Hours/shifts	12	12	8	9
Job security	-	2	1	-
Colleagues/workmates	5	7	12	15
Other	6	3	9	3
	100	100	100	100

The single most important consideration of all groups, both sexes is remuneration. In our hypothesis we have said that earnings are an important factor for all workers but the motivations differ. Strangely, for the doers group, pay seems to be less important than it is for the other groups and we have argued that for these workers pay is perhaps the only distinguishing factor between jobs. However, for both males and females of this group

travel to work is also important and if we regard this as a cost on the business of working for a living we can see that there is not a serious challenge to the hypothesis.

It is not so easy to reconcile the interest of the doers group in job security (males) and job satisfaction and colleagues/workmates (females) where the group scores more highly than our other three classifications. We should remember, however, that in each case only a small minority of the group are involved.

Among male samplers job satisfaction is important and this makes sense for a group that is trying out a series of jobs but for females we find that travel to work is second only to remuneration and this is a little puzzling especially since, among females, this group is least likely to have family reasons for desiring short work journeys.

For male stickers working conditions, type of work and job satisfaction are important and we might expect a wide spread of interests like this from a group who are determined to take only a job which approximates to their ideal requirements. The results for females are similar.

It is difficult to interpret the responses from snatchers since the general nature of the question allowed replies relating both to a temporary or stop gap job and a more permanent employment. The male answers indicate the importance of job satisfaction and working conditions, the latter also being a common reply from females. These results are consistent with snatchers reporting the disadvantages of their temporary job relative to their conception

of their usual type of job. The sub-group who took a decrease in pay, mainly men, will be missing the more demanding work associated with highly paid jobs while those who achieved an increase in earnings, predominantly women, seem to be suffering from the poorer working conditions often associated with higher paid manual jobs.

How did each group go about finding the job they held at the time of the survey? Stickers and samplers indulged in job search but even those groups who did not search will have used an information system to secure employment. MACKAY (47) suggests that one reason for using a period of unemployment to search for a suitable job (sticking) might be because the information systems are rusty or inefficient due to inactivity. A number of his redundant workers had not changed jobs for a considerable time but among our respondents there is no significant difference between the length of time, on average that each group held its previous job. It is unlikely, therefore, that any differences between choice of information system are attributable to dis-use of the various systems.

We argued in section 2 above that samplers may have greater intensive information requirements than the other groups and in Chapter 7 we saw that friend and kinship networks might be thought the best system to provide such details, although they were found to be relatively inefficient. We might expect, therefore, that samplers would tend to use the 'Network' more than other groups but Table 8.12 shows that this is not the case for males although it might hold for females. Perhaps male samplers, after trying a series of jobs, are only too well aware of the inefficiency of

friend and kinship networks or, possibly, if they used this system they would find a suitable job and cease 'sampling'.

Table 8.12

Strategy by Recruitment Method⁽¹⁾

Males

	<u>Direct App.</u>		<u>Advert.</u>		<u>Network</u>		<u>Exchange</u>		<u>Row Total</u>
Samplers	9	(15)	26	(44)	11	(19)	13	(22)	59 (100)
Snatchers	7	(16)	9	(20)	18	(41)	10	(23)	44 (100)
Stickers	6	(11)	21	(39)	16	(30)	11	(20)	54 (100)
Doers	3	(6)	14	(28)	21	(42)	12	(24)	50 (100)
	25	(12)	70	(34)	66	(32)	46	(22)	207 (100)

Females

Samplers	1	(3)	3	(9)	18	(55)	11	(33)	33 (100)
Snatchers	1	(3)	4	(13)	19	(61)	7	(23)	31 (100)
Stickers	6	(15)	13	(32)	10	(24)	12	(29)	41 (100)
Doers	6	(11)	16	(28)	29	(51)	6	(10)	57 (100)
	14	(9)	36	(22)	76	(47)	36	(22)	162 (100)

Table for males significant at the 13% level, chi-squared test, all cells have expected values in excess of 5; this test is not possible on the table for females.

The table for males is barely significant at 13% but the tendency which does exist shows samplers using newspaper advertising, as do stickers, the other group who said they searched for a job. Snatchers tend to use the direct application and network methods, the latter also being used by doers. Direct application might be used by snatchers because it offers the possibility of minimizing the length of any unemployment period, as we argued in

(1) For definitions see Chapter 7.

Chapter 7 although this does not hold for friend and kinship networks. The use of the network by doers seems to be consistent with the hypothesis since they tend to wait for job opportunities to be drawn to their attention.

None of the male groups favoured the employment exchange but amongst females this seems to be liked by the groups who searched for a job (samplers and stickers). Female stickers also tended to opt for newspaper advertising, as did their male counterparts. Another similarity with the table for males is that the groups who did not search for work, snatchers and doers, tended to prefer the network. Female doers also liked newspaper advertising and note that direct application tended to be used as a method of searching for a suitable job by female stickers.

It should also be noted that comparison between Table 8.12 and Table 8.5 does not reveal any clear association between choice of information system and experience of unemployment.

Finally in the context of the recruitment process we will study the reasons respondents gave for leaving their previous job. We have already noted, in our re-formulation of the snatching strategy, (3.2 above) that it is difficult to see why a worker should leave a job voluntarily unless he has the prospect of another job which constitutes an improvement in his net advantage. In particular those snatchers who suffered a decrease in gross earnings by changing job should tend to have left their previous job under duress; those who achieved an increase may have left voluntarily.

Table 8.13

Strategy by Sign of Increment to Adjusted Gross Earnings from
Changing Job by Reason for Leaving Previous Job

<u>Males</u>	<u>Leaving Reason</u>			
	<u>Sign</u>	<u>Pull</u>	<u>Push</u>	<u>Row Total</u>
Samplers	+	7 (58)	5 (42)	12 (100)
	-	4 (22)	14 (78)	18 (100)
Snatchers	+	9 (69)	4 (31)	13 (100)
	-	4 (40)	6 (60)	10 (100)
Stickers	+	10 (56)	8 (44)	18 (100)
	-	2 (18)	9 (82)	11 (100)
Doers	+	14 (58)	10 (42)	24 (100)
	-	2 (25)	6 (75)	8 (100)
 <u>Females</u>				
Samplers	+	3 (43)	4 (57)	7 (100)
	-	2 (29)	5 (71)	7 (100)
Snatchers	+	3 (38)	5 (62)	8 (100)
	-	- -	4 (100)	4 (100)
Stickers	+	4 (29)	10 (71)	14 (100)
	-	2 (33)	4 (67)	6 (100)
Doers	+	6 (35)	11 (65)	17 (100)
	-	1 (17)	5 (83)	6 (100)
		73 (40)	110 (60)	183 (100)

Table 8.13 attempts to test the hypothesis by examining those leaving reasons which can be classified as constituting an attraction to the new job ('pull') and those which can be said to be a repellant from the previous job ('push'). The pull reasons used are 'money', 'more interesting work elsewhere', 'more opportunities elsewhere' and 'promotion'. The push reasons are 'working conditions', 'didn't get on with colleagues', 'boring work', 'didn't get on with boss/supervisor', 'redundant', 'redundancy threat', 'change in firm's organisation', 'sacked', 'health' and 'didn't like it/fed up'.

For snatchers, both males and females, a majority of those who took a decrease in gross earnings were 'pushed' from their previous job as expected but this is by no means a distinguishing feature of the sub-group since the same statement can be applied to all those groups of workers who did not achieve at least the same gross earnings in their new job. Little comment can be made about the relative size of the proportions between groups since the numbers who answered all the necessary questions are too small. The hypothesis, therefore can be neither confirmed nor rejected.

Deeper analysis of leaving reasons reveals that for all the male groups an increase in gross earnings is associated with being 'pulled' by the new job, which is not surprising since the most common pull reason was 'money'. The same can be said of the female groups although the tendency does not appear to be so strong with 79% of those who said 'money' achieving a positive increment to gross earnings. This confirms our finding (Table 8.11) that interest in remuneration is not a differentiating feature between the groups but we hypothesise a difference in motivation. An example of such differences comes from analysis of leaving reasons which could not be classified as either pull or push; these are mainly 'travel to work', 'hours', 'shifts', 'marriage', 'pregnant' and 'other family circumstances'. Many female snatchers (62%) gave such reasons and this is consistent with our hypothesis; this group takes its family responsibilities more seriously than other groups and acts accordingly in the labour market. This example also highlights a probable discrepancy between the reason a worker gives for leaving a job and his reason for taking another;

those aspects which persuade a worker that his current job is intolerable are not necessarily important to him in deciding which job offer to accept.

A further example is the case of female samplers who gave 'travel to work' as their reason for leaving their previous job more frequently than any other group yet they were the least successful of all groups in reducing their travel to work distance, comparing previous job with that held at the time of the interview.

Thus there may be no real problem in explaining why a snatcher should voluntarily leave a job when he has only the prospect of a temporary, perhaps lowly paid alternative position to which he can look forward: he may leave a job simply because he cannot stand it any longer. Contrast this with the view of the doers group who seem to consider most jobs equally (un)satisfactory.

Further analysis of leaving reasons would not be fruitful because of the difficulties of interpretation we have indicated.

Conclusion

We have seen that there is inadequate evidence from the survey on the reasons the respondents took the job they held at the time of the interview but stickers and samplers did tend to give positive replies, in line with expectations. In response to a general question asking what respondents look for in a job, all groups displayed their interest in remuneration. Doers of both sexes and female samplers considered travel to work important; and male doers also mentioned job security, females said 'job satisfaction' and 'colleagues' or 'workmates' quite often. Job

satisfaction was also mentioned frequently by male samplers and snatchers, who, like female snatchers were concerned with working conditions. In the stickers group, both sexes had a wide range of interests but replies relating to working conditions, type of work and job satisfaction were most common. None of these findings constitutes a serious challenge to our hypothesis.

The information systems used by the groups were diverse and not entirely in line with expectations. Newspaper advertising was favoured by males of the samplers and stickers groups, who indulged in job search and by females of the doers group, who did not search. Of the female groups only stickers did not use disproportionately friend and family networks and this system was also commonly used by male snatchers and doers. The female groups who searched (samplers and stickers) did so by using the employment exchange; female stickers also used direct application, a method favoured by male snatchers.

Analysis of the reasons respondents gave for leaving their previous job was inconclusive because numbers were small and because these reasons may differ from those for taking the next job. However, it seems that those workers who gave 'money' as a leaving reason tended to achieve an increase in real gross earnings. We have suggested that snatchers, the problem group in the hypothesis, may leave a job because it is intolerable, assuming that the next, even if it is temporary and low paid, must be better.

6. Training

We have seen so far that there are considerable differences between the four labour market strategies in terms of behaviour,

personal responsibilities and attitudes towards work. We have also seen that there is virtually no difference between the groups in level of skill, as measured by socio-economic group (3.3 above). The exceptions to this were a relatively low proportion of male white collar workers in the snatchers group and an above average representation of white collar females in the stickers group. We also saw that there were rather more skilled manual males and semi-skilled or unskilled females amongst samplers and snatchers compared with the other two groups.

We expect white collar and skilled manual workers to be more interested in training and further training than semi-skilled or unskilled people (see Chapter 5). White collar workers need training to further their careers; it is a means towards the acquisition of higher incomes and more social status. Skilled manual workers also enjoy higher incomes through further training; in addition training is likely to enable the skilled worker to gain more satisfaction and self-identity from his job. In contrast the semi-skilled and unskilled seem to believe that the only training appropriate to them is that provided by their employer 'on-the-job'. We might expect, therefore, that since there is little difference between our four groups in skill level there would be no difference in the replies to the question:

Q.28b "Have you ever considered getting any (further) training or retraining?"

which we take as indicative of the attitudes of respondents towards training. Yet we find a strong association for males but not for females.

Table 8.14

Strategy by Q.28b 'Considered Training?'

Males

	<u>Yes</u> ⁽²⁾	<u>No</u>	<u>Row Total</u>
Samplers	45 (74)	16 (26)	61 (100)
Snatchers	29 (64)	16 (36)	45 (100)
Stickers	31 (56)	24 (44)	55 (100)
Doers	25 (46)	29 (54)	54 (100)
	130 (61)	85 (39)	215 (100)

Females

Samplers	11 (34)	21 (66)	32 (100)
Snatchers	10 (29)	24 (71)	34 (100)
Stickers	20 (44)	26 (56)	46 (100)
Doers	13 (22)	45 (78)	58 (100)
	54 (32)	116 (68)	170 (100)

Table for males significant at the 3% level, table for females only significant at 15% level, chi-squared test.

For men, the samplers and (to a lesser extent) snatchers are shown to be interested in training, the other two groups less so. The tendency is strong enough for us to conclude that the slight over-representation of skilled manual workers among male samplers and snatchers is not the prime source of the association. This is supported by the finding that the males in the stickers and doers groups are much less interested in training despite the above average proportions of white collar workers in these groups.

Furthermore, amongst females it is the doers group that is most strongly not interested in training yet it was the samplers and snatchers groups that had an over-representation of semi-skilled and unskilled women.

(2) Includes respondents who had actually undertaken further training.

It would appear that the association between labour market strategy and interest in training for males is not the result of socio-economic group acting as an intervening variable. For females the weak relationship is not in the same direction as for males since female stickers are interested in further training and female snatchers are not; doers of both sexes tended to answer 'No'. It follows that whatever motivations we find behind male attitudes and behaviour will not apply, necessarily, to females.

In our hypothesis stickers and doers said that they had not considered leaving their present firm. This is one characteristic which can be associated with a long run equilibrium situation from a supply standpoint: a worker who wishes his present job to continue into the long run will not consider changing his job. It is possible, therefore, that stickers and doers think they have achieved their long run objective and it follows that they will not be interested in further training since this has an implication of occupational mobility. Doers believe that most jobs are much the same so there is no point in making the effort to train for another job which offers no benefits. It might be argued, of course, that the additional remuneration of a more highly trained job should appeal to doers but Chapter 5 showed that this incentive is quite weak. Stickers have undertaken a long search for their present job and have suffered long periods of unemployment in some cases as a result. Throughout this time they do not appear to have considered training to improve their chances of securing employment and thus avoid the opportunity cost of being out of work; this indicates a remarkable degree of self confidence or perhaps

they are aware of the finding in Chapter 5 that further training has little influence on the duration of unemployment.

The interest of samplers in training is fairly obvious; they will regard it as one way of broadening their experience, using it to increase the distribution of job offers open to them. For snatchers, who are in a job which they regard as temporary, it is difficult to know whether the replies relate to their short run (stop gap) situation or to their more normal employment. The slight tendency to be interested in training, which we saw for males in Table 8.14 seems to follow from previous training experience, however; it is likely that this relates to the more normal employment of the group and from this we can see that snatchers were not thinking of their present job in answering training questions. Table 8.15 confirms this to some extent.

Table 8.15

Strategy by Length of Longest Period of Training (Mean weeks)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Samplers	91	22	68
Snatchers	85	24	59
Stickers	59	14	39
Doers	66	18	41
	75	19	51
Significance Level of F-test, Analysis of Variance	23%	73%	4%

Note that for males, samplers and snatchers have the longest training experience (although the significance level is poor) and are also interested in further training, a result to be expected from Chapter 5 where we suggested that previous education and

training were the main determinants of subsequent interest. For females the same two groups have the longest training experience but the differences are totally insignificant and not in line with Table 8.14. Instead the findings of Chapter 5 lead us to expect a relationship between interest in further training and unemployment experience and this is confirmed for samplers and stickers (compare Table 8.14 and Table 8.5).

One interesting observation on Table 8.15 is that the mean length of the longest period of training of all the groups is shortest for stickers. Thus unwillingness to change occupation is not the result of being highly trained, an alternative proposition to life cycle situation being the most important factor in choice of labour market strategy. If anything, it seems that long periods of training can induce adaptability, perhaps because employers take it as an indication of ability to learn. One measure of adaptability is the use to which the longest period of training is being put in the current job of the respondents; snatchers seem the most adaptable with only 12% using this training, stickers the least since 39% of this group were making use of their longest period of training. This is a confirmation of our hypothesis since stickers are thought to be the group most likely to wish to continue working in their normal occupation. We are also not surprised to find doers willing to abandon their most extensive period of training - only 22% were using it in their current job; the figure for samplers is 23%. It is possible that there is an association between training experience and adaptability and between labour market strategy and adaptability.

It might be argued that experience in doing a job, rather than training, is more likely to produce an intransigent attitude towards occupational change. Such experience is likely to be acquired during the longest job in a work history and a measure of its use is the extent to which the training given in the longest job is being used in the respondents' current job. In fact the results are very similar to those reported above for the use of the longest period of training with stickers most likely to be using their experience in their longest job and snatchers and doers least likely.

Conclusions

Male samplers and snatchers are interested in further training and may be more highly trained than the other two groups, thus confirming the association found in Chapter 5 between previous education and training and considering undertaking further training. For females the results bear out the finding of Chapter 5 that experience of unemployment is an important determinant of interest in further training. In general the results are consistent with our hypothesis.

Neither long periods of training nor extensive experience of doing one job are plausible explanations of the unwillingness of stickers to change occupation; life cycle position is still the most likely cause. Stickers appear to be in a long run situation, not wishing to change their job and in the next section we will examine their contentedness to try to corroborate this. We will also study the other groups to ascertain whether their apparent adaptability is beneficial in terms of satisfaction.

7. Contentment

We expect stickers and doers to be more content than the other two groups because they are hypothesised to be in a long run situation, not wishing to change their job. In addition, the most plausible reason for a sticker wishing to continue in his normal occupation is because he achieves intrinsic satisfaction from the work; we expect to find confirmation of this and hope to identify those aspects of work which are most important to this group. It is an open question whether doers regard all jobs as much the same because they are equally satisfactory or unsatisfactory; we should provide an answer to this problem. We might suppose that snatchers, of either of our two sub-groups, will have many complaints about their temporary situation but on the other hand, all are working for the financial reward of their job and this may forestall criticism; again it is an open question. We expect samplers to be generally discontent because they wish to leave and thus have not found their long run goal in their present job.

Analysis of several questions dealing with contentment and aspects of the job and the firm constitutes this section. In almost every case it is difficult to be conclusive because we have no idea which variables respondents held constant in making their replies; we are looking, therefore, for several indicators pointing in the same direction.

A seemingly straightforward measure of contentment is the replies to the question asking for a comparison between the respondent's current job and his previous job. Contentment is considered a relative concept; few workers who think their present job worse than their previous job will feel satisfied.

Table 8.16

Strategy by "How does this job compare with your previous Job?"

Males

	<u>Better</u> ⁽³⁾	<u>Worse</u> ⁽⁴⁾	<u>Indifferent</u> ⁽⁵⁾	<u>Row Total</u>
Samplers	21 (36)	15 (26)	22 (38)	58 (100)
Snatchers	14 (34)	14 (34)	13 (32)	41 (100)
Stickers	36 (67)	6 (11)	12 (22)	54 (100)
Doers	33 (65)	6 (12)	12 (23)	51 (100)
	104 (51)	41 (20)	59 (29)	204 (100)

Females

Samplers	12 (39)	12 (39)	7 (22)	31 (100)
Snatchers	17 (52)	9 (27)	7 (21)	33 (100)
Stickers	31 (67)	8 (17)	7 (15)	46 (100)
Doers	40 (70)	4 (7)	13 (23)	57 (100)
	100 (60)	33 (20)	34 (20)	167 (100)

Tables significant at the 1% level (males), 2% level (females) on a chi-squared test.

The tables for both males and females meet our expectations. Stickers and doers think their present job better than their previous job and thus indicate their contentment. There is, of course, an element of tautology here because both these groups have been partly defined by their lack of desire to leave their firms. We can only note that there are remarkably few workers in these groups who thought their current job worse.

(3) 'This job better'; 'Balance of conflicting reasons favours present job'.

(4) 'This job worse'; 'Balance of conflicting reasons favours previous job'.

(5) 'No balance apparent'; 'Same'; and 'Different' indicating that the respondent had not made a judgment between the two jobs.

Both samplers and snatchers tend to think their present job worse or they are indifferent. Proportionately more male snatchers think their job worse than male samplers although the reverse is true for females; this probably stems from female snatchers achieving an increase in pay by changing jobs while male snatchers tend to fall into the sub-group which averaged a substantial decrease.

When we analyse the subjects mentioned in the first replies to the same question we find that remuneration seems more important to males of all groups when compared with females.

Table 8.17

Strategy by Subjects mentioned Comparing Current and Previous Jobs.
(First Replies. Percentages)

Males

	<u>Money</u>	<u>Working Conditions</u>	<u>Interest in Work</u>	<u>Job Easier</u>	<u>Colleagues</u>	<u>Other</u>	<u>Total</u>
Samplers	19	21	21	11	2	26	100
Snatchers	26	13	11	11	3	36	100
Stickers	24	18	14	8	2	34	100
Doers	29	16	11	16	-	28	100
	24	17	14	11	2	32	100

Females

Samplers	18	21	18	18	4	21	100
Snatchers	10	17	23	20	3	27	100
Stickers	18	16	21	16	7	22	100
Doers	10	10	16	14	14	36	100
	14	15	19	17	8	27	100

In fact there is a strong similarity between Table 8.17 and Table 8.11 above which summarised the things respondents considered important when they were looking for a job. This indicates consistency in replies which confirms the picture of our groups which we drew in section 5 above. The differences are that Table 8.17 shows less interest generally in

remuneration and travel to work but the easiness of the job (or the physical effort involved) seems much more important in the comparison between jobs. More specifically working conditions now seem important to all males and female samplers appear to have a wide range of interests in the differing aspects of a job which might be more in keeping with the stickers group. In addition female snatchers mentioned interest in the work quite frequently while they did not consider job satisfaction important in looking for a job (Note that interest in the work and job satisfaction are not identical concepts but they are sufficiently closely related for this level of analysis).

A further measure of contentment, directed at the relationship between earnings and hours is the question asking overtime workers whether they would like to work more or less overtime. Only the table for males is shown because the number of females is too small for analytical purposes.

Table 8.18

Strategy by "Would you like to work more or less overtime?"

Males

	<u>More</u>		<u>Less</u>		<u>Same</u>		<u>Row Total</u>
Samplers	10	(20)	24	(49)	15	(31)	49 (100)
Snatchers	5	(16)	19	(59)	8	(25)	32 (100)
Stickers	9	(20)	13	(29)	23	(51)	45 (100)
Doers	7	(18)	12	(32)	19	(50)	38 (100)
	31	(19)	68	(42)	65	(40)	164 (100)

Table significant at the 8% level, chi-squared test.

Those workers who tended to say that they would like to work the same amount of overtime, stickers and doers, can be considered

unambiguously content. It is more difficult to interpret the other replies; samplers and snatchers answered 'Less' quite often but this might mean that they desire the same gross earnings for fewer hours or that they are prepared to reduce both earnings and hours (on this argument they were working overtime at the time of the survey because they felt some form of obligation to management). The latter interpretation seems unlikely for snatchers since both subgroups are hypothesized to have taken their current job for the financial rewards it offered. Either interpretation may apply to samplers.

If stickers and doers are content and samplers and snatchers discontent we expect them to sum up their feelings about the job and the firm at shop floor level in reply to the question asking whether they thought work was organised efficiently at their firm. The various topics which respondents had in their minds in giving their responses to this question seemed to be work organisation, management, working conditions, job satisfaction, hours, shifts and payment systems. Table 8.19 shows the anticipated tendencies for both sexes.

Table 8.19

Strategy by "Compared with other places where you have worked, do you think that work here is organised efficiently?"

Males

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Samplers	10 (18)	47 (82)	57 (100)
Snatchers	6 (15)	34 (85)	40 (100)
Stickers	22 (43)	29 (57)	51 (100)
Doers	24 (51)	23 (49)	47 (100)
	62 (32)	133 (68)	195 (100)

<u>Females</u>	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Samplers	6 (23)	20 (77)	26 (100)
Snatchers	10 (32)	21 (68)	31 (100)
Stickers	30 (67)	15 (33)	45 (100)
Doers	31 (62)	19 (38)	50 (100)
	77 (51)	75 (49)	152 (100)

Both tables significant at less than 1%, chi-squared test.

Thus, with several indicators we have strong evidence to suggest that stickers and doers are content, probably in a long run situation and samplers and snatchers are discontent. But is this saying any more than people who wish to leave a firm tend to feel discontentment and vice versa? If these were the only differences between our groups this would be true but we have already seen that unemployment experience, change in gross pay by virtue of changing jobs and life cycle position are important distinguishing variables between the four groups. In particular we have identified distinctive features between samplers and snatchers and between stickers and doers. We have done nothing more in this section than point to certain similarities in contentment between our groups.

We can therefore embark upon deeper analysis. A man who is dissatisfied with his employment may either leave the firm or seek to change those aspects of the job which do not please him by working from within. One way of doing this is to take up grievances with a worker's representative.

Table 8.20

Strategy by "Have you ever asked your shop steward/works committee representative to take up a grievance for you?"

Females

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Samplers	3 (10)	27 (90)	30 (100)
Snatchers	11 (37)	19 (63)	30 (100)
Stickers	5 (12)	37 (88)	42 (100)
Doers	7 (13)	48 (87)	55 (100)
	26 (17)	131 (83)	157 (100)

Table significant at the 2% level, chi-squared test.

The tendency in Table 8.20 is for snatchers to take up grievances among the female groups; the tendency is the same in the table for males but it is significant only at the 13% level so it is not shown. The other group which is discontent, samplers do not tend to take problems to their representatives and this shows a further distinction between the two groups who wish to leave the firm. Snatchers wish to leave and try to change things from within, samplers only do the former. It may be that samplers do not wish to cause trouble in the firm because they are still 'trying the job out' and may yet decide that the job approximates sufficiently to their long run goal for them to stay. Snatchers regard their position as purely temporary, have no fear of recriminations and may be trying quite simply to make their time at the firm as pleasant as possible. Note that from the evidence of Table 8.20 it does not seem to be true that leaving a firm and changing it from within are alternative courses of action for any group of workers; stickers and doers neither wish to leave nor stir up trouble.

Although samplers may not take up grievances because of possible recriminations, this argument should not hold with respect to industrial disputes involving all workers where freedom from victimization can be assured quite often. We asked respondents whether there had been any particular issues at the factories and samplers tended to remember these more frequently than the other groups.

Table 8.21

Strategy by "Have there been any particular issues which have been brought to the notice of either the union/works committee or the management?"

Males

	<u>Yes</u>		<u>No</u>		<u>Row Total</u>
Samplers	49	(82)	11	(18)	60 (100)
Snatchers	24	(58)	17	(42)	41 (100)
Stickers	36	(73)	13	(27)	49 (100)
Doers	27	(55)	22	(45)	49 (100)
	136	(68)	63	(32)	199 (100)

Table significant at the 2% level, chi-squared test.

The table for females is significant only at the 17% level so it has not been shown but it also shows samplers as the main group who reported disputes. If we can associate memory and reporting of disputes with sympathy for the grievances (which were usually money and working conditions) we can see that the discontented samplers tend to prefer concerted action by all the workers to rectify problems while the (equally discontented) snatchers opt for the individual approach. Interestingly, Table 8.21 shows stickers as having some interest in general issues and this might be evidence that this group are less content than doers

but, instead of wishing to leave, rely on workers' action to improve their position. It may be, of course, that the discontent of stickers has already been rectified as a result of a dispute; we do not know whether they were satisfied with the outcome - this might explain their apparent contentment at the time of the interview.

We can see an association between satisfaction and aspirations for males in Table 8.22.

Table 8.22

Strategy by "Would you like to get promotion in this firm?"

Males

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Samplers	40 (68)	19 (32)	59 (100)
Snatchers	19 (51)	18 (49)	37 (100)
Stickers	39 (71)	16 (29)	55 (100)
Doers	43 (83)	9 (17)	52 (100)
	141 (70)	62 (30)	203 (100)

Table significant at the 2% level, chi-squared test.

One of the contented groups, doers would like promotion while snatchers, who have been shown to be dissatisfied, are not interested in advancement within the firm. The other two groups are close to the overall average and this represents a further vindication of our four-way distinction. The desire to leave does not seem to be simply an expression of demand for increased earnings since this, presumably, could be achieved through promotion. Snatchers do not want to advance themselves within the firm because they believe they are going to return to their normal occupation in the near future and for men this probably means an increase in pay. More money in an occupation of their own choosing

is a more attractive alternative than increased earnings through promotion to a job they do not know in a factory they have grown to dislike.

Being contented does not seem to be a sufficient condition for a worker to seek promotion; it appears that he also has to have the desire for increased pay and the adaptability we tend to associate with doers. In contrast stickers are so satisfied that they have relatively few aspirations to a higher grade; this makes sense for a group who have indulged in lengthy search for a suitable job. Note that these conclusions hold for males but for females the equivalent table is not significant.

One way of summing up this section is to allow the respondents to do it. Many chose to do this in respect of both the job and the firm in response to the question:

"If someone asked you what this firm was like what would you say?"

If we take the favourable replies to indicate contentment and vice versa we find that stickers and doers of both sexes are satisfied; male and female samplers and snatchers tend to be discontented. Note that above average proportions of male stickers and snatchers and female samplers and snatchers appear uncommitted. In general, however, the results confirm the other measures of contentment we have used in this section.

Table 8.23

Strategy by "If someone asked you what this firm was like
what would you say?" (Percentages)

Males

	<u>Favourable</u>	<u>Average</u>	<u>Unfavourable</u>	<u>Total</u>
Samplers	41	10	49	100
Snatchers	28	19	53	100
Stickers	71	14	15	100
Doers	74	7	19	100
	55	12	33	100

Females

Samplers	39	22	39	100
Snatchers	42	26	32	100
Stickers	87	4	9	100
Doers	80	12	8	100
	67	15	18	100

Conclusions

We have found considerable evidence, from a variety of indicators, to show that stickers and doers tend to be contented and that the other two groups are not. Thus the answer to the open question concerning the work orientation of doers seems to be that they regard all jobs as equally satisfactory and not unsatisfactory. We were also looking for those aspects of work which gave stickers intrinsic satisfaction but we have found only confirmation that a broad spectrum of interests typify stickers. It seems that the financial rewards of the job, which attracted snatchers of both sub-groups are not sufficient to offset the disadvantages of their temporary work. Samplers have not achieved their long run goal in their current job and wish to continue their search by further 'job-shopping'.

The groups who are considering leaving are also more likely to try to solve their problems by working from within the firm. Snatchers prefer to do this by individual action, samplers by the concerted action of all the work force since this avoids possible management recriminations. We also found a slight tendency for stickers to support action by workers' organisations and for this group trying to change unpleasant aspects of the job from within may be an alternative to leaving.

Amongst men, the adaptable and contented doers group would like promotion and snatchers would not; the other two groups are divided on the issue. This is one of several indicators we have found to show that our four-way distinction is a relevant method of analysis and that the view that workers wish to leave a job only because they are discontent is an over-simplification. The alternative, more complex perspective of the labour market strategies hypothesis has resulted in a deeper understanding of attitudes towards overtime, industrial disputes and promotion.

8. Geographic Mobility

We have already seen in previous chapters that geographic mobility is an important labour market dimension; we might suspect therefore that it has a role to play in at least some of our labour market strategies although it has not yet entered our hypothesis specifically. Those groups which experienced long periods of unemployment may be less mobile than other groups whose members were prepared either to travel long distances or to move house in order to avoid being out of work. Thus female samplers and stickers of both sexes might be expected to be relatively less mobile.

In fact there is virtually no significant difference between the female groups on travel to work distance at the time of the survey and of the male groups stickers and samplers tend to travel the furthest. It appears therefore that unemployment is not associated with the length of the daily work journey.

Table 8.24

Strategy by Travel to Work Distances at the Time of the Survey (Mean miles)

	<u>Males</u>	<u>Females</u>	<u>All</u>
Samplers	5.7	2.4	4.6
Snatchers	3.6	2.3	3.1
Stickers	4.8	2.1	3.6
Doers	3.9	2.1	3.0
	4.6	2.2	3.6
Significance Level of F-test, Analysis of Variance	15%	88%	5%

Comparison between Table 8.24 and 8.9 reveals that high gross earnings are not associated with long daily travel to work distances, either. Interestingly, however, we can see that for males the strategy of searching for long periods during unemployment for a truly suitable job (sticking) and that of trying out a series of jobs in search of a long run objective (sampling) can involve long daily journeys to work once a job has been found.

Stickers restrict themselves to one occupation (perhaps broadly defined) and therefore have a given distribution of wage offers from which to make their choice. In contrast, snatchers and doers choose between different distributions and select one wage offer from a wider range. In order to extend the number of

wage offers open to them, stickers are prepared to travel further. Yet samplers are also prepared to do this and the choice of wage offers available to this group is, perhaps, the widest of our four. The rationale for this seems to be that travel to work is not an important consideration in those aspects of a job which the sampler is seeking in his long run objective. In confirmation of this we saw in Table 8.11 that male samplers mentioned travel to work least of all four male groups in what the respondents said they looked for in a job. Thus labour market strategies are a partial explanation of differential geographic mobility among males.

Mobility can also be of a more permanent nature than travelling to work; some workers are prepared to move house for the right job. We expect the same two groups, samplers and stickers to demonstrate this but snatchers are unlikely to change their address to take up a temporary appointment and doers, who regard all jobs as equally satisfactory (except perhaps in respect of remuneration) will see little point in uprooting themselves for a job. Table 8.25 confirms these expectations for all male groups except stickers; the equivalent table for females is significant at only the 35% level but shows similar differences.

Table 8.25

Strategy by "Were you living there (present address) in April 1971?"

Males

	<u>Yes</u>	<u>No</u>	<u>Row Total</u>
Samplers	21 (33)	43 (67)	64 (100)
Snatchers	24 (55)	20 (45)	44 (100)
Stickers	30 (53)	27 (47)	57 (100)
Doers	33 (62)	20 (38)	53 (100)
	108 (50)	110 (50)	218 (100)

Table significant at the 2% level, chi-squared test.

We must be careful in our interpretation of Table 8.25, however, because there are many reasons for moving house not connected with work. Most of these stem from life cycle position, for example buying or renting a larger house to accommodate a growing family. We saw in 3.4 above that of the male groups samplers were the most likely to have at least one child under five years old and they also had the most members in the under 30 age group. Thus in Table 8.25 labour market strategy acts as an intervening variable between life cycle position and propensity to move house. It is still possible, however that choice of strategy serves to reinforce permanent geographical mobility.

We also asked respondents whether they had considered taking a job outside the North East and the pattern of replies, including those respondents who had actually worked outside the region as 'Yes' replies, again reveals the influence of life cycle position. The younger male groups, samplers and snatchers tended to have considered long distance mobility while the older groups had not. It is possible, of course, that stickers and doers had contemplated working outside the North East in their younger days but had forgotten such an ^{un}important event as a thought process when they were interviewed. Cross-tabulation of the replies for females is totally insignificant.

Conclusions

It is clear from this short section that the most important determinant of permanent or long distance geographical mobility amongst males is life cycle position and especially age but labour market strategies may reinforce the propensities and they may

constitute a partial explanation of differing lengths of the daily work journey. There are no significant differences between our female groups on the mobility variables we have studied.

9. General Conclusions

The analytical method used in this chapter has been an abstraction and does not pretend to portray reality; instead it presents a picture of the behaviour of workers when faced with the problem of changing jobs which provides insight into the actions and reactions of the individual in a labour market context. Thus the most significant findings were related directly to job changing: unemployment experience, change in gross earnings by virtue of changing job and the respondents' comparison of present and previous job.

Age was also a significant variable but we can only speculate as to the relative strengths of supply and demand forces in this respect. One of the most interesting findings was the insignificance of socio-economic classification in choice of labour market strategy. We know that there are important distinctions between the socio-economic groups once they are doing a job, for example in remuneration, but it appears that skill level is irrelevant to the process of job change. How then can we explain the greater incidence of unemployment amongst less skilled manual workers? A joint explanation of a combination of supply forces (choice of strategy) and demand forces is the most plausible.

Unemployment amongst older, unskilled workers is a continuing problem in the North East. It is also true that new manufacturing

establishments have reported high labour turnover in the initial phases of their operations, which implies a cost in terms of training expenditure and lower production levels. Poor industrial relations is also costly to a firm. The source of these costs seems to be, from the analysis in this chapter, mainly attributable to samplers and snatchers, the groups which are discontent. A positive hiring policy favouring older workers, who are not necessarily highly trained, would ensure a high proportion of stickers and doers in a firm's work force and thus reduce the probability of high labour turnover and bad industrial relations. Incidentally, policies of this nature would help to alleviate the unemployment problems of the North East and, if the females of these two groups were attracted back into the work force, increase regional income per capita. For the view that older, unskilled workers might be difficult to train see MACLAURIN and MYERS (51); for contrary evidence see MORLEY (56).

The process of exploration and experimentation we have suggested for samplers will be familiar to some readers. GINZBERG (23), in research into occupational choice made by new entrants to the labour market, considers that such choice is a developmental process, a series of decisions made over the years with each step having a meaningful relationship to those which preceded it and follow it. Throughout the years of his development a person tries to learn about his interests, capacities and values and about the opportunities and limitations of the real world, in order to make an occupational choice that will yield maximum satisfaction. Our analysis reveals that a process like this may continue, for some people (samplers), beyond the first entry into the labour market.

We must ask why samplers do not achieve their long run goal earlier in their working lives, despite their effort of trying out different jobs. It would seem that the solution lies in the inefficient information flows in the labour market, especially in respect of intensive information. A similar explanation seems likely for why snatchers find it necessary temporarily to abandon their normal employment, at least in respect of the sub-group who took a decrease in gross earnings between jobs. In this case, however, extensive information relating to suitable job opportunities seems lacking. This is not a problem to the sub-group of snatchers who take a more highly paid job, despite barely acceptable working conditions, because the chief motivation here is the additional earnings. If the welfare of this sub-group is to be improved the personal circumstances of the individuals must be alleviated, presumably through macroeconomic measures to improve the general economic situation and possibly greater social services provision.

In contrast, stickers and doers are in a long run situation, not seeking to change their current job. Better extensive information flows would obviate the lengthy job search of stickers, however and improve welfare by reducing unemployment. Doers, on the other hand, seem fairly satisfied given the constraints of the labour market.

It is possible to see doers as a different type of worker from those represented by the other groups by asking whether there is likely to be mobility between strategies. We have argued that sampling is a strategy for younger people who do not recognise fully their family responsibilities. They are able to continue trying

out different jobs until their financial commitments push them towards one of the snatching sub-groups. Once these problems have been resolved they will be older and likely to have a better idea of the occupation they wish to follow and may be prepared to undertake extensive search for the right job - sticking. Different combinations are possible; for example a young man may find a suitable occupation at his first attempt, never suffer a crisis in his personal finances and 'stick' all his working life; again, a sampler may make the transition to sticking without needing to 'snatch'. The relatively low number of respondents in the snatchers group indicates that these alternatives may not be uncommon.

In contrast, doers seem to have a very different orientation to work and, although they do tend to be older workers, the young are fairly well represented in this group (apart from females whom we suggested might be absent from the work force to have a family). Thus we expect little mobility between the doers group and the other three groups.

10. Policy Conclusions

If workers change job to achieve an increase in earnings then mandatory or 'voluntary' incomes policies may interfere with the efficient allocation of labour. The consequences may be far reaching, for example, if a firm or industry experiences a large increase in demand for its product it will wish to recruit more labour, perhaps in a few particular occupations. If it is not free to offer high wages because of an incomes policy it may suffer labour shortage, fail to expand and leave excess demand in the product market which can be remedied only by increased prices or imports with consequent effects on inflation and/or the balance of payments.

REDDAWAY (74) has argued that only small changes in relative wages are necessary to induce high labour mobility. Under most British incomes policies small changes of this type have been possible and it follows that such policies could not have had a great effect on the efficient allocation of labour. There are many flaws in Reddaway's analysis but, by approaching the problem through the complex motivations behind labour mobility via labour market strategies we come to essentially the same conclusion.

For samplers the reasons for changing jobs relate to the whole combination of advantages and disadvantages offered, including earnings. Travel to work is of particular importance to females of the group, job satisfaction to males. The inter-job mobility of the group is not likely, therefore, to be reduced by restrictions to the level of wage rate increases.

Snatchers pose a more difficult problem. It may be that snatching at either a high or low paid job (relative to expectations) because of financial stringency is a common source of making adjustments to the labour force for the economy as a whole. The sub-group who were attracted by the prospect of high earnings may find that the disadvantages of the job, especially the working conditions, outweigh the benefits of the financial reward if relativities in wage rates are reduced by an incomes policy. Similarly, if the relativity between unemployment or social security benefit and the relatively low pay of the other snatchers sub-group is reduced, the willingness of workers to fill these jobs will be affected although they may still leave their previous (intolerable) jobs. It is probable, however, that the effect of

an incomes policy on relativities would have to be substantial before a noticeable change in behaviour patterns was brought about.

Stickers are interested in a wide range of job characteristics, including earnings. They have a firm conception of the going rate for their own occupations - a 'reservation wage' - and do not seem to be attracted by high rewards in different occupations. If an incomes policy acted to depress the earnings of certain occupations in some firms but not in others (for example an established plant relative to a new plant) then the mobility of this group would be affected. They would rather remain unemployed than accept earnings below their expectations; only a small minority of workers are likely to be involved in such a case, however.

The doers group have a relatively straightforward view of work; they appear to be in a long run situation, regarding their job (and every other job) as satisfactory. Perhaps for this reason they are more likely to be attracted by alternative employment offering higher earnings. Money is the simplest attribute which distinguishes between jobs. Because they appear neither to think about leaving nor search for another job their mobility will be brought about seemingly instantaneously, by the 'market mechanism'. The changes in gross earnings achieved by this mobility are quite large so an incomes policy of the type we have known in Britain would have to be in force for a considerable time to erode this differential substantially and thus affect the allocation of labour. We can draw only tentative conclusions from this analysis because of the smallness of the sample but it seems possible that incomes policies may have only a minimal effect on

the efficient allocation of labour because their effect to date, at least in Britain, does not seem to have/a ^{been} serious distortion of pay relativities. This appears to contradict Reddaway's finding that only very small changes in relative wages are necessary to induce high inter-job mobility. The discrepancy comes about from Reddaway's interpretation of the observation that labour mobility is high and changes in relative wages are small; he attaches little importance to non-wage factors influencing the decision to change jobs. We have attempted to give due weight to both pecuniary and non-pecuniary factors and have seen that these differ between our groups. Small changes in pay relativities will not seriously distort the high mobility patterns which already exist for both financial and non-financial reasons. If the only policy variable available to influence inter-job mobility is earnings then substantial shifts in patterns of pay might be needed to affect job changing behaviour.

CHAPTER 9

Conclusions

For the purposes of exposition many of the chapters of this thesis have investigated areas of study more or less in isolation although reference has been made to the central themes throughout. We will now try to draw the threads together and emphasize the inter-relationships.

The primary objective has been to show that by assuming the forces of supply and demand are operating, it is possible to understand and explain much of the behaviour of suppliers of labour services and so demonstrate that a labour market exists, or at least that it is a relevant and useful concept. We have not tried to deny that the interests of different disciplines might be better served through alternative perspectives but from the economics viewpoint the labour market still provides an important method of analysis.

Thus in Chapter 2 we saw that for most of our study areas the cyclical fluctuations we associate with the workings of a market did indeed occur and where they did not, re-definition of the spatial boundaries produced the anticipated movements in unemployment rates. It cannot be denied that such movements could also be observed if, as in the job opportunities hypothesis, demand but not supply forces are at work; this seems unlikely however since we based the spatial limits of our areas on the job search patterns of respondents - sellers of labour services. We saw, incidentally, that although industrial structure could help to explain high levels of unemployment, wide fluctuations seemed due to a broad base of industry.

Similarly, in Chapter 3 we found that industrial labour markets probably do not exist but in the spatial and occupational dimensions the evidence was consistent with market behaviour. This conclusion provides an interesting commentary on the long period change in the industrial structure of the North East: the demise of the industrial dimension reflects the employment decline of traditional industries such as coal mining, shipbuilding, farm-work and fishing where industrial labour market may possibly still exist. It is worth noting, however, that some occupations are highly specific to these industries and identification of industrial labour markets may be concurrent, in these cases, with the identification of occupational labour markets. We also saw that the simple view of occupational markets as a series of non-competing groups was ill founded, that they can be better viewed as a complex of inter-relationships and that this is a suitable area for further empirical research. Similarly, the study of the spatial dimension in Chapter 4 found that labour market areas can overlap; this is inconsistent with a perfectly competitive market since competitive forces operating without restriction would lead either to the integration or mutual exclusion of two such areas. The finding that labour markets have imperfections is far from original and confirmation that information networks are not perfect was seen in Chapter 7. However, even an imperfect market is still a market except in the limiting case where the 'frictions' are so strong that the twin functions of wage determination and job distribution do not coincide. It is difficult to know what indicators would reveal that this point had been reached.

A worker's pursuit of his own self interest was seen in Chapters 5 to 8 as a plausible explanation of diverse labour market phenomena; this can be taken as evidence of competitive supply forces. In Chapter 5 we saw that the self interest perceived by different groups of workers can vary because of past experience of education, training or unemployment. Family commitments are not important but they can affect geographical mobility, as we saw in Chapter 6 where it was also suggested that workers might seek to be either geographically or occupationally mobile, in line with Chapter 3. Thus, measures such as the Employment Transfer Scheme designed to increase geographical mobility, if successful may reduce occupational mobility and hinder the increase in the supply of trained workers. Perhaps the most striking evidence of the variety of types of self interest among workers came in Chapter 8 where we found that different groups can seek jobs at higher or lower earnings levels compared with their previous job and can experience differing lengths and incidences of unemployment because of the short run strategies they adopt in pursuit of their longer run objectives. The foundation for these, especially the strategies of a 'job shopping' type, was laid by the imperfection of the information systems demonstrated in Chapter 7.

It is clear from this that labour markets are highly structured but within each group, in each area and at each broadly defined occupational level we still expect to find the influence of competitive forces on the supply side. The problem with labour market studies would seem to be not that market forces do not exist but that the complexities have not been fully appreciated. Complex behaviour can appear chaotic and disorderly without appropriate insight, which

might come through more research on the lines of Chapter 8 leading to a supplement to traditional competitive theory.

It is the view of this thesis, then, that the labour market is not "a highly abstract concept, useful mainly for normative purposes" REYNOLDS (75) but that it is useful for practical, positive purposes when properly understood. There is no denying that the competitive model is an abstraction; all simplifications that attempt to isolate the fundamental nature of human behaviour must be, but we have seen that its use can help to explain phenomena of interest to the economist. By suggesting supplements rather than alternatives to the competitive model, this thesis has pointed to a direction for further study, using a behavioural methodology, which might break new ground and add to the understanding of the working of labour markets expounded in this volume.

The major problems remain those of giving satisfactory explanations for spatial and occupational mobility (and immobility) which are consistent with the assumption of rational economic behaviour, such that the individual has an image of possible actions and possible outcomes from adopting these actions and such that he orders these acts transitively, completely, in a way which is consistent with his preferences and he behaves accordingly. In such a context social, rather than economic forces have a role to play, perhaps especially in explaining geographical immobility but this does not mean that the labour market can be better seen as a social system on the lines suggested by SMITH (87).

The sociological and psychological views of the positive correlation between amounts of education and personal earnings were

concluded by BLAUG (4) to be assimilated into a proper economic explanation: the strength of competitive forces determine the extent to which the economic view is relevant. The same can be said of the concept of the labour market itself. It has been the argument of this thesis that competitive forces are sufficiently active, at least on the supply side to render full economic explanations of labour market phenomena both interesting and pertinent to reality. Thus, although we have agreed with KERR (40) that the most important labour market dimensions are spatial and occupational, we cannot accept that groups of workers rather than individuals dominate decision-making on the supply side. At the same time it cannot be denied that organised labour does play an important labour market role.

The relevance of the economic view of the labour market can be seen from the policy implications of the thesis. In Chapter 2 we saw the success of regional policy in attracting small plants to small estates in small towns but pointed to the difficulties in carrying out a similar transformation in large towns. In Chapter 3 it was suggested that high unemployment rates might increase occupational mobility but this might be seen as wastage by policy makers who, although they wish to increase occupational mobility, need means other than the introduction of new factories. One such possibility is the provision of additional incentives to undertake further training or re-training (Chapter 5). In addition, greater provision of courses on home electrics, car maintenance and other do-it-yourself pursuits might be worthwhile to accustom people to training courses. In Chapter 6 the emphasis upon the worker's investment in training might be repeated in information distributed

by Industrial Training Boards. Such intervention might be seen as an attempt to reduce imperfections in the market for training which, unlike local labour markets may be dominated by institutional factors, including the reactions of firms to their (possibly justifiable) belief that 'poaching' of trained labour represents a cost to the firm which provides training. Since the interests of firms and the interests of the economy may not co-incide in the field of training, the increasing intervention of the Training Services Agency in recent years might be viewed as beneficial to the community as a whole. Similarly the proposal in Chapter 7 to provide more information of all types to improve the efficiency of the allocation of labour might be considered beneficial.

Spatial mobility was studied in Chapter 4 and an important question for planners, whether to try to identify or create growth poles was raised; we also pointed to the need for a re-examination of the areas used in the Department of Employment monthly Area Statistics of Unemployment. Both regional policy and incomes policy were considered in Chapter 8. For the latter it was concluded that the form they have taken in this country in the past probably had little effect on labour mobility. In the case of regional policy the positive conclusion was that firms have an incentive to recruit older, less skilled workers both in terms of improved industrial relations and labour turnover and that regional income, participation and unemployment rates would also benefit from such a hiring policy. Government might consider increasing the incentive to firms by intervening in the market.

Such government intervention has been tried in the past, of course. Attempts to influence the behaviour of individual workers and organisations by the application of financial inducements or penalties were incorporated in the Industrial Training Act, the Redundancy Payments Act, Selective Employment Tax and Regional Employment Premium. If such intervention is necessary, to be effective it must be based on an accurate picture of the behaviour of firms, unions and workers. This thesis has tried to make a contribution to our understanding of the latter. More generally, we can conclude that knowledge of local labour markets is a prerequisite for understanding regional (or industrial) policy in action. Furthermore, such knowledge can only be beneficial as an input to the local decision taken by those responsible for the siting of new factories or offices, irrespective of whether these are a result of mobile industry or indigenous growth. Deeper understanding, through more local research might also help to predict new labour markets, such as that created in South East Northumberland and spatial immobilities, such as those evident in the area of the New Town of Washington.

Finally, the emphasis upon labour supply in this thesis should not be taken to mean that the problems of the North East have their roots in the behaviour, attitudes and characteristics of the population. Instead, it has been demonstrated that workers in the region behave in a manner which is consistent with the assumption of economic rationality, as far as data permit tests of this hypothesis. Suppliers of labour services respond to incentives and this indicates that the major role of regional policy should be to act to rectify deficient demand for labour in such a way that

incentives to workers are clear and in the right form. Regional policy might also act to reduce market imperfections, including any remaining improvements to the infrastructure which might otherwise prevent suppliers of labour from responding as they wish. Studies of local labour markets will contribute by identifying market imperfections and ascertaining the appropriate form for incentives to take which might be influenced by the effects of persistent deficient demand on suppliers of labour services.

APPENDIX 1.1

Selection of the Seven Factories

1. Acknowledgements

1.1. The staff and students of the North East Area Study are grateful to the respondents, management and trade unions of the seven factories for their care and co-operation which made this survey possible.

1.2. The selection of the seven factories, the design of the questionnaire, the interviewing of respondents, the preparation and editing of the computer data file and indeed the organisation of the whole project was undertaken by a team at North East Area Study (NEAS) under the provisions of a grant from the Social Science Research Council. Full time members of the team were:-

Mary Howe, Neill Marshall, Eric Smith, Clive Taylor and
Ian Taylor.

1.3. Mr. A. R. Townsend, Director of North East Area Study gave invaluable assistance at all stages and Mark Johnson, Research Assistant undertook considerable work on the computer data file. The coding system was designed by Mr. M. P. A. Macourt, Fellow in Social Statistics who also undertook sampling work, edited the questionnaire and participated in the interviewing.

1.4. Full utilization was made of the helpful guidance of Mr. R. K. Brown, Department of Sociology and Social Administration and Mr. R. Morley, Department of Economics.

1.5. Acknowledgements are also due, with gratitude, to the Northern Regional Offices of the Department of Employment and the Department of Industry.

2. Definitions

2.1. The 7 factories selected were all chosen from among the 117 of the 'SURVEY OF INDUSTRIAL PLANT IN THE NORTHERN REGION, 1974' referred to from here on as the 'SURVEY OF PLANT'. Firms outside the 'Industrial North-East' were however excluded.

2.2. We will refer to the seven factories by their location and display them in inverse order of their start of production thus:-

WASH 1	1974	Washington New Town, Tyne and Wear County
WASH 2	1973	Washington New Town, Tyne and Wear County
ASHT	1973	Ashington, Northumberland.
SUND	1973	Sunderland, Tyne and Wear County
CRAM	1972	Cramlington 'New Town', Northumberland.
HART	1965	Hartlepool, Cleveland County
NEWB	1958	Newburn area, Tyne and Wear County

The interviewing was conducted at ASHT on 26 February and 5 March 1975 and at the other firms over the period 21 April to 24 June 1975.

2.3. 'Expansion criterion'; initially an increase of 50 employees or 100% reported in the 'SURVEY OF PLANT', June 1972 to June 1974 ('or nearest to mid-year'). Note that the survey did indeed go below 50 in the marginal case of WASH 2 (44 at 6/74, 45 at the time of the interviews), and that SUND (52 at 6/74) had fallen back to 46 at the time of interviews due to redundancy before Easter. Otherwise firms with lower employment, though some had 100% increase, were excluded before selection was made.

2.4. 'Establishments new to region'; in these cases production started after 1st January, 1971 and the SURVEY OF PLANT had been

extended by the addition of 42 cases to document their activities, and establish whether they satisfied the 'Expansion criterion'.

2.5. 'Immigrant establishments'; in these cases production started after 1965 but before 1971, and they also satisfy the 'Expansion criterion'. All these establishments were included in the original SURVEY OF PLANT of 1972 as determined between University of East Anglia and the North of England Development Council (NEDC).

2.6. 'Old established establishments'; these started production before 1966 but had recently expanded sufficiently to satisfy the 'Expansion criterion'. Origin of names as for 'Immigrants', with an attempt at a 'matching sample'.

2.7. 'Internal movers'; of the SURVEY OF PLANT, were normally eliminated as soon as they were identified (although at one late stage one of these firms was approached)

3. SUMMARY

3.1. The selection of the 42 firms as initial candidates from which possibly to select for survey 'Establishments new to the Region' had at the outset appeared a sufficient addition to the SURVEY OF PLANT of 1974. Being based on information on labour expansion plans dating back as far as mid-1973 (up-dated to mid-1974) the list of 42 was thought if anything to be too 'old' rather than too 'new'.

3.2. Factors such as delayed openings, refusals and other miscellaneous reasons reduced the number of plant eligible under the 'Expansion criterion' as 'Establishments new to the Region' to eight. The survey was conducted in five of these eight and a refusal was received in one of the remaining three.

3.3. From this it might appear that the only problem was a simple one of elimination but in fact the position did not emerge as clearly and immediately as that and the situation and criteria were under continuous review for several months. In the first discussions of the team it was not necessarily held possible to select more than three 'Establishments new to the Region', partly to make room for a comparison with one older established firm.

3.4. Thus analyses from data in the SURVEY OF PLANT were conducted on all factories replying among the 42 (including some which were Internal Movers), and among all other respondents to this survey which satisfied the 'Expansion criterion'. Attempts to produce a 'typology' from this total group as a whole were still hindered by the small number of firms.

3.5. With the general benefit of this work and resulting summary tabulations the choice of firms to approach was made by collective judgment, on the objective of four 'Establishments new to the Region' plus one 'Old-established establishment'. In the case of the latter it was the third firm to be approached which responded favourably and was surveyed.

3.6. Three changes were made after the pre-test at ASHT (i) it was found possible to include the results of the pre-test conducted in one firm, in the final results (ii) it was found necessary for various reasons to add a second firm in Washington (iii) the late refusal of a firm in South-West Durham led to the need to substitute another firm in the southern half of the region.

3.7. The only three firms available in this area were in the group of 'Immigrant establishments', and from a simultaneous approach to

all three the firm providing the most immediate and promising response was chosen.

3.8. The net result produces:-

'Establishments new to the region':- (5) in Ashington, Cramlington, Washington (2) and Sunderland.

'Immigrant establishments':- (1) Hartlepool.

'Old-established establishments':- (1) Newburn.

3.9. We can approach only tentatively the question as to whether the 7 are representative of the overall flow of arrivals. There are aggregate data available⁽¹⁾ for new factories opened in the period 1966-72. In view of the changing political and economic climate since 1970, and the time taken to implement a decision to move, it is probable we are working in a period of different characteristics.

4. THE 42 FACTORIES

4.1. The 42 factories mentioned above were selected on the basis of an expected increase of 50 employees and 100% expansion of employment over the period 1973-5, omitting factories which started production before 1st January, 1971 and establishments outside the "Industrial North-East" (as used in the "Regional Abstract of Statistics"). All the criteria were the subject of discussion and experimentation in and between the first meetings of the Research Committee. The exact figures of 50 and 100% are inevitably arbitrary but limitations were felt necessary to avoid the undue expenditure of effort on very small developments; likewise the

(1) "The Movement of Manufacturing Industry into the Northern Region 1966-72 (inclusive)"; paper supplied by D.T.I. Regional Office.

exclusion of "Rural" areas of the North-East was sustained because it was not considered possible to mount a major survey in factories as far from Durham as, say Northallerton, Haltwhistle or Berwick; it is interesting that in deciding the date of 1971 in one of these early meetings there was mention of separately adding one firm with a longer history in the Region.

4.2. THE SURVEY OF PLANT was administered to the 42 firms in exactly the same way as to the other firms described in "Expansion in the North, N.E.D.C., April, 1975". Each member of the North-East Area Study team took part in these interviews with firms, but the team were spread over new and older firms, like other interviewers. The only difference for the 42 firms was that previous survey forms (from 1972) were obviously not available to interviewers and equally that the University was not known to the firms from that interview. This may have been one factor among several which produced a lower response among the 42 firms than in the overall SURVEY:-

Table 1

Response of "the 42 factories to Survey of Plant

Respondents

A	'Internal Movers'	5
B	Factories employing 50 or more at June, 1974*	8
C	Other factories expanding by 100% or from 0, June, 1972 to June, 1974	5
D	Other factories	<u>5</u>
	SUB-TOTAL	23

* including WASH 2, 44.

Non-Respondents

E Refusals	9
F Not opened at time of survey	7
G Other, interview incomplete or not undertaken	<u>3</u>
	<u>19</u>

4.3. All the 5 factories in group C had opened after June, 1973, but so too had 6 of the 8 in group B. Note that the 117 responding factories of the SURVEY OF PLANT, including the above 23, constituted a response rate of 86%.

5. INITIAL ANALYSIS OF THE SURVEY OF PLANT

5.1. The SURVEY OF PLANT had been prepared by Mr. Morley, Department of Economics, partly with the information needs of the NEAS project in mind. Later a Project Workshop was held before seeing the mass of forms to assess what variables from the SURVEY OF PLANT would be of relevance to the selection of factories for the NEAS survey. This meeting provided the guidelines for tabular comparison of relevant results under approximately 30 heads. A later version of 34 variables used to display the characteristics of possible factories is shown at TABLE 2. In addition to basic characteristics such as location, industry and size a wide range of variables concerned with labour recruitment and training was included. Other characteristics included, for example, payment systems, investment per capita and obstacles to growth, while particular attention was paid to the branch characteristics of the plant in terms of its relationship to the rest of the organisation, for instance the level of spending within the discretion of the local manager.

Table 2

Selection of 29 expanded firms from 93 questionnaires
examined

KEY TO "VARIABLES" USED IN
DISPLAYING CHARACTERISTICS OF POSSIBLE FACTORIES FOR
SELECTION

"Variable"	Explanation of Code	SURVEY OF PLANT QUESTION NUMBER
1	Established post June 1973. 1 = Yes; 0 = No	II 1.1
2	Standard Industrial Classification - given in arabic numerals	II 0.1
3	Total number of employees at June 1974	I 1
4	50 male employees or more. 1 = Yes; 0 = No (at June 1974)	I 1
5	More female employees than male at June 1974 1 = Yes; 0 = No	I 1
6	Ratio male to female employees 5:1 or more at June 1974. 1 = Yes; 0 = No	I 1
7	Expected labour force increase June 1973 to June 1975 more than 100%	I 1
8	Turnover for most recent year a = under 25%; b = 25% to 50%; c = over 50%	I 2
9	% leaving within three months of starting a = under 5%; b = 5% to 19%; c = 20% and over	I 3
10	Geographic location A = Tyneside; B = Wearside C = Cleveland; D = S.E. Northumber- land; E = Washington, Cramlington, Peterlee; F = West Durham; G = Durham City and East Durham	ADDRESS
11	% walking to work 0 = 10% or less; 1 = over 10%	I 7
12	% coming by car. a = under 30%; b = 30% to 60%; c = over 60%	I 7

"Variable"	Explanation of Code	SURVEY OF PLANT QUESTION NUMBER
13	% using public transport. 0 = 10% or less 1 = over 10%	I 7
14	Predominant payment system; 1 = incentive type; 0 = non-incentive type	I 9
15	Shift working 1 = Yes; 0 = No	I 10
16	Plant and machinery investment since mid 1972 per man added June 1972 to June 1975	I 1 & 13
17	Plant status a = Independent no branches b = parent branches elsewhere; c = subsidiary within larger groups; d = branch with head office elsewhere; e = other	II 1.2
18	Ownership B = Non N.E. British; F = Foreign; H = N.E. or Head Office (H.O.)	Various
19	Level of capital spending requiring H.O. approval a = under £100; b = £100 or over; c = all	II 1.2.2
20	% output exported a = NIL; b = 1% to 29% c = 30% and over	II 1.4
21	Products the same as those of other plants in the group 1 = Yes 0 = No	II 1.5
22	Hindrances to faster growth, last 2 years 1 = skilled labour shortage; 0 = Other	II 1.7
23	Predominant type of labour a = Skilled; b = Semi-skilled; c = Unskilled	II 2.1
24	Existing vacancies 1 = Some 0 = NIL	II 2.2
25	Labour trained at Skillcentre recruited 1 = Yes; 0 = No	II 2.6
26	Main method of recruitment used 1 = Via present employees; 0 = Other	II 2.7
27	Recruitment of older unskilled men 1 = Yes; 0 = No	II 2.8
28	Disadvantages in the local labour market a = None b = bad transport; c = other	II 2.14

"Variable"	Explanation of Code	SURVEY OF PLANT QUESTION NUMBER
29 30 31	Planned employment) Modification of plans) for 1975 made during Proportion Skilled) last year < is reduc-) tion; = is no change; Training programme) > is increase.	II 2.16
32	Training Board contribution 1 = EITB; 0 = other	II 2.17
33	Plants opening during last 2 years, special difficulties recruiting initial workforce 1 = Yes; 0 = No.	II 2.19
34	Procedure laid down by Head Office for labour recruitment 1 = Yes; 0 = No.	II 2.22.1

5.2. The collective view was that it was necessary to include an older-established firm. Thus eight 'Immigrant establishments' (origin 1965-70) which also satisfied the 'Expansion criterion' were included, and three 'Old-established establishments' likewise. These were added immediately to 22 'Establishments new to the region' to make up an analysis of 33 returns from the SURVEY OF PLANT; a tabulation of about 900 cells.

5.3. The main objective of a somewhat exhaustive analysis was to see whether there were obvious connections between variables ('factors') which would provide for the clustering together of firms into 'types'. Thus if four main 'types' were discernible then the selection of firms could be undertaken by sampling one factory from each 'type'. One theoretically simple stage in the analysis was to compare together those factors on which it was possible to divide the 33 firms in to two nearly equal groups; from the resulting tables of 4 cells for

each comparison it is possible to derive one figure (positive or negative) showing the number of factories at which two factors work in the same direction. There were some simple, clear results: for example, an association between a predominance of females in the workplace and travel-to-work by foot; a relationship between male employment and the number of vacancies. Without pressing the point no clear 'typologies' emerged. However, with 'factors' like the nature of the industry, where the measure used, the Standard Industrial Classification (SIC) is purely nominal, it was not felt appropriate to attempt any simple binary division. In a further exercise four 'factors', S.I.C., Location, Size, and an index of branch characteristics, were each divided in to four or more groups, and arrayed against about fifteen of the more important other factors to see how much a selection based on these four factors would produce imbalances amongst the others. Again there were no clear results. (This overall pattern is somewhat surprising considering some of the general typecasting that is sometimes applied to Development Area factories - for instance impressions that they contain a significant proportion of simple female-employing electronic assembly plant).

6. INITIAL SELECTION OF FACTORIES BY COLLECTIVE JUDGMENT

6.1. Inspection of Table 1 shows that, with a general decision to exclude 'internal movers', and a view that the smaller firms would give insufficient statistical breadth and depth, the choice had to be a relatively more simple matter. The team addressed itself to a tabulation of the variables shown at Table 2 with the knowledge and experience gained from the work of analysis in

mind. It was decided to include at least one foreign-owned firm, and to try and maintain a geographical spread which would represent the variety of travel-to-work situations in different labour markets of the region.

6.2. On the negative side it was decided:

- (i) that it was impractical to survey more than two factories north of the Tyne.
- (ii) that it would be undesirable to select more than two (out of four) factories in New Towns.
- (iii) that it would be inappropriate to select all three of the factories associated with electrical engineering, as the most prominent industrial group.
- (iv) that it would be inappropriate to select both of two factories associated with chemicals.
- (v) that one of the firms, at Peterlee had been sufficiently investigated for the time-being by other researchers.

6.3. A provisional decision was made to select firms at four locations including two of the firms which eventually agreed to the survey.

6.4. One of these firms had been selected principally on grounds of size but after consideration bearing in mind the 'untypicality' of its particular pharmaceuticals it was rejected in favour of a firm (CRAM) at Cramlington. Chemicals as a whole represent less than 5% of the jobs gained from new establishments to the Region, 1966-72, whereas electrical engineering, 19% of the total, was second in importance only to textiles. A second firm (WASH 1) at Washington was added as an alternative to WASH 2 should the latter refuse the survey. A firm at Team Valley was selected to represent older establishments.

7. SUBSEQUENT APPROACHES AND CHANGES; ESTABLISHMENTS NEW TO THE REGION

7.1. The SURVEY OF PLANT proved useful in being one of the sources for assessing the characteristics of the Manager in charge before an approach was made. In nearly all cases the Director's procedure was to seek an appointment by telephone 3 or 4 days after a letter, explain the purpose of the Survey in general and establish the principles of sampling and of confidentiality with regard to the factory as a whole, the Union and/or Works Committee and the individual employee. As regards confidentiality of the factory results all firms accepted without question that the work would be written up in the usual way for this type of work - as one of a series of case studies where the firm went unnamed. It was normal to seek consultation with workers representatives; in some cases a face-to-face meeting was arranged with the convenor and/or senior shop stewards; in other cases a fairly standard note went to an ensuing meeting of the Works Committee for approval. A second meeting nearer the time was always necessary to tie up details of the sampling, dates and interviewing rooms.

7.2. A further decision was the addition of a plant (ASHT) at Ashington as the firm in which to administer the first working draft of the questionnaire (as one of very few remaining firms). It proved possible to administer this pre-test on 26/2/75 and 5/3/75. In the event of comparatively little change in the final questionnaire it was later decided to transfer responses to the final forms (as far as possible) and then to include them in the analysis as part of the normal coding process.

7.3. A late decision was to include WASH 1 as an additional firm, partly to have an opportunity of comparing the employees of two firms in the same labour market area.

8. SELECTION OF 'IMMIGRANT' FIRM

8.1. As mentioned above this group had been included in analysis of the SURVEY OF PLANT and recourse to it was necessary in finding a substitute for another firm in the southern half of the region which gave a late refusal. After an abortive phone call to a Durham firm which was an 'Internal Mover', three approaches to 'Immigrant' establishments were made simultaneously. HART, the Hartlepool firm responded most encouragingly and was selected on this basis.

9. SELECTION OF ONE 'OLD-ESTABLISHED ESTABLISHMENT'.

Only four firms from this group appeared to satisfy the 'expansion criterion'. A Team Valley factory was selected but a meeting with them was unsuccessful, and letters were sent to a Newcastle firm, who refused by post, and to NEWB at Newburn. The latter proved co-operative, and in the event represent quite a mixture of factors to provide some comparison with the 'younger' firms. Although not established until 1958 they can be seen as part of Tyneside 'heavy industry' with a variety of trades.

10. DESCRIPTION OF THE SEVEN FIRMS

10.1. Industry, Geographic Origin and Ownership

The seven factories fall into three SIC Order totals, mechanical engineering (Order VII), electrical engineering (Order IX) and bricks, pottery, glass and cement (Order XVI). In the whole of the Northern Region, the South East and Eastern Regions were the

main sources of inward movements of plants, 1966-72.⁽²⁾ All but two of the firms have their immediate origin in the outer edges of London although one is in turn European owned and another has come into American ownership. Of the remaining two, one is directly controlled from the USA and the other is jointly owned by American and Tyneside interests.

10.2 Sex and Size. Characteristics of the respondents and response rates are included in Appendix 1.2. but the overall total of respondents contains 56% of males, which is lower than the recorded rate of 67% for factories moving into the Northern Region, 1966-72,⁽²⁾ but higher than the figure of 50% for the period 1945-65.⁽³⁾ Three of the plants had virtually equal numbers of males and females, two were predominantly female employing and two overwhelmingly male. Lists of employees, normally for the first day of the month of interviewing in the firm, provide the following totals:-

Table 3

Employment by the Factories prior to the Survey

	<u>WASH 1</u>	<u>WASH 2</u>	<u>ASHT</u>	<u>SUND</u>	<u>CRAM</u>	<u>HART</u>	<u>NEWB</u>
Male	46	17	47	45	67	231	724
Female	47	27	47	2	118	208	29
Total	93	44	94	47	185	439	753

(2) Source: unpublished summary paper of Department of Industry, Regional Office, Newcastle.

(3) BOARD OF TRADE (5).

APPENDIX 1.2

REPORT ON THE SAMPLE AND THE INTERVIEWING

1. Introduction

1.1. Appendix 1.1 reports the selection of and the reasons for choosing the seven firms in which interviews were carried out - five of them new establishments and two older-established. This Appendix outlines the process between establishing that the senior management of the seven establishments concerned were prepared to countenance the North East Area Study (NEAS) team interviewing their employees and the completion of the interviews.

1.2. We are concerned not only with the response rate but also with the factors leading to it, with the attitude of management to the survey and with the nature of the lists from which sampling (where necessary) was done. The problems which will be discussed here range from the attitude of personnel staff through to the sort of accommodation provided for interviewing and from the accuracy of the lists of employees provided to the team through to differential rates of non-response between employees in different departments of the establishments concerned.

1.3. The intended scheme of events at each of the factories was

- (i) to make contact with the general manager of the plant to establish his attitude to the team interviewing employees under his control and to discuss dates for interviewing;
- (ii) to contact his personnel staff and the employees' representatives - either union shop stewards or works committee representatives.
- (iii) to obtain lists of employees complete at a recent date;

- (iv) where appropriate - that is in four of the plants - to extract a sample of employees, and to communicate the names of the sample to the establishment.
- (v) in consultation with the personnel staff to arrange interviews and locations for interviewing.
- (vi) to carry out the interviewing and follow up those difficult to contact.

1.4. In general, this scheme was followed but in one establishment a completely different scheme operated. At SUND two of the team gained permission to do participant observation in the factory over a period of three months and the actual interviewing was carried out by one of these at the end of this period.

2. Initial Contact

At CRAM and HART initial contact was with the General Manager but detailed negotiations about interviewing procedure was delegated to the manager in charge of personnel work. At NEWB contact was with the Personnel Manager throughout. The other four factories were smaller than these three, in terms of employment and none had a manager dealing with personnel work full time. At ASHT, the pre-test firm, the General Manager and his works supervisor organised that those employees we wished to interview would be called from the shop floor and would then call each other, under the supervision of the firm. The process went fairly smoothly and it was adopted at other plants.

3. Information Imparted to Employees

A letter was sent, giving details of the nature of the survey and the North East Area Study to workers representatives - either shop stewards or a Works Committee. In many cases a notice informing the entire work force of the aims and objectives of the

survey was placed on shopfloor notice boards. At HART it is likely that the Union were never contacted, despite assurances by the management that this would be done.

4. Lists of Employees

4.1. Each establishment was asked to provide a complete and up-to-date list of employees of all grades and types. In the older established plants, NEWB and HART, a list including only employees recruited since early 1973 was requested, the cut off date being close to the average starting date for the other, newer plants. This ensured that all respondents had changed their job in the recent past and that all questions, especially those concerning the labour market, were applicable to all interviewees.

4.2. The lists which were supplied varied in nature and accuracy but no systematic errors were evident. From the information provided it is possible to tabulate details of their labour forces; see Table 1.

Table 1

FIRM	<u>All Employees</u>			<u>'Staff' Employees</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
WASH 1	46	47	93	6	1	7(a)
WASH 2	17	27	44	3	1	4(a)
ASHT	47	47	94	18	5	23(b)
SUND	45	2	47(e)	2	2	4(a)
CRAM	67	118	185(e)(f)	39	9	48(a)
HART	231	208	439	36	22	58(c)
NEWB	724	29	753	112	1	113(d)

NOTES

- (a) Includes junior clerical staff but not shopfloor supervisors.

- (b) Includes shopfloor supervisors, junior clerical staff but not chargehands.
- (c) Includes shopfloor supervisors and junior clerical staff.
- (d) Does not include shopfloor supervisors or junior clerical staff.
- (e) Total includes the General Manager.
- (f) Total does not include canteen staff, industrial cleaners or security guards as these workers were not employed by the firm.

5. Sampling

5.1. For the pre-test at ASHT it was not thought feasible to sample more than 50 employees. A 50% sample was decided upon reflecting the male-female split in the firm but monthly paid staff under-represented since the interests of the team were concentrated upon shopfloor workers.

Table 2 ASHT Sample

Employees as at 19.2.75

	<u>Weekly Paid</u>	<u>Monthly Paid</u>	<u>Row Total</u>
Male	29 (19)	18 (4)	47 (23)
Female	42 (22)	5 (2)	47 (24)
Total	71 (41)	23 (6)	94 (47)

Figures in parenthesis show the numbers sampled from each group.

5.2. For the main fieldwork, it was felt that a case study approach to a survey of employees at six factories was appropriate and that this implied an attempt to interview the entire work force in the smaller establishments - WASH 1 (93); WASH 2 (44); and SUND (47).

5.3. At CRAM 100 employees were selected by means of a stratified random sample with equal sampling fraction throughout all depart-

ments, separated by sex and shift, where appropriate. A summary is shown at Table 3.

Table 3 CRAM Sample

					Shift			
					Day		Evening	
	M	F	M	F	M	F	M	F
Staff	38 (21)	9 (5)	37 (20)	9 (5)	1 (1)	-	-	-
Shopfloor: Supervisors & Tradesmen	28 (15)	4 (2)	18 (10)	4 (2)	8 (4)	-	2 (1)	-
Process operators	-	105 (57)	-	72 (39)	-	30 (16)	-	3 (2)
	66 (36)	118 (64)	55 (30)	85 (46)	9 (5)	30 (16)	2 (1)	3 (2)

5.4. At NEWB and HART it was also decided that the total potential sample should be 100. The cut-off dates of recruitment referred to at 4.1 above were 1.4.73 at NEWB and 1.5.73 at HART, both dates being selected on the basis of convenience to the firm and approximation to the average starting date for the other five factories.

Employees at NEWB were divided into sixteen 'departments' and the sample chosen within these with equal probability in proportion to the total number of employees in each 'department' (not the number of 'new' employees). This avoided over-emphasis on 'departments' with high turnover rates. Table 4 gives the details.

Table 4 NEWB Sample

	<u>Total</u>	<u>(New)</u>	<u>Sample</u>
<u>Males</u>			
1. All monthly paid	112	(13)	13*
2. Weekly paid (except Personnel Dept)	44	(20)	8
3. Personnel Dept.	12	(4)	2
4. Extrusion	39	(19)	7
5. Baking	67	(38)	12
6. Brick Maintenance	36	(6)	6*
7. Graphitising	90	(50)	16
8. Maintenance	72	(26)	13

	<u>Total</u>	<u>(New)</u>	<u>Sample</u>
9. Inspection	29	(6)	5
10. Hunt shop	48	(26)	8
11. Shipping /13 shop	61	(23)	11
12. Services	96	(58)	17
13. Pilot/Sampling/Stores	18	(3)	3*

Females

14. Monthly paid	1	(-)	-
15. Weekly paid (except Personnel Dept.)	19	(2)	2*
16. Personnel Dept.	10	(5)	2
	753	(299)	125

Note that Table 4 indicates a sample of 125 and not 100 as previously mentioned. During the interviewing it was found that labour turnover since the date of compilation of the list supplied by the firm had been so high that an achieved sample of more than 70 was unlikely. Thus, without loss of randomness the sample was increased in size. It was found that the sample sizes in some 'departments' exceeded the number of potential respondents (marked * in Table 4) so this excess was returned to the remainder and an iterative procedure undergone. In interpreting the results, therefore, a purist might wish to weight the responses from these few 'departments' but this has not been done in the main text.

The system of selection at HART was initially the same as that at NEWB, as shown by Table 5.

Table 5. HART sample : Stage 1

	<u>Total</u>	<u>(New)</u>	<u>Sample</u>
<u>Males</u>			
1. Glass Line	75	(43)	18
2. Assembly	31	(24)	8
3. Plastics	21	(7)	5
4. Inspection	9	(5)	2
5. Engineering	13	(1)	1*

<u>Males</u> (Cont.)	<u>Total</u>	<u>(New)</u>	<u>Sample</u>
6. Stores	13	(6)	3
7. Toolroom	12	(1)	1*
8. Transport : Drivers	11	(11)	3
9. Printroom; Can Line etc.	11	(9)	3
10. Office	7	(5)	2
11. Shopfloor supervisors	28	(9)	7
 <u>Females</u>			
12. Glassline	82	(68)	19
13. Assembly	47	(31)	10
14. Plastics	26	(26)	6
15. Inspection	17	(10)	4
16. Cleaners	6	(4)	1
17. Printroom, Can Line, Canteen	8	(8)	2
18. Office	19	(15)	4
19. Shopfloor Supervisors	3	(1)	1
Totals	439	(284)	100

During the interviewing it became apparent that large numbers of the sample had left the firm. A second list was requested from the management and this revealed that of the first sample of 44 shopfloor males and 42 shopfloor females only 26 males and 20 females appeared on the new list. A total of 59 people appeared on the second list but not the first. To increase the number of completed interviews it was decided to increase the sample by 40 selected from these 59 names which appeared only on the new list. These were chosen by simple random sample of 18 from 32 males and 22 from 27 females.

6. Arrangement and Location of Interviews

At SUND. the interviews took place on the shopfloor; at the other factories accommodation was made available by the management in which to conduct the interviews. At NEWB this consisted of three rooms in the Health Centre for manual workers and a conference room for staff personnel. At CRAM an area of an open-plan office, which

nevertheless afforded a reasonable degree of privacy, was set aside for interviewing. At WASH 2 the accommodation was the Production Supervisor's Office and the First Aid room. At WASH 1 and HART the canteen was used for interviewing while at ASHT a partitioned-off area of the shopfloor which had been used as a training school was utilized.

7. Response Rates

Table 6 Effective Response Rates

	<u>WASH 1</u>	<u>WASH 2</u>	<u>ASHT</u>	<u>SUND</u>	<u>CRAM</u>	<u>HART</u>	<u>NEWB</u>
1. Sample size	93	44	47	46	100	137(a)	119(b)
2. Effective Sample Size (excludes leavers)	86	44	47	46	98	104	103
3. Total Response	61	27	37	39	78	80	71
4. Refusals	6	10	4	4	16(c)	5	7
5. Absent (e)	13	5	6	1	1	7	6
6. Other (includes not contacted)	6	2	-	2	3	12	19(d)
7. Response Rate							
(3) ÷ (2)	71.0%	61.4%	78.8%	84.8%	79.7%	76.9%	68.9%

Notes

- (a) 100 originally, plus addition of 40, minus 2 whose names appeared in different forms on the first and second lists and who were sampled twice, minus 1 who had been recruited before the cut-off date.
- (b) 100 initially, plus addition of 25, minus 1 who was sampled twice because of a mistake on the original list, minus 5 who had been recruited before the cut-off date.
- (c) 8 of these were on sections of process operators experiencing difficulties between supervisors and workers.
- (d) Many of those not contacted were on a different part of the shift pattern than that expected.
- (e) Absentee rates are largely dependent on the number of days on which interviewing took place.

7.1. Table 6 sets out the position of response and non-response.

Out of a total effective sample size of 528, refusals amounted to 52 - a rate of slightly less than 10%, or of just over 10% if those who were never contacted are removed from the total of 528. 34 of the 52 were male and 18 female, from a total effective sample of 311 males and 217 females. This gives refusal rates of 10.9% for males, and 8.3% for females.

7.2. Differential response rates in different departments of the various establishments are likely to affect the overall profile gained from examining the results of the questioning; no overall pattern emerges, however. Nevertheless it should be noted that in HART the response rate among white collar workers is appreciably higher than average; the equivalent rate at CRAM is correspondingly below average.

7.3. The overall response of 393 from an effective sample of 528, a rate of 74.4% is not too disappointing. The level of co-operation given to us by the relevant employees - in all seven establishments - was very high; particularly when one considers that there was no apparent benefit accruing to the establishment or to the individual employee.

APPENDIX 1.3

COPY OF THE SURVEY QUESTIONNAIRE

NORTH EAST AREA STUDY, UNIVERSITY OF DURHAM

Employment by New Manufacturing Industry in North East England

CARD 1

Time started:

Date of Interview:

Respondent's ID

Interviewer's ID

Day of week & shift

Sex: M 1, F 2

Firm's classif resp

Location of firm

c1-5

c6-7

c8-9

c10

c11-13

c14-17

For binary code questions, where appropriate, existing codes, 7 for don't know, 8 for not applicable and 9 for refusal to answer.

"I would like to start by asking a few questions about how you travel to work now and in the past."

Work through questions 1 to 5 for present job, and then for previous job.

1. HOW DO YOU NORMALLY COME TO WORK?

01 bus 05 train
02 workers' bus 06 walk
03 own Car 07 cycle
04 lift in Car 66 other.....

Present

Previous

c18-19

c20-21

2. HOW DO YOU NORMALLY RETURN HOME?

codes as qn 1

Present

Previous

c22-23

c24-25

3. HOW LONG ON AVERAGE DOES IT TAKE?

record number of minutes

Present

Previous

c26-27

c28-29

4. WHAT IS THE TOTAL DISTANCE BETWEEN YOUR HOME AND PLACE OF WORK?

record number of miles

Present

Previous

c30-31

c32-33

5. HOW MUCH ON AVERAGE DO YOU SPEND PER WEEK ON TRAVEL TO AND FROM WORK?

record number of pence

Present

Previous

c34-36

c37-39

6. DO YOU THINK THAT YOUR PRESENT JOURNEY IS BETTER OR WORSE THAN YOUR PREVIOUS JOURNEY TO WORK?

	<u>c40</u>	
Better	1	to 6a
Worse	2	to 6a
Same	3	to 7

If 'Better' or 'Worse' to 6

7 8 9

6a IN WHAT WAYS?

c41-42

c43-44

2.

Check answer to qn 1 (present): if 03,04 ask qn 7, if any other ask qn 8

7. (if travel to work by car) WHY DO YOU PREFER TO TRAVEL
TO WORK BY CAR AND NOT BY PUBLIC TRANSPORT?

c45-46

01 no available public transport

☐

to qn 10

02 too long to wait for bus

03 the journey is too long

04 a change is involved

05 need car for work

06 other.....

8. (if travel to work by means other than car)
DOES YOUR HOUSEHOLD HAVE A CAR?

c47

yes 1

to qn 8a

no 2

to qn 9

7 8 9

rubric

If 'Yes' to 8

8a WHY DON'T YOU USE IT TO TRAVEL TO WORK?

c48-49

01 can't drive

☐

02 other family use it

03 no car park here

04 too expensive

05 roads too congested

06 other.....

Only for those answers 01,02,05 to qn 1 (present)

9. (if travel to work by public transport) DO YOU HAVE
ANY PROBLEMS IN TRAVELLING TO WORK BY PUBLIC TRANSPORT?
WHAT PROBLEMS?

c50-51

☐

c52-53

☐

10. (all) WHAT IS YOUR (EXACT) ADDRESS? IS IT RENTED
OR OWNER OCCUPIED? IF RENTED, FROM WHOM?

c54-57

☐

1 council

2 New Town Corporation

3 NCB

4 private landlord

5 owner occupied

6 other.....

c58

☐

CARD 2

ID c1-5

11. WERE YOU LIVING THERE (address given in qn 10) IN APRIL 1971?

c6
yes. 1 to qn 12
no 2 to qn 11a

7 8 9

If 'No' to 11

11a WHAT WAS YOUR PREVIOUS ADDRESS? WAS IT RENTED OR OWNER OCCUPIED? IF RENTED, FROM WHOM?

c7-10

- 1 council
- 2 New Town Corporation
- 3 NCB
- 4 private landlord
- 5 owner occupied
- 6 other.....

c11

11b WHEN DID YOU MOVE TO YOUR PRESENT ADDRESS?
record month and year
.....

c12-15

11c WHAT WERE YOUR REASONS FOR MOVING?

c16-17

11d HOW DOES WHERE YOU LIVE NOW COMPARE WITH WHERE YOU USED TO LIVE? Probe for area and house.

c18-19

c20-21

12. (ABOUT YOUR PRESENT HOME), HAS IT BEEN ALTERED OR MODERNISED SINCE YOU MOVED IN AND SINCE APRIL 1971?

c22
yes 1 to qn 12a
no 2 to qn 13

7 8 9

If 'Yes to 12

12a IN WHAT WAYS?

c23-24

c25-26

12b DID YOU PAY ANYTHING TOWARDS THE ALTERATIONS YOURSELVES? HOW MUCH?

c27
yes 1
no 2

7 8 9

record sum in pounds

c28-30
£

4.

Work History

13. HOW OLD WERE YOU WHEN YOU LEFT SCHOOL?

record age in years

c31-32

14. WHAT TYPE OF SCHOOL WAS IT?

1 elementary	4 technical/commercial
2 secondary modern	5 comprehensive
3 grammar	6 other.....

c33

CODERS TO SPARE PAGE

Answers to questions on work history are recorded on the next page, for each job required record the answers in the table. Return to this page for answers to qn 16

15i WHAT EXACTLY IS YOUR JOB HERE?

15ii WHAT WAS YOUR JOB BEFORE THIS ONE? AND BEFORE THAT? AND BEFORE THAT?

15iii WHAT IS THE JOB IN YOUR ENTIRE WORKING LIFE YOU HAVE SPENT LONGEST WORKING AT?

For each of the (up to) five jobs given ask each of the following questions, except where indicated in the table.

- IN WHAT FIRM (establishment)?
- WHERE WAS THAT?
- WHEN DID YOU WORK AT THAT JOB?
probe exact dates
- DID YOU RECEIVE TRAINING FOR THAT JOB? OF WHAT SORT?
FOR HOW LONG?
- WHY DID YOU LEAVE THAT JOB?
- BETWEEN THAT JOB AND THE NEXT ONE WAS THERE A GAP? WERE YOU
(REGISTERED AS) UNEMPLOYED? FOR HOW LONG?

CARD 5

c1-5

ID

				5

16. HAVE THERE BEEN ANY OTHER JOBS FOR WHICH YOU
HAVE RECEIVED TRAINING (OR FOR WHICH YOU HAVE
FELT QUALIFIED THROUGH EXPERIENCE)?

	c6
yes	1
no	2

to qn 16a
to qn 17

7 8 9

If 'Yes' to 16

16a WHAT WAS THAT JOB/WERE THOSE JOBS?
WHY ARE YOU NOT DOING THAT JOB ANY MORE?

Job

Reason

Job i

Job ii

c7-11

c12-13

c14-18

c19-20

JOB/OCCUPATION	NAME OF ESTABLISHMENT	LOCATION	DATES	REASONS FOR LEAVING	TRAINING		
					YES/NO	TYPE	LENGTH
PRESENT JOB			D.				
			GAP				
PREVIOUS JOB			D.				
			GAP				
JOB BEFORE THAT			D.				
			GAP				
JOB BEFORE THAT			D.				
			GAP				
LONGEST JOB			D.				
			LENGTH				

Footnote: Change of Job entered only if Change of Establishment.
Only record jobs where worked over 16 hours per week.

17. HAVE YOU EVER HAD A JOB OUTSIDE YOUR HOME AREA?

c21
yes 1 to qn 17a
no 2 to qn 18

If 'Yes' to 17

7 8 9

17a WHERE?

war service and national service to be
separated from voluntary enlistment

c22-25

☐ ☐ ☐ ☐

c26-29

☐ ☐ ☐ ☐

18. HAVE YOU EVER HAD A JOB OUTSIDE THE NORTH EAST?

c30
yes 1 to qn 18a, 19
no 2 to qn 18b

If 'Yes' to 18

7 8 9

18a WHERE?

war service and national service to be
separated from voluntary enlistment

c31-34

☐ ☐ ☐ ☐

c35-38

☐ ☐ ☐ ☐

If 'No' to 18

18b HAVE YOU EVER SERIOUSLY CONSIDERED
TAKING A JOB OUTSIDE THE NORTH EAST?

c39
yes 1 to qn 18c
no 2 to qn 19

If 'Yes' to 18b

7 8 9

18c WHAT DID YOU DO ABOUT IT?

c40-41

☐

nothing 22

19. WHEN YOU ARE LOOKING FOR A JOB WHAT SORTS
OF THINGS DO YOU CONSIDER MOST IMPORTANT?

01 pay/wages 05 work interest/satisfaction
02 travel to work 06 hours/shift system
03 type of work 07 job security
04 working conditions 66 other.....

c42-43

1st response

☐ ☐

c44-45

2nd response

☐ ☐

20. HOW DOES THIS JOB COMPARE WITH YOUR PREVIOUS JOB?

c46-47

☐ ☐

c48-49

☐

7.

21. WAS THERE A PARTICULAR REASON FOR YOU MAKING UP YOUR MIND TO LEAVE YOUR LAST JOB AT THE TIME YOU DID?

c50-51

☐

check qn 15 in case sacked or made redundant

none 22

22. HOW DID YOU FIRST HEAR ABOUT THE JOB YOU FIRST APPLIED FOR WITH THIS FIRM?

c52-53

☐

- 01 inquired at firm 05 employment exchange
- 02 advert in paper 06 personal contact with
- 03 friends employee
- 04 family/relatives 66 other.....

23. WHAT DID YOU KNOW ABOUT THAT JOB AND THE FIRM BEFORE YOU APPLIED?

c54-55

☐

nothing 22

CARD 6

24. WHILE YOU WERE LOOKING AROUND FOR A JOB BEFORE YOU JOINED THIS FIRM, WHICH GEOGRAPHIC AREAS DID YOU CONSIDER WORKING IN? WHY THIS AREA?

c1-5
ID ☐

	Area	Reason
1st		
2nd		
3rd		
4th		
5th		

c6-9
☐
c10-11
☐
c12-15
☐
c16-17
☐
c18-21
☐
c22-23
☐
c24-27
☐
c28-29
☐
c30-33
☐
c34-35
☐

24a WHY NOT (other areas)?

THE

B,C: A = NEWCASTLE B = LONGBENTON C = KILLINGWORTH D = BEDLINGTON AREA
PS: A = NEWCASTLE B = HO'TON-L-S C = WASHINGTON D = SOUTH SHIELDS
W,W: A = NEWCASTLE B = GATESHEAD C = FELLING D = SUNDERLAND
K,C: A = WILLINGTON B = SPENNYMOOR C = WEARDALE D = BISHOP AUCKLAND
AGL: A = NEWCASTLE B = GATESHEAD C = BLAYDON D = RYTON

A:

c36-37

☐

B:

c38-39

☐

C:

c40-41

☐

D:

c42-43

☐

25. WILL YOU TELL ME THE NAMES OF ANY FACTORIES AND OTHER WORK PLACES AT WHICH YOU SERIOUSLY CONSIDERED GETTING A JOB? WHICH OF THESE DID YOU ACTUALLY CONTACT?

	name of firm	location	contact yes 1, no 2
i	c44-47 [][][][]	c48-51 [][][][]	c52 []
ii	c53-56 [][][][]	c57-60 [][][][]	c61 []
iii	c62-65 [][][][]	c66-69 [][][][]	c70 []
iv	c71-74 [][][][]	c75-78 [][][][]	c79 []

CARD 7

c1-5

ID [][][][] 7

26. DID YOU FEEL YOU HAD A REAL CHANCE OF GETTING A JOB WITH ANY OTHER FIRM (or other workplace) WHEN YOU TOOK THIS JOB?

not within this factory

c6
yes 1 to qn 26a
no 2 to qn 27

7 8 9

If 'Yes' to 26

26a WHY DID YOU TAKE THIS ONE THEN?

c7-8

[][]

Training

27. HAVE YOU EVER COMPLETED AN APPRENTICESHIP?

c9
yes 1 to qn 27a
no 2 to qn 28

7 8 9

If 'Yes' to 27

27a IN WHAT TRADE AND WITH WHICH FIRM (establishment)?
trade:

c10-11

[][]

firm and location

c12-15

[][][]

- 27b IS WHAT YOU DO NOW THE KIND OF THING MOST PEOPLE IN YOUR TRADE DO?

c16
yes 1
no 2

7 8 9

9.

28. HAVE YOU EVER UNDERTAKEN ANY FURTHER TRAINING OR RETRAINING WHICH YOU HAVEN'T MENTIONED SO FAR?

c17
yes 1 to qn 28a, 29
no 2 to qn 28b

7 8 9

If 'Yes' to 28

28a WHAT WAS IT? WHAT DID YOU THINK OF IT?

nature:

c18-19

opinion:

c20-21

If 'No' to 28

28b HAVE YOU EVER CONSIDERED GETTING ANY (FURTHER) TRAINING OR RETRAINING?

c22
yes 1 to qn 28c, 29
no 2 to qn 28d

7 8 9

If 'Yes' to 28b

28c WHAT WAS IT?

c23-24

If 'No' to 28b

28d WHY NOT?

c25-26

29. HAVE YOU BY ANY CHANCE HEARD OF THE SCHEMES AVAILABLE....

i AT GOVERNMENT (RE)TRAINING OR SKILL CENTRES?

c27
yes 1
no 2

7 8 9

ii THROUGH THE TRAINING OPPORTUNITIES SCHEME?

c28
yes 1
no 2

7 8 9

iii AT TECHNICAL COLLEGES?

c29
yes 1
no 2

7 8 9

30. DID YOU GET ANY TRAINING ON STARTING YOUR PRESENT JOB?

c30
yes 1 to qn 30a
no 2 to qn 31

7 8 9

If 'Yes' to 30

30a HOW LONG FOR?

record number of weeks

c31-32

30b WHERE DID THE TRAINING TAKE PLACE?

c33-34

30c WHAT IS YOUR OPINION OF IT?

c35-36

31. HAVE YOU DONE ANY OTHER JOBS IN THIS FACTORY?

c37
yes 1
no 2
7 8 9

32. WOULD YOU LIKE TO GET PROMOTION IN THIS FIRM?

c38
yes 1
no 2
7 8 9

33. WHAT DO YOU THINK THE OPPORTUNITIES ARE LIKE FOR
GETTING ON IN THIS FIRM NOW? AND IN THE FUTURE?

now:

c39-40
☐ ☐

future:

c41-42
☐ ☐

34. IF SOMEONE ASKED YOU WHAT THIS FIRM WAS LIKE WHAT
WOULD YOU SAY?

c43-44
☐ ☐

35. IN WHAT WAYS, IF ANY, DO YOU THINK THE CONDITIONS
IN THIS FACTORY COULD AND SHOULD BE IMPROVED?

c45-46
☐ ☐
c47-48
☐ ☐

36. WHAT THINGS DO YOU LIKE ABOUT WORKING HERE?

check for both job and factory

c49-50
☐ ☐

c51-52
☐ ☐

37. WHAT THINGS DO YOU DISLIKE ABOUT WORKING HERE?

check for both job and factory

c53-54
☐ ☐

c55-56
☐ ☐

11.

Job Security

38. HAVE YOU EVER SERIOUSLY THOUGHT OF LEAVING HERE?

c57
yes 1 to qn 38a
no 2 to qn 39
sometimes 3 to qn 39

7 8 9

If 'Yes' to 38

38a WHAT FIRMS HAVE YOU CONTACTED?

none 2222

firm location

i

c58-61
[][][][]

ii

c62-65
[][][][]

iii

c66-69
[][][][]

iv

c70-73
[][][][]

CARD 8

c1-5

ID [][][][] 8

38b DO YOU THINK THAT YOU WILL LEAVE THEN?

c6
yes 1
no 2

7 8 9

39. DO YOU THINK YOUR JOB HERE IS SECURE?

c7
yes 1
no 2
'hope so' 3
depends on national situation 4
unsure 5

7 8 9

39a WHY DO YOU THINK THIS IS?

asked regardless of answer to 39, although exact wording may need alteration

c8-9
[][]

39b ARE THERE ANY OTHER JOBS AROUND HERE WHICH YOU FEEL ARE MORE SECURE?

c10
yes 1 to qn 39c
no 2 to qn 40

7 8 9

If 'Yes' to 39b

39c WHICH? WHY DO YOU THINK THIS IS?

which why

i

c11-14
[][][][]

c15-16
[][]

ii

c17-20
[][][][]

c21-22
[][]

iii

c23-26
[][][][]

c27-28
[][]

iv

c29-32
[][][][]

c33-34
[][]

Remuneration

40. DO YOU WORK OVERTIME?

c35
 yes 1 to qn 40a,b,41
 no 2 to qn 40c

7 8 9

If 'Yes' to 40

40a WHAT IS THE NORMAL AMOUNT YOU WORK?

record number of hours

c36-37

40b WOULD YOU LIKE TO WORK MORE OR LESS OVERTIME?

record comment

c38
 more 1
 less 2
 same 3

7 8 9

If 'No' to 40

40c WOULD YOU LIKE TO WORK OVERTIME?

c39
 yes 1
 no 2

7 8 9

41. WHAT WAS YOUR TAKE HOME PAY LAST WEEK?

record answer in pounds and pence; if answer
 difficult to obtain show card and record letter;
 if monthly given
 write here.....

c40-43
 £
 c44

41a WAS THAT NORMAL?

c45
 yes 1 to qn 42
 no 2 to qn 41b

7 8 9

If 'No' to 41a

41b WHAT IS THE NORMAL AMOUNT?

record answer in pounds and pence; if answer
 difficult to obtain show card and record letter;
 if monthly given
 write here.....

c46-49
 £
 c50

42. HOW MANY HOURS DID YOU WORK THAT WEEK?

record number of hours

c51-52

42a WAS THAT NORMAL?

c53
 yes 1 to qn 43
 no 2 to qn 42b

7 8 9

If 'No' to 42a

42b WHAT IS THE NORMAL AMOUNT?

record number of hours

c54-55

43. WHICH SHIFT WERE YOU WORKING THAT WEEK?

c56

13.

44. WHAT WAS YOUR GROSS PAY (top line) LAST WEEK?

c57-60
£

record answer in pounds and pence; if answer
difficult to obtain show card and record letter;
if monthly given
write here.....

c61

44a WAS THAT NORMAL?

c62
yes 1 to qn 45
no 2 to qn 44b

7 8 9

If 'No' to 44a

44b WHAT IS THE NORMAL AMOUNT?

c63-66
£

record answer in pounds and pence; if answer
difficult to obtain show card and record letter;
if monthly given
write here.....

c67

45. WHAT WAS YOUR TAKE HOME PAY IN YOUR PREVIOUS
JOB JUST BEFORE YOU LEFT?

CARL 9
c1-5
ID
c6-9
£

record answer in pounds and pence; if answer
difficult to obtain show card and record letter;
if monthly given
write here.....

c10

46. WHAT WAS YOUR GROSS PAY (top line) IN YOUR
PREVIOUS JOB JUST BEFORE YOU LEFT?

c11-14
£

record answer in pounds and pence; if answer
difficult to obtain show card and record letter;
if monthly given
write here.....

c15

47. HOW MANY HOURS WERE YOU WORKING FOR THAT?

c16-17

record number of hours

48. CAN WE CONSULT THIS FIRM'S RECORDS OF WHAT YOU HAVE
EARNED IN THE PAST?

c18
we can consult 1
we cannot consult 2

7 8 9

Not B,C

49. IN COMPARISON WITH OTHER JOBS IN THE FACTORY,
WOULD YOU SAY THAT YOUR PAY IS:

	HIGH	1	to qn 49a
check list is high, low, <u>NOT</u> more, less;	ABOUT RIGHT	2	to qn 49a
read only first three, do not	LOW	3	to qn 49a
read out 'Can't compare'	can't compare	4	to qn 50

If 'High', 'About Right' or 'Low' to 49

7 8 9

49a WHICH JOBS ARE YOU COMPARING WITH?

i

c20-24

ii

c25-29

iii

c30-34

Not B,C

50. COMPARED WITH OTHER JOBS AROUND HERE OF SIMILAR
SKILL OUTSIDE THIS FACTORY, WOULD YOU SAY THE
PAY FOR THE JOB IS:

check list is high, low, NOT more, less;
read only first three, do not read
out 'Can't compare'

HIGH	1	to qn 50a, c
ABOUT RIGHT	2	to qn 50a, c
LOW	3	to qn 50a, b
can't compare	4	to qn 51

c35

7 8 9

If 'High', 'About Right' or 'Low' to 50

50a WHICH JOBS ARE YOU COMPARING WITH?

i

c36-39
☐☐☐☐

ii

c40-43
☐☐☐☐

iii

c44-47
☐☐☐☐If 'Low' to 50

50b WHY DO YOU THINK THIS IS?

c48-49
☐☐If 'High' or 'About Right' to 50

50c HAVE YOU TRIED FOR ONE OF THESE JOBS?

yes	1	to qn 51
no	2	to qn 50d

7 8 9

If 'No' to 50c

50d WHY NOT?

c51-52
☐☐Not B,C

51. COMPARED WITH SIMILAR JOBS, DO YOU THINK THAT
THE WAGES PAID AT OTHER FACTORIES BELONGING
TO THIS COMPANY ARE:

check list is high, low, NOT more, less;
read only first three, do not read
out 'Can't compare'

HIGH	1
ABOUT RIGHT	2
LOW	3
can't compare	4

c53

7 8 9

52. COMPARED WITH OTHER PLACES WHERE YOU HAVE
WORKED, DO YOU THINK THAT WORK HERE IS
ORGANISED EFFICIENTLY?

yes	1
no	2

c54

7 8 9

52a IN WHAT WAYS?

c55-56
☐☐c57-58
☐☐

15.

Industrial Relations

Not B,C

53. ARE YOU A MEMBER OF A TRADE UNION?

c59
yes 1 to qn 53a
no 2 to qn 54

7 8 9

If 'Yes' to 53

53a WHICH ONE?

c60-61

Not B,C

54. WERE YOU A MEMBER OF A TRADE UNION IN YOUR LAST JOB?

c62
yes 1
no 2

7 8 9

Not B,C

55. DO YOU THINK ALL WORKERS SHOULD BELONG TO A TRADE UNION?

c63
yes 1
no 2
up to them 3

7 8 9

56. HAVE YOU EVER ASKED YOUR SHOP STEWARD/WORKS COMMITTEE REPRESENTATIVE TO TAKE UP A GRIEVANCE FOR YOU?

c64
yes 1 to qn 56a
no 2 to qn 57

7 8 9

If 'Yes' to 56

56a WHAT WAS THE LAST GRIEVANCE ABOUT?

c65-66

57. WHAT ARE RELATIONS LIKE BETWEEN THE SHOP FLOOR AND MANAGEMENT?

c67-68

58. HAVE THERE BEEN ANY PARTICULAR ISSUES WHICH HAVE BEEN BROUGHT TO THE NOTICE OF EITHER THE UNION/WORKS COMMITTEE OR THE MANAGEMENT?

c69
yes 1 to qn 58a
no 2 to qn 59

7 8 9

If 'Yes' to 58

58a WHAT WAS IT ABOUT?

c70-71

c72-73

17.

After household table has been completed, establish who is the Head of the Household, i.e. name in rent book or owner of home - if in doubt be a male chauvinist.

If Head of Household is other than respondent

59a WHAT TYPE OF FIRM DOES (did, if currently not in employment) (S)HE WORK FOR?

state products of firm

59b WHAT JOB DOES (did, if currently not in employment) (S)HE DO?

state exact title

60. WHAT IS YOUR TOTAL NET HOUSEHOLD INCOME?

c32-35
£

record answer in pounds and pence; if answer difficult to obtain show card and record letter; if monthly given write here.....

c36

61. SINCE YOU TOOK A JOB WITH THIS FIRM HAS YOUR HOUSEHOLD BOUGHT (STARTED TO RENT):

if answer yes then ask: WITHIN LAST SIX MONTHS?

code in each box:

- 1 yes, not in last six months
- 2 yes, within last six months
- 3 no

DINING ROOM SUITE
THREE PIECE SUITE/ARMCHAIRS
COLOUR TV
FITTED CARPETS
TELEPHONE
FRIDGE/DEEP FREEZE
CAR OR VAN

c37
 c38
 c39
 c40
 c41
 c42
 c43

c44

61a ANY OTHER THINGS LIKE THAT?

record item, and whether within last six months

c45-46

c47-48

If positive response to 'Car or Van'

61b WHAT YEAR (WAS IT FIRST REGISTERED)?

if can't remember get letter of registration

c49-50

THANK YOU FOR YOUR CO-OPERATION

Time finished:

time taken

c51-52

APPENDIX 2.1

ASHINGTON MANUFACTURING INDUSTRY EMPLOYERS 1971

Size Band	SIC MLH (1968 SIC)	<u>Firm & Location</u>
A	V <u>275</u>	Caldo Chemicals, Linton Colliery, Morpeth
A	VI <u>321</u>	Alcan (UK) Ltd., Alcan Project Site.
A	VII 339	American Air Filter Ltd., Linton Colliery, Morpeth
A	341	Clarke Chapman & Co. Ltd., Alcan Project Site.
A	<u>341/2</u>	Exotic Metals Engineering Co., Jubilee Estate.
B	IX 361	C.A. Parsons, Alcan Project Site.
A	<u>361</u>	A. Reyrolle & Co. Ltd., Trading Estate, Ashington.
A	XI 381	T. R. Creffield & Son Ltd., Jubilee Estate.
A	<u>381</u>	Hallowell Bros. Lintonville Terrace, Ashington.
A	XII <u>399</u>	Remploy Ltd., Jubilee Estate.
A	XIII <u>417</u>	Exquisite Knitwear, Newbiggin Road, Ashington.
B	XV 442	Hepworths, Jubilee Estate.
A	<u>443</u>	Jubilee Fashions, Jubilee Estate.
A	XVI 461	Northern Brick Co., Ashington Colliery, Ashington
A	<u>469</u>	Wm. Siggins & Sons, Links Quarries, Newbiggin
A	XVIII <u>484</u>	G. T. Culpitt & Sons Ltd., Jubilee Estate.
A	XIX 491	Tyne Valley Engineering, Jubilee Estate.
A	496	Carobel Manufacturing Co. Ltd., Ellington Road, Ashington.
A	496	Freedman Bros., Industrial Estate, Ashington.
A	<u>499</u>	G. T. Culpitt & Sons Ltd., Jubilee Estate.

(—) Marks end of SIC Order.

	<u>Size Band</u>	<u>No. of Employees</u>
KEY:	A	5 - 499
	B	500 - 999
	C	1000 - 1499
	D	1500 - 1999
	E	2000 +

Probability of employment by firm of MLHs listed above in 1971,
given employment in manufacturing

Probability of employment within SIC Orders represented by firms
listed above (1971), given employment in manufacturing.

P_2

0.97

Probable SIC Orders)	Mechanical engineering; electrical engin-
)	eering; clothing and footwear; other
of source employments)	manufacturing <u>plus</u> metal manufacture since
	Alcan are now (1975) large employers in
	the area.

APPENDIX 2.2

HARTLEPOOL MANUFACTURING INDUSTRY EMPLOYERS 1971

Size Band	SIC	MLH (1968 SIC)	<u>Firm & Location</u>
A	III	214	J. Pattison & Sons Ltd., West View Road.
A		214	W. & G. Cock Ltd., West View Road.
B		214	Ross Poultry Ltd., Usworth Road.
B		218	R.H.M. Foods Ltd., Greatham.
A		219	Nitrovit Ltd., Middleton Road.
A		229	Tees & Hartlepool Ice & Cold Storage Co. Fish Quay
B		231	J. W. Cameron & Co. Ltd., Lion Brewery, Stockton Street.
A		232	F. Cuthrie Ltd., Stockton Road.
A		<u>239</u>	Hartlepool Bottling Co., George Street.
E		311	British Steel Corporation, South Works
B	VI	312	British Steel Corporation, Tubes Division
A		313	Dudley & Dowell Ltd., Longhill
A		322	J. J. Hardy & Sons Ltd., Brenda Road.
A		<u>323</u>	Batchelor Robinson Ltd., Windermere Road.
A		VII 341	Surtees Engineering Ltd., West View Road.
A		341	I.M.C. Ltd., Old Cemetery Road.
A		341	Hartlepool Marine Servicing Co. Ltd.
B		341	Foster Wheeler John Brown Boilers Ltd., Brenda Road.
A		341	Wheelfin Ltd., Trading Estate.
A		341	Weststruct Ltd., Whitby Street.
A	VII	341	Stranton Engineering Co., Usworth Road.
A		341	Parkinson Construction Co., Graythorp.
A		341	Hartlepool Steel Fabrications.
B		<u>341</u>	Geo. Clarke & NEM (Hartlepool) Ltd., Ferry Road,
A		IX 361	Seal Electrical & Transformers Co.
A		361	Welders & Compressors Ltd., Graythorp.
A		361	Woded Transformers Ltd., Belle Vue Way.
A		363	Remploy Ltd., Trading Estate.
E		<u>363</u>	GEC/AEI Industrial Estate.

<u>Size Band</u>	<u>SIC</u>	<u>MLH (1968 SIC)</u>	<u>Firm & Location</u>
B	XII	399	Expanded Metal Co. Ltd., Greatham Street.
A		399	Head Wrightson Stampings Ltd., Brenda Road.
A		399	Metal Workers Ltd., Greatham Street.
A		399	Metfab, Graythorp.
A		<u>399</u>	Surtees Engineering Co. Ltd., Surtees St.
A	XV	441	Vickers Sportswear Ltd., Graythorp.
B		442	John Collier Ltd., Powlett Road.
A		443	Fashin Industries (Hartlepool) Ltd., Moreland Street.
		(-)	Marks end of SIC Order

P₁ 0.81

P₂ 0.82

Probable SIC Orders: Food, drink & tobacco; metal manufacture;
mechanical engineering; electrical engineer-
ing; metal goods n.e.s.; clothing and foot-
wear.

APPENDIX 2.3

SEATON DELAVAL MANUFACTURING INDUSTRY EMPLOYERS 1971

Size Band	SIC	MLH (1968 SIC)	<u>Firm & Location</u>
A	V	271	Safety Cleaning Solvents, Bassington, Cramlington.
A		273	Shultons (GB) Seaton Delaval
B		276	Commercial Plastics, Bassington, Cramlington
A		<u>279</u>	Fasson Adhesive Products, Nelson, Cramlington
A	VII	331	Belos Gravely, Seghill (Colliery) Dudley.
A		339	Stanley Bridges, Nelson, Cramlington.
A		339	American Air Filter, Bassington, Cramlington
A		349(M)	Waymouth Northumbria, Hartford Works, Cramlington.
A		<u>349(M)</u>	Douglas E. Ward, Station Road, Seaton Delaval
A	IX	367	Northern Audio Visual Engineering, Bassington, Cramlington.
A		<u>368</u>	Ronson Products, Bassington, Cramlington
B	XII	392	Wilkinson Sword, Bassington, Cramlington
A		<u>399</u>	Ivanhoe Forge, Station Road, Seaton Delaval
A	XIII	<u>417</u>	Exquisite Knitwear, Nelson, Cramlington
A	XVI	<u>461</u>	Northern Brick Co., East Cramlington <u>and</u> Seghill.
A	XIX	491(M)	Dunlop Angus, Bassington, Cramlington.
A		<u>495(M)</u>	Columbia Ribbon & Carbon, Nelson, Cramlington
		(-)	Indicates end of SIC Order.

Probability of employment in 1971 by firms of MLHs listed above excluding firms employing mainly males (M) given that it is employment in manufacturing.

$$P_1 \quad 0.95$$

Probability of employment in 1971 within SICs represented above, excluding (M) given employment in manufacturing

$$P_2 \quad 0.98$$

Probable SIC orders (Females only): chemical & allied; mechanical eng., metal goods n.e.s.
ADD for males Other manufacturing industries.

NOTE: This Appendix concentrates on female employment because the large majority of respondents at CRAM were women.

APPENDIX 2.4

SUNDERLAND MANUFACTURING INDUSTRY EMPLOYERS 1971

Size Band	SIC	MLH (1968 SIC)	<u>Firm & Location</u>
B	III	231	Vaux & Associated Breweries
A		232	Sykes Soft Drinks, Ryhope
A		232	W. Robson
A		<u>232</u>	Fenwick & Sons Ltd., Villa Works
E	VII	337	Coles Cranes Ltd.,
A		<u>337</u>	The Steel Group Co. Ltd., Pallion
B	IX	361	Doxford & Sunderland Ltd., Sunderland Forge
D		364	Thorn Radio Valves & Tubes Ltd., Pallion
A		364	Electrosil, Pallion.
E		363	Plessey Telecommunications Group, Southwick & Sunderland.
A		<u>367</u>	Wearside Electronics
A	X	370	Geo. Clark & WEM Ltd,
D		370	Austin & Pickersgill, Southwick
A		370	Peter Johnson & Co. Ltd., c/o Austin & Pickersgill.
A		370	Steels Eng. Installation, Pallion.
E		370	Doxford & Sunderland Ltd., Pallion.
C		370	Doxford & Sunderland Ltd., Deptford Yard
A		370	Walter Kidd
C		370	Doxford & Sunderland Eng. N. Sands.
B		370	Austin & Pickersgill Ltd., Sunderland.
A		<u>370</u>	Doxford & Sunderland Shipbuilding & Engineering.
C	XI	381	Hepworth & Grandage Ltd.
A		381	Clarks Coach Builders
B		<u>383</u>	Rolls Royce
B	XV	442(F)	Jackson the Tailor, Hendon Road.
A		442(F)	Jackson the Tailor, Ocean Road.
C		442(F)	Hepworths, Pallion
A		445(F)	L. J. & M. Refson
A		445(F)	Sunderland Mantle Co., Pallion

Size Band	SIC	MLH (1968 SIC)	<u>Firm & Location</u>
A		445(F)	Ferryhill Manufacturing Co. Ltd.
A		<u>445(F)</u>	H. Oliver & Son.
E	XVI	463	J. A. Jobling & Co. (Pyrex)
A		463	Hartley Wood & Co.
A		463	Scientific Equipment
A		463	J. A. Jobling & Co. Pallion
A		469	Webster Davidson & Co. Ltd.,
A		469	Willowcrete Manu Co. Ltd.
A		<u>469</u>	Tilling Construction Services
A	XVIII	481	Wiggins Teape
A		481	Don'tar Paper Mills
A		482	Remploy Ltd.
A		485	Portsmouth & Sunderland Newspapers
A		489	Brian Mills.
A		489	Northumbria Printing Works
A		489	W. H. Forester
A		489	J. P. Mawson
A		489	Thos. Reed & Co., High Street West
A		489	Thos. Reed & Co., Commercial Road.
A		489	J. G. Rutter
A		489	William & White
A		489	C. B. of Sunderland, Central Purchasing Department.
A		489	Lamson Paragon Ltd., Pallion
A		489	Edward Thompson Printers Ltd.
A		489	Tombola House Ltd.
A		<u>489</u>	Inkerman Publications
		(-)	indicates end of SIC Order

Probability of employment in 1971 in a firm with MLH listed above,
excluding employers of mainly female labour (F), given employment
in manufacturing.

$$P_1 = 0.79$$

Probability of employment in 1971 in SIC Orders represented by list, again excluding employers of mainly female labour; given employment in manufacturing.

P_2 0.88

Probable SIC orders: Food, drink & tobacco; mechanical eng;
electrical eng; shipbuilding; vehicles;
bricks etc; paper, printing etc.

NOTE: This Appendix concentrates on male employment because the large majority of respondents at SUND were men.

APPENDIX 2.5

NEWBURN MANUFACTURING INDUSTRY EMPLOYERS 1971

Size Band	SIC	MLH (1968 SIC)	<u>Firm & Location</u>
A	III	214	Little Farm Sausages Ltd., Industrial Estate
A		<u>218</u>	James Ross & Son (Newcastle) Ltd., Industrial Estate.
A	VII	333	Tress Engineering Co., The Stanners
A		336	Aveling Barford Ltd., Industrial Estate.
A		337	Jones Cranes Ltd., Stanners Estate.
A		<u>339</u>	Northern Hardfacing Co., High Street.
A	VIII	<u>354</u>	C. A. Woods Ltd.
A	IX	<u>369</u>	The Ever Ready Co. (G.B.) Ltd., Industrial Estate.
A	XII	<u>399</u>	Jonas Woodhead Ltd.
A	XVI	461	Northern Brick Co. Throckley
B		463	Glass Tubes & Components Ltd., Lemington
B		469	NEWB.
A		469	Neolith (1970) Ltd., Walbottle Road.
A		<u>469</u>	Concrete Products (Newburn) Ltd., Sandhills
A	XIX	<u>491</u>	Regent Tyre & Rubber Co. Ltd., N. Wylam.

(-) Indicates end of SIC Order

P_1 (male) 0.91

P_2 (male) 0.99

Probable SIC orders: mech. eng; bricks etc.; food, drink and tobacco (possibly)

NOTE: This Appendix concentrates on male employment because the large majority of respondents at NEWB were men.

APPENDIX 2.6

WASHINGTON MANUFACTURING EMPLOYERS 1971

Size Band	SIC	MLH (1968 SIC)	<u>Firm & Location</u>
A	V	<u>275</u>	Proctor & Gamble Ltd., Stephenson
B	VI	<u>312</u> (M)	Tube Products Ltd.
A	VII	339	Contair Engineering, Hartburn
A		339	Jarn Ltd.
A		339	Kater Engineering, Crowther
A		339	E. Angus Leybourne & Co. Ltd.
A		339	Molenschot Scales (GB) Ltd., Crowther
A		339	Rite Vent Ltd., Parsons
A		339	Washington Engineering Ltd., Industrial Rd.
A		341	West Line Engineering Co., Parsons
A		341	Oakes Welding Ltd., Crowther
A		349	G. Nicholson (Engineers) Ltd.
A		349	Machinery Installations Ltd., Parsons
A		<u>349</u>	T. Crossling & Co. Ltd., Parsons
B	VIII	<u>352</u>	Timex Corporation, Stephenson
A	IX	364	Littlefuse Ltd., Hartburn
A		365	R.C.A. (G.B.) Ltd., Armstrong
A		<u>365</u>	Philips Electrical Ltd., Stephenson
A	XII	390(M)	Washington Tool Co. Ltd., Crowther
A		390(M)	Small Power Dynamo (NE) Ltd., Crowther
A		390(M)	Hartburn Tools, Parsons
A		393(M)	Linread Ltd., Stephenson
A		399(M)	School Cloakroom Equipment Ltd., Crowther
A		399(M)	Chester Metal Co. Crowther.
A		399(M)	Washington Sheet Metal Works
A		<u>399</u> (M)	Wheway Watson Ltd., Parsons
A	XV	<u>445</u>	Pawson's (Washington) Ltd., Usworth
A	XVI	461(M)	Blythe's & Sons (Birtley) Ltd., Washington Station.
A		463	Newalls Insulation Co. Ltd.
A		469(M)	Natural Stone Quarries Ltd., Springwell
A		<u>469</u>	Steetley (MFG) Ltd., Springwell

Size Band	SIC	MLH (1968 SIC)	<u>Firm & Location</u>
A	XVII	<u>471</u>	Calders Ltd., Biddick Lane
A	XVIII	489	Cail & Sons, Stephenson
B	XIX	<u>499</u>	Newalls Insulation Co. Ltd.
		(-)	indicates end of SIC Order

P₁ female 0.95

P₂ female 0.97

Probable SIC orders: mech. eng; instrument eng; elect. eng; other
manufacturing industries.

NOTE: This Appendix concentrates on female employment because the
large majority of respondents at WASH 1 and WASH 2 were
women.

APPENDIX 2.7

Newcastle Manufacturing Industry Employers 1971

Size Band	SIC	MLH (1968 SIC)	Firm & Location (Newcastle except where stated otherwise)
B	III	212	Carricks (Caterers) Ltd.
A		217	Albany Confectionery Co. Ltd.
C		217	Rowntree & Co. Ltd.
A		218	Thos. Dawson
A		218	Appetiser Co. Ltd.
A		219	Epro Products Ltd.
A		231	Bass Charrington (North) Ltd.
A		231	A. Guinness & Son Ltd.
A		231	Northern Clubs Federation Brewery
C		231	Scottish & Newcastle Breweries
A		239	Newcastle Warehousing Co. Ltd.
C		<u>240</u>	W. D. & H. O. Wills
A	V	271	Thos. Ness & Co. Ltd.
A		272	Hilton-Davis Chemicals
C		272	Winthrop Laboratories
B		274	British Paints Ltd.
B		275	Proctor & Gamble (Newcastle 3)
A		<u>275</u>	Proctor & Gamble (2 addresses)
A	VI	311	Geo. Blair & Co. Ltd.
A		<u>311</u>	Raine & Co. Ltd.
A	VII	332	A. Robinson & Co.
A		332	R. Blackett Charlton & Co. Ltd.
A		332	Burma Engineering Co. Ltd.
A		332	Pearson Machine Tool Co. Ltd.
A		341	Central Design Services
A		341	Northern Furnace Equipment
A		341	Riley (IC) Products
A		341	Service Welding Co.
A		341	F. Turnbull Co. Ltd.
A		341	Tyne Draft Designs Ltd.
A		349	Anglo Swedish Electric Welding Co.

Size Band	SIC	MLH (1968 SIC)	Firm & Location (Newcastle except where stated otherwise)
A		341	Tyneside Engineering Co.
B		349	British Engines Ltd.
A		349	R. N. Dodds & Sons
A		349	Innery & Young (1959) Ltd.
A		349	T. B. Pearsons & Sons (Engineers)
A		349	Newcastle Welding Co.
B		349	R. Blackett Charlton & Co. Ltd.
A		<u>349</u>	Winn Products (Engineers) Ltd.
A	IX	361	J. J. Greenfield & Co.
E		361	C. A. Parson Ltd.
A		<u>361</u>	Watson Norie Ltd.
E	X	370	Swan Hunter Shipbuilders Ltd.
A		370	Union Insulation Co. Ltd.
A		370	U.S. Metallic Packing Co.
A		370	Seaguard Ltd.
A		370	Rowan & Boden Ltd.
A		370	Kraemar (UK) Ltd.
A		370	Mersey Insulation Co. Ltd.
B		370	Hawthorn Leslie (Engineers) Ltd.
A		370	Donkin & Co. Ltd.
A		370	Cape Insulation Ltd.
A		<u>370</u>	Chemical & Insulating Engineers
B	XIX	491	Dunlop Angus & Co. Ltd.

$P_{1(M)}$ 0.71

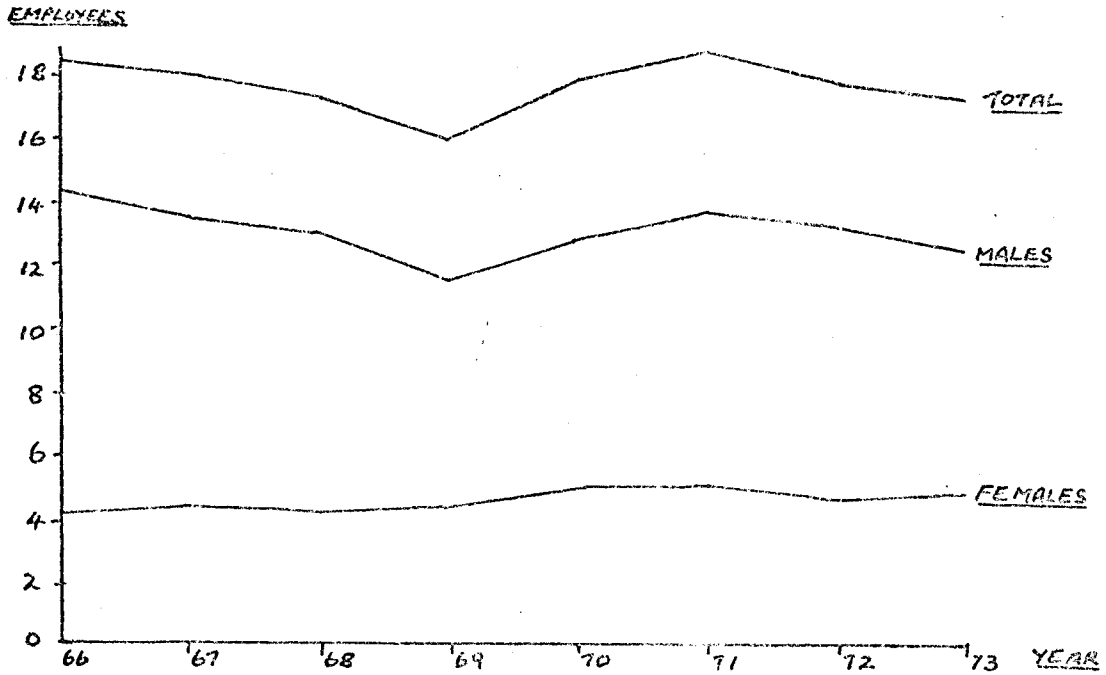
$P_{2(M)}$ 0.84

Probable SIC orders: Food, drink & tobacco; chemicals and allied; metal manufacture; mechanical engineering, electrical engineering; shipbuilding and marine engineering; paper, printing and publishing.

NOTE: This Appendix concentrates on male employment because the large majority of respondents who named Newcastle as a 'job search area' were men. (see Chapter 4).

FIGURE 2.1

ASHINGTON: TOTAL EMPLOYEES IN EMPLOYMENT ('000s)



ASHINGTON: EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)

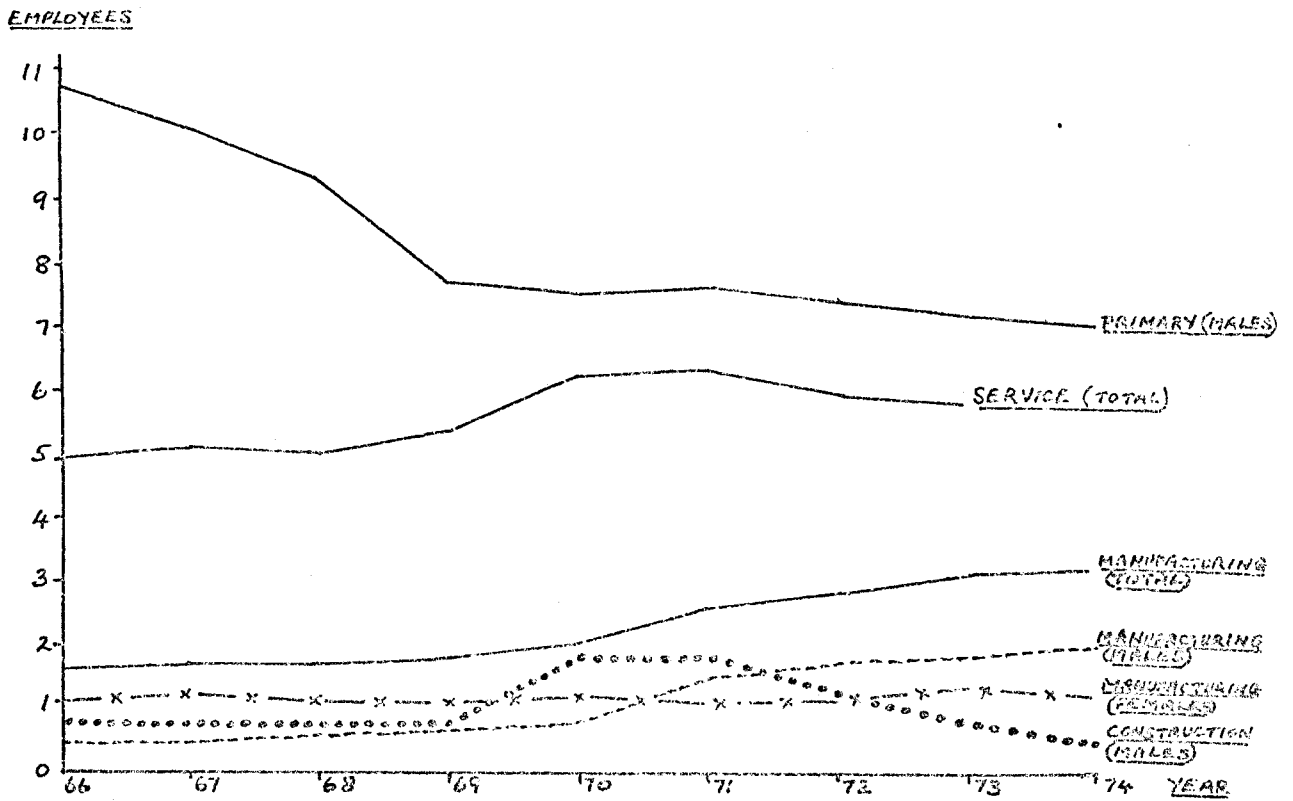
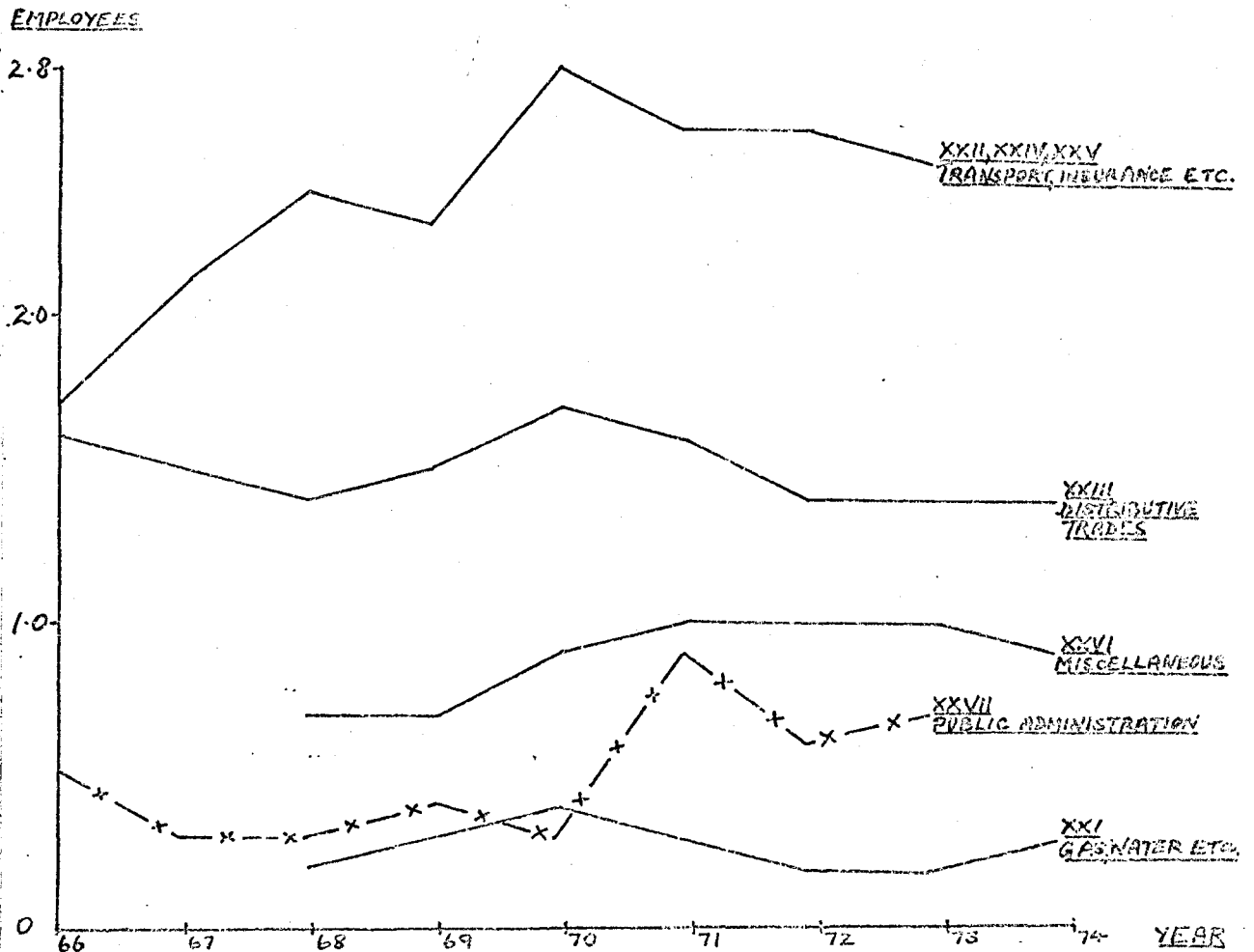


FIGURE 2.2

ASHINGTON: EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000s)



NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

XXI GAS, ELECTRICITY AND WATER.

XXII TRANSPORT AND COMMUNICATION

XXIII DISTRIBUTIVE TRADES

XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES

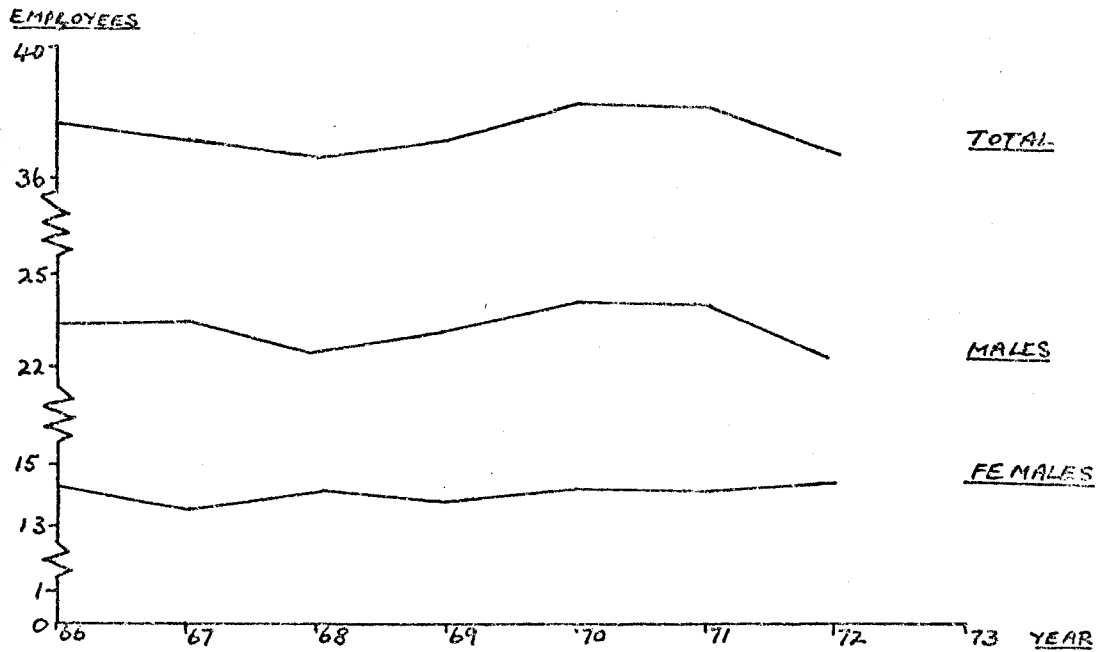
XXV PROFESSIONAL AND SCIENTIFIC SERVICES

XXVI MISCELLANEOUS SERVICES

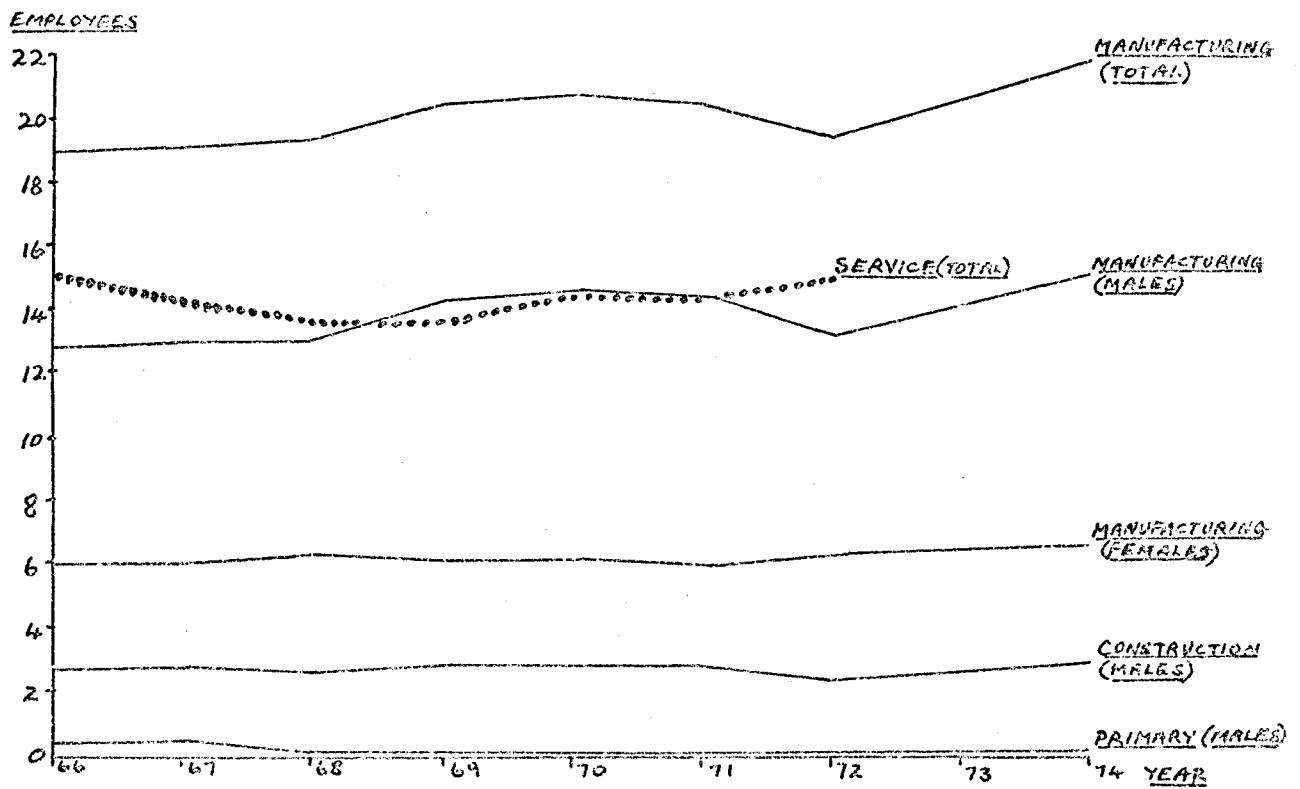
XXVII PUBLIC ADMINISTRATION AND DEFENCE

FIGURE 2.3

'HARTLEPOOL': TOTAL EMPLOYEES IN EMPLOYMENT ('000s)



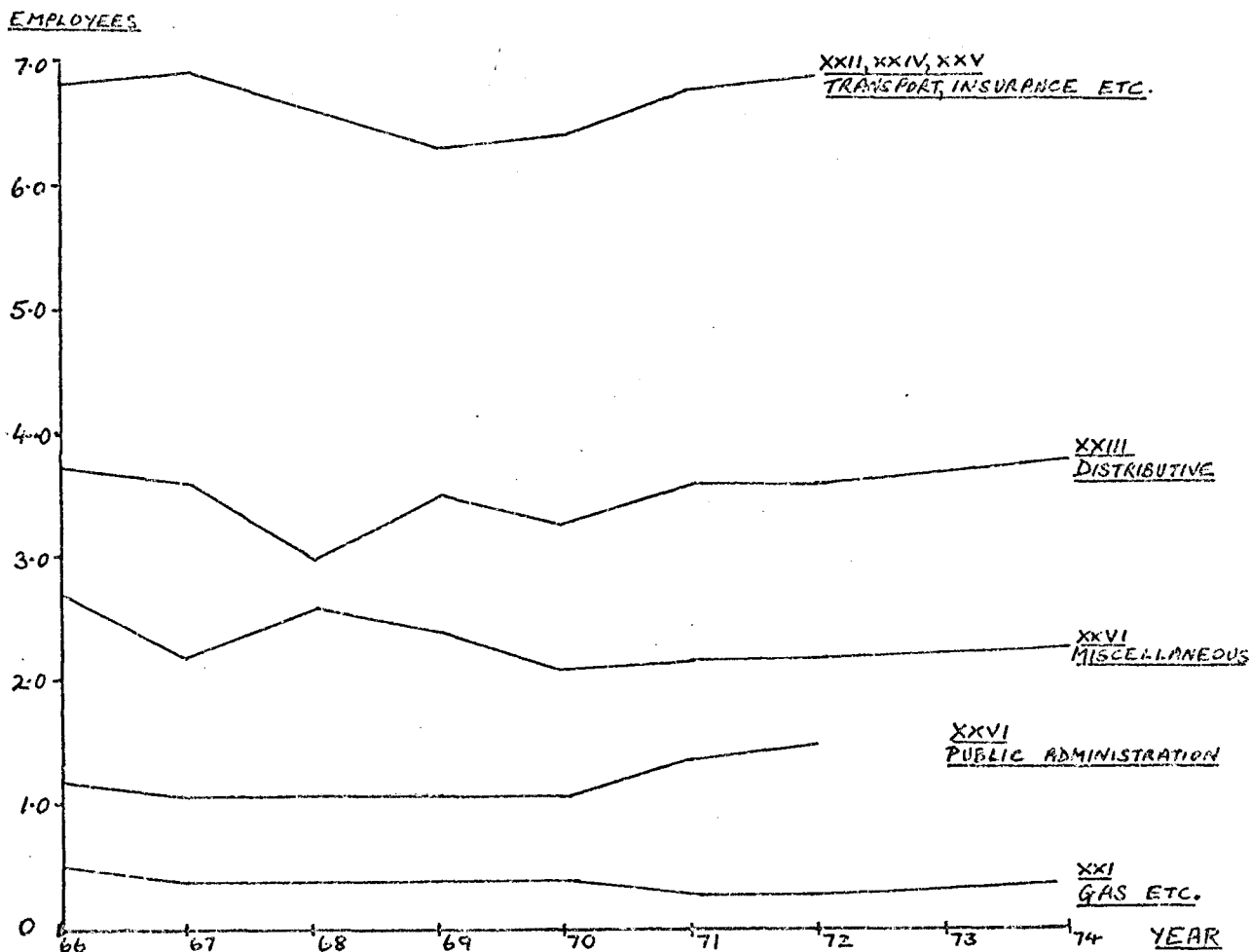
'HARTLEPOOL': EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)



NOTE: 1973 FIGURES INTERPOLATED

FIGURE 2.4

'HARTLEPOOL: EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000s)



NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

XXI GAS, ELECTRICITY AND WATER.

XXII TRANSPORT AND COMMUNICATION

XXIII DISTRIBUTIVE TRADES

XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES

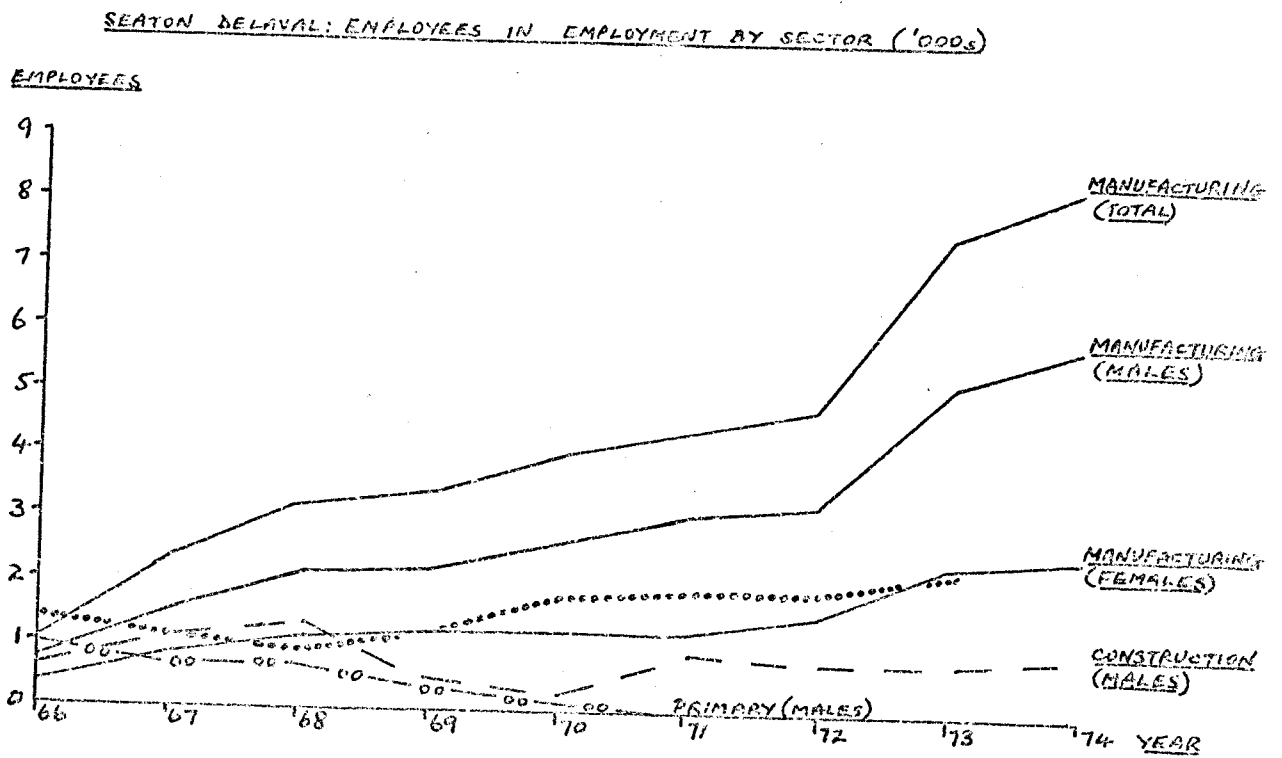
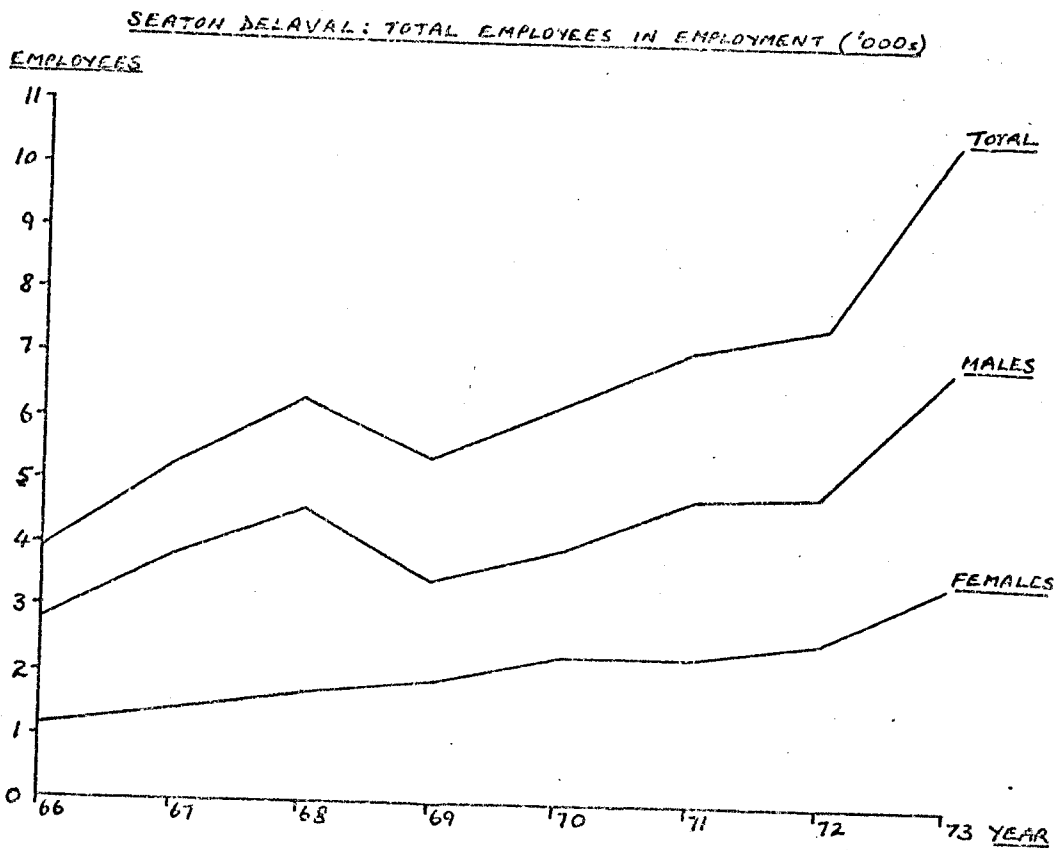
XXV PROFESSIONAL AND SCIENTIFIC SERVICES

XXVI MISCELLANEOUS SERVICES

XXVII PUBLIC ADMINISTRATION AND DEFENCE

NOTE: 1973 FIGURES INTERPOLATED

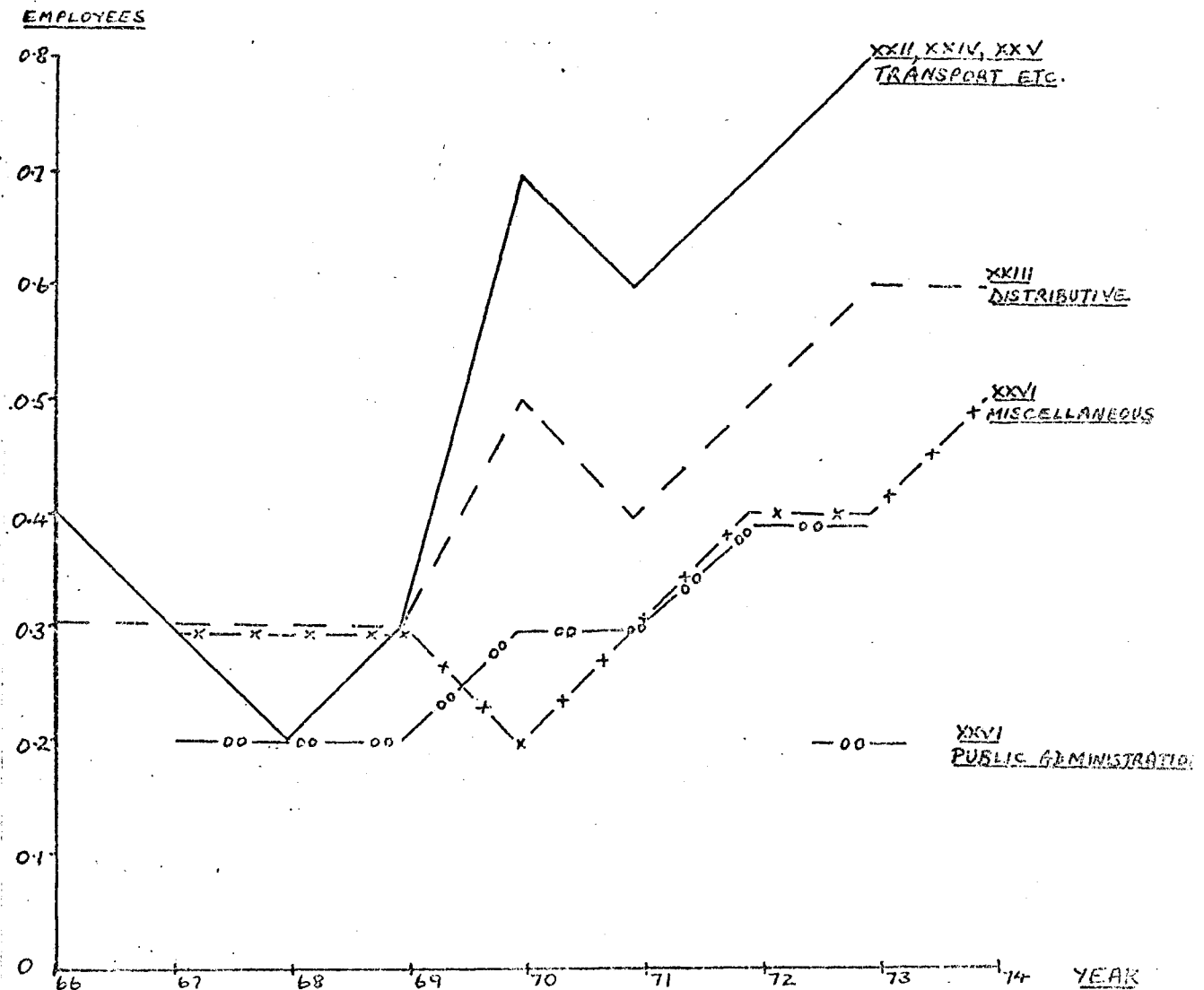
FIGURE 2.5



NOTE SERVICE (TOTAL)

FIGURE 2.6

SEASON DELAVAL: EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000)



NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

XXI GAS, ELECTRICITY AND WATER.

XXII TRANSPORT AND COMMUNICATION

XXIII DISTRIBUTIVE TRADES

XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES

XXV PROFESSIONAL AND SCIENTIFIC SERVICES

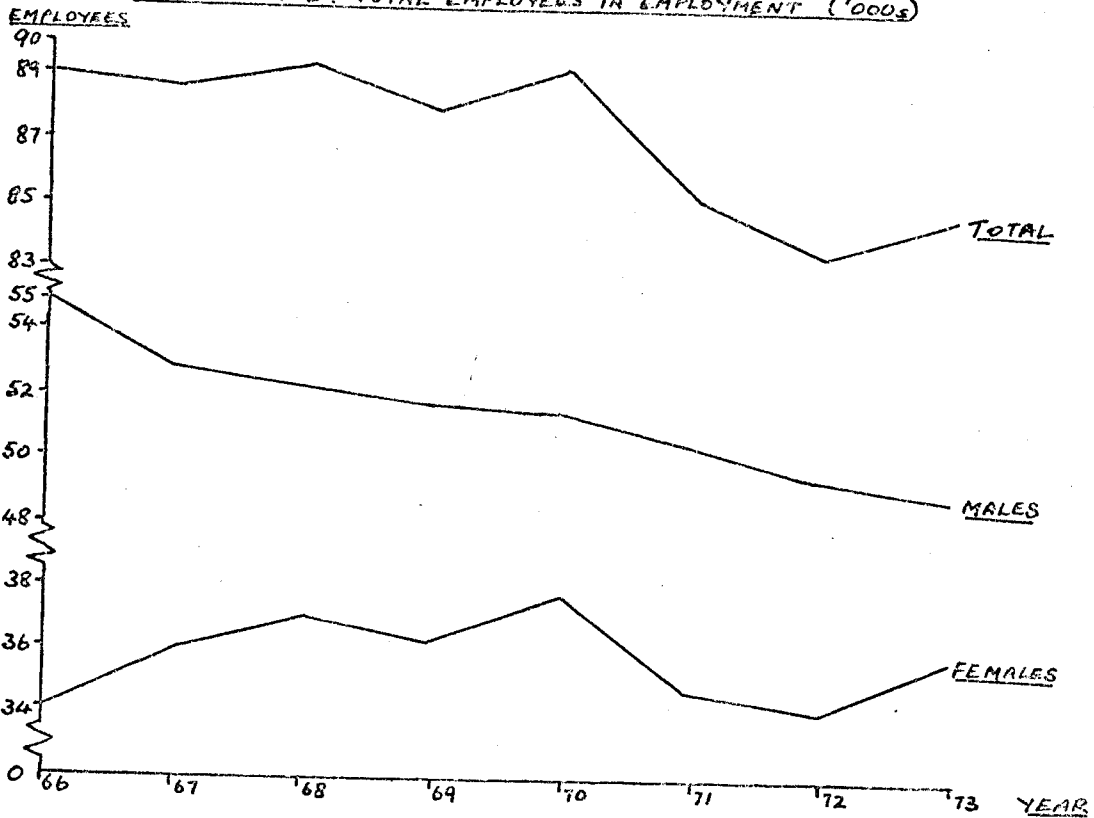
XXVI MISCELLANEOUS SERVICES

XXVII PUBLIC ADMINISTRATION AND DEFENCE

NOTE XXI GAS ETC. NEGLIGIBLE THROUGHOUT

FIGURE 2.7

'SUNDERLAND': TOTAL EMPLOYEES IN EMPLOYMENT ('000s)



'SUNDERLAND': EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)

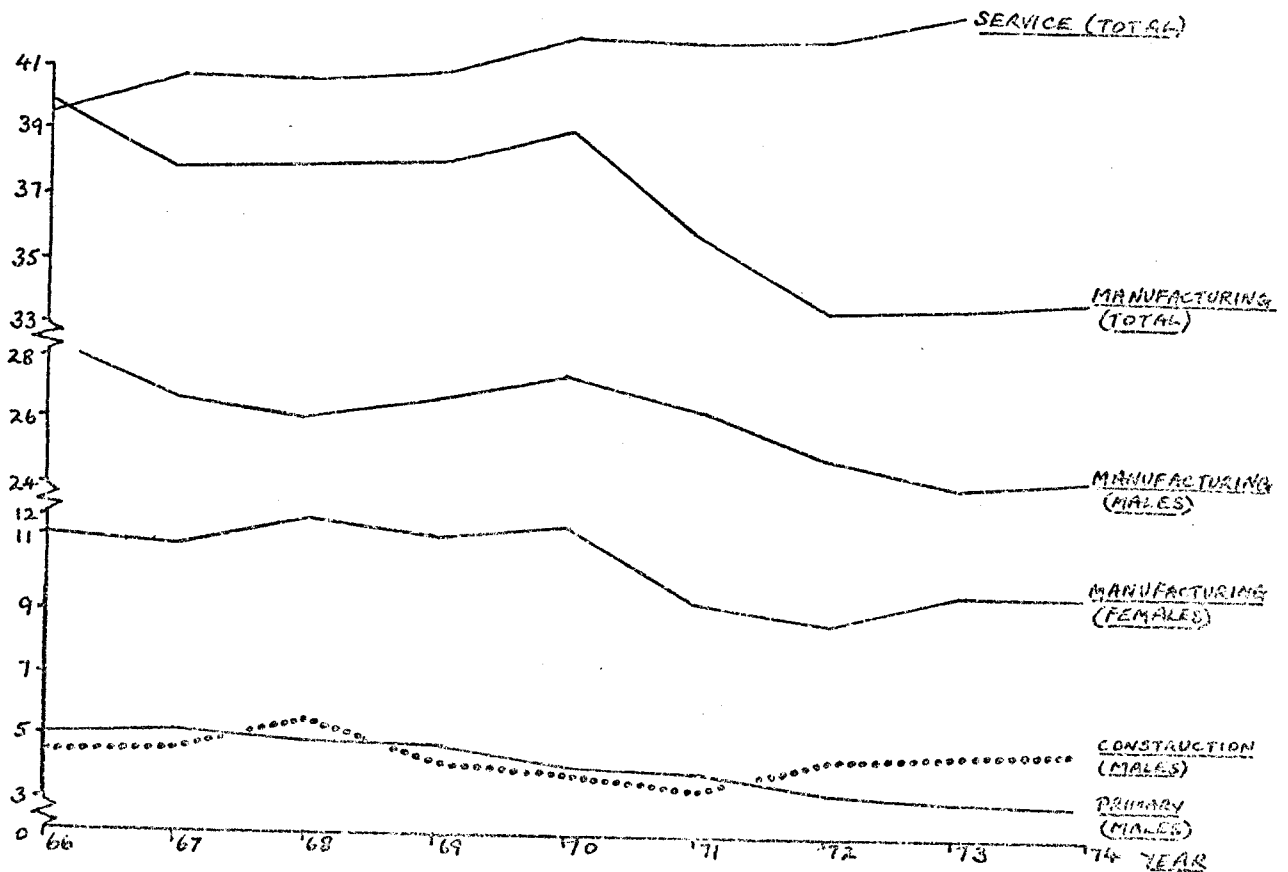
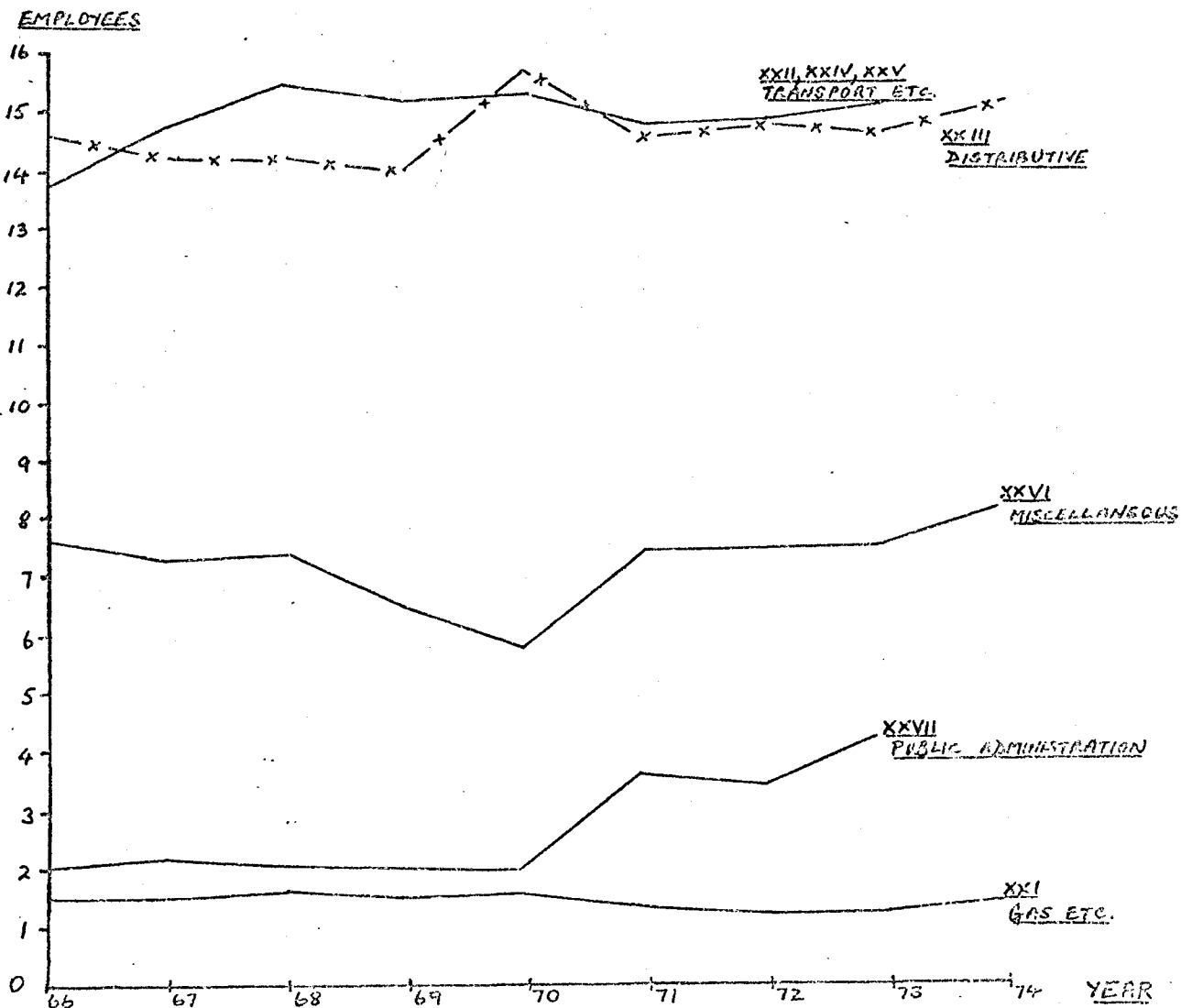


FIGURE 2.8

'SUNDERLAND' EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000s)

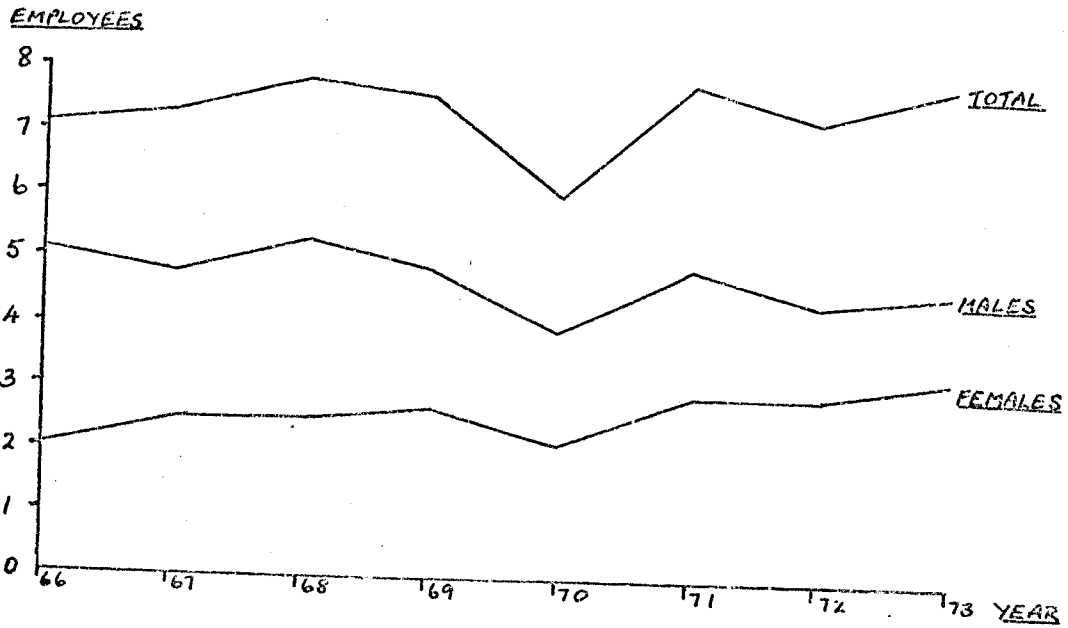


NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

- XXI GAS, ELECTRICITY AND WATER.
- XXII TRANSPORT AND COMMUNICATION
- XXIII DISTRIBUTIVE TRADES
- XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES
- XXV PROFESSIONAL AND SCIENTIFIC SERVICES
- XXVI MISCELLANEOUS SERVICES
- XXVII PUBLIC ADMINISTRATION AND DEFENCE

FIGURE 2.9

NEWBURN: TOTAL EMPLOYEES IN EMPLOYMENT ('000s)



NEWBURN: EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)

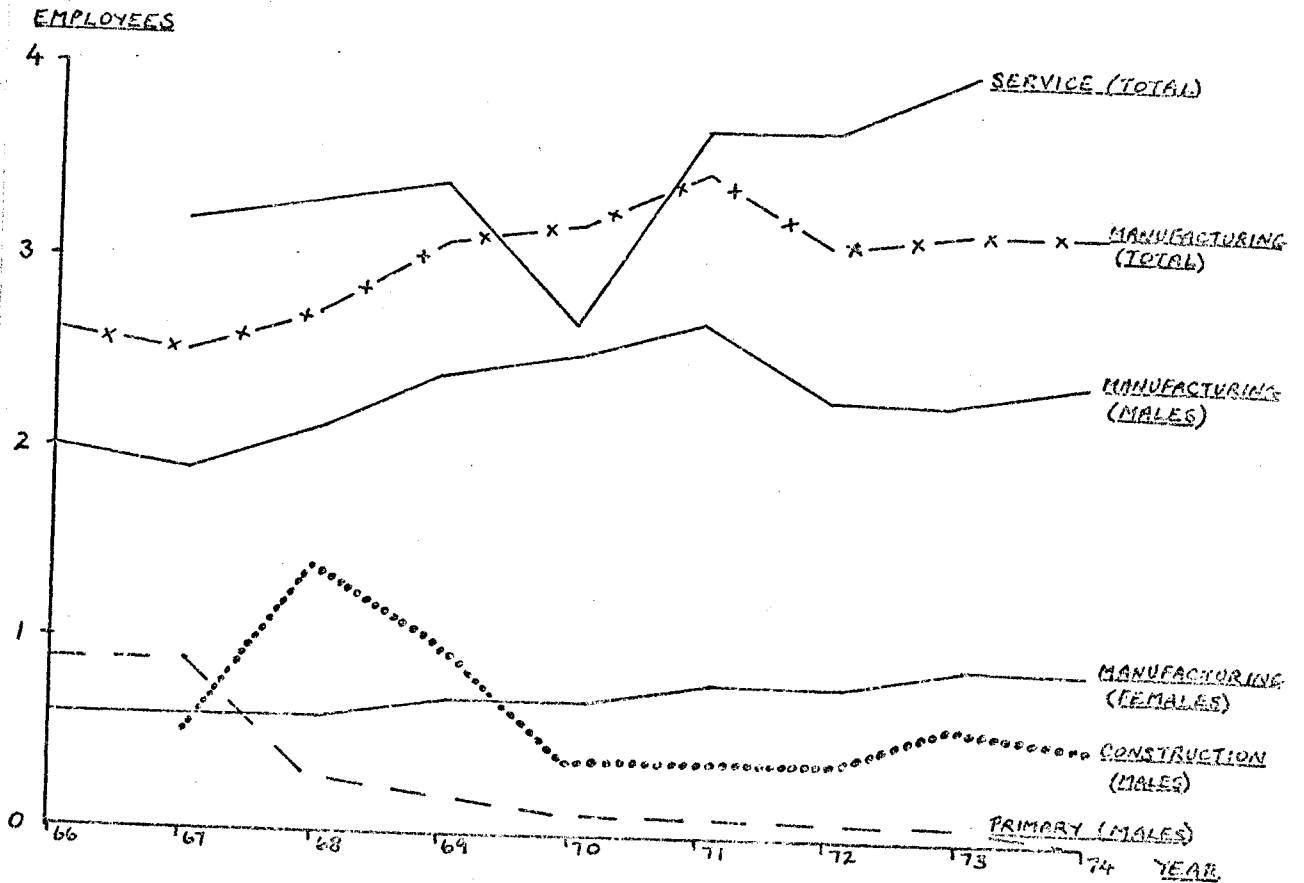
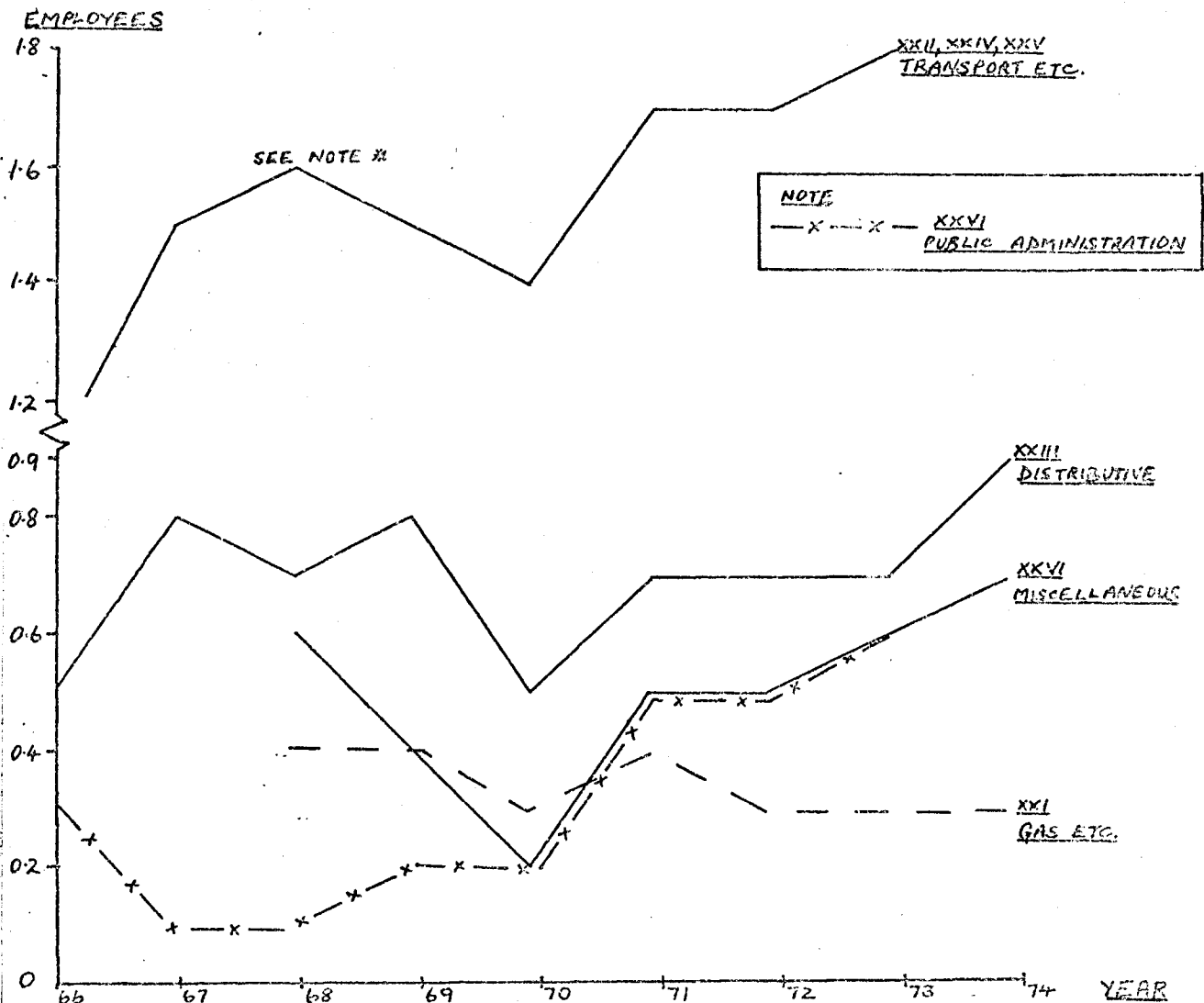


FIGURE 2.10
NEWBURN: EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000s)



NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

XXI GAS, ELECTRICITY AND WATER.

XXII TRANSPORT AND COMMUNICATION

XXIII DISTRIBUTIVE TRADES

XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES

XXV PROFESSIONAL AND SCIENTIFIC SERVICES

XXVI MISCELLANEOUS SERVICES

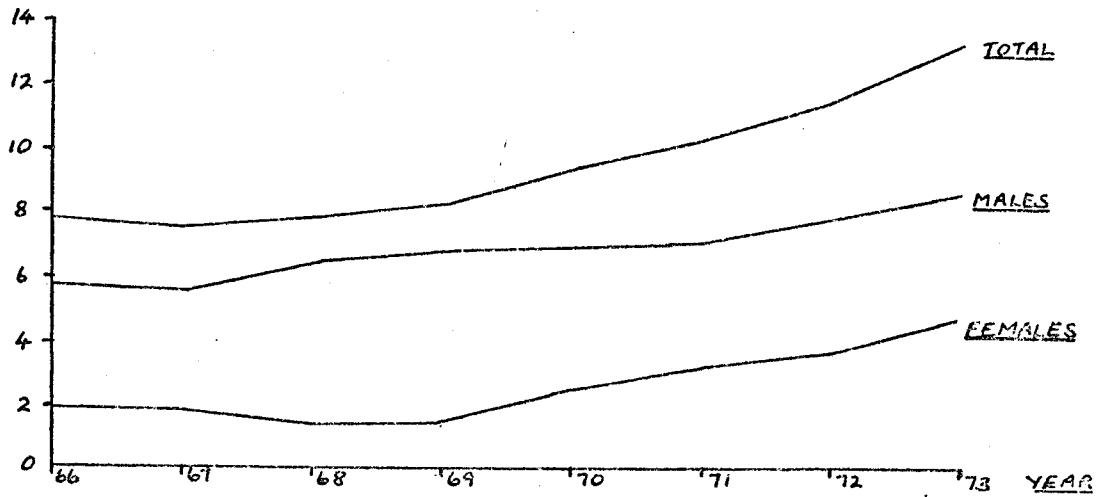
XXVII PUBLIC ADMINISTRATION AND DEFENCE

* NOTE: INCLUDES UNCLASSIFIED

FIGURE 2.11

WASHINGTON: TOTAL EMPLOYEES IN EMPLOYMENT ('000s)

EMPLOYEES



WASHINGTON: EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)

EMPLOYEES

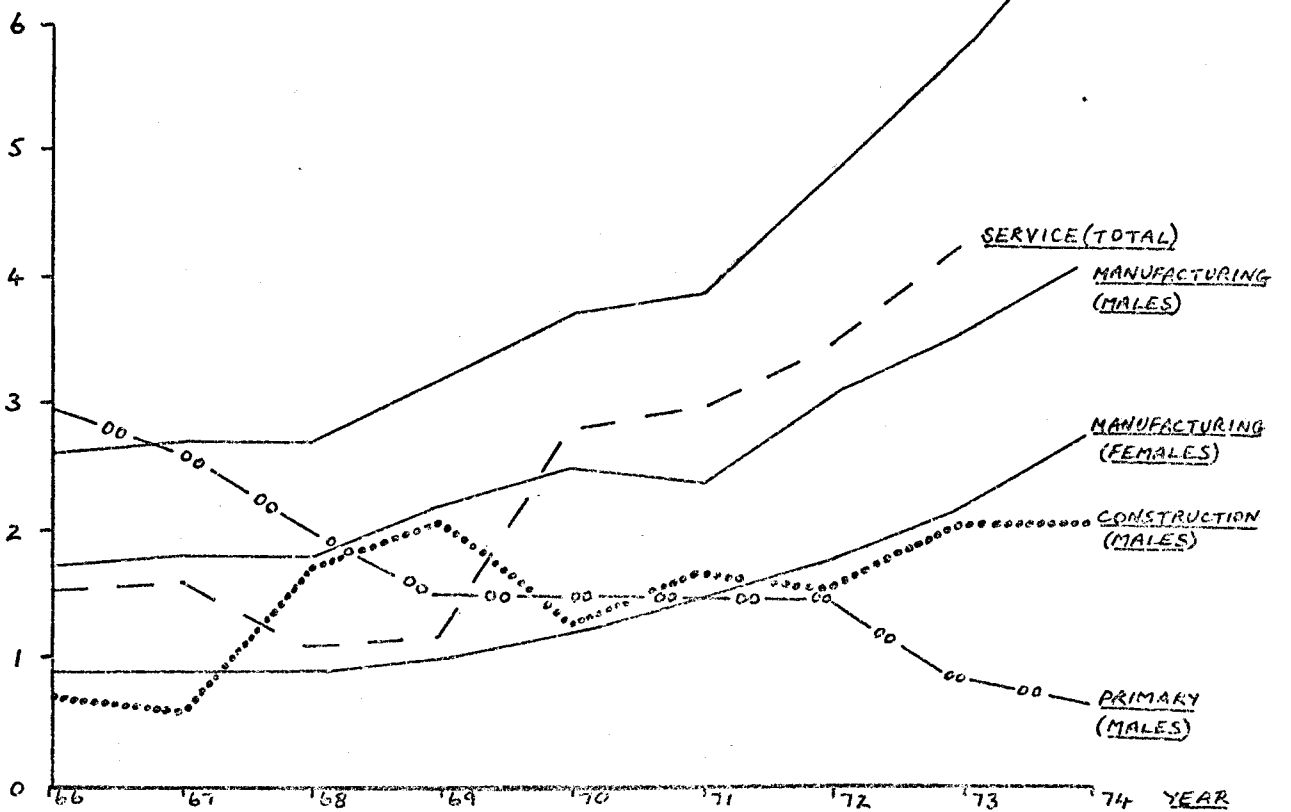
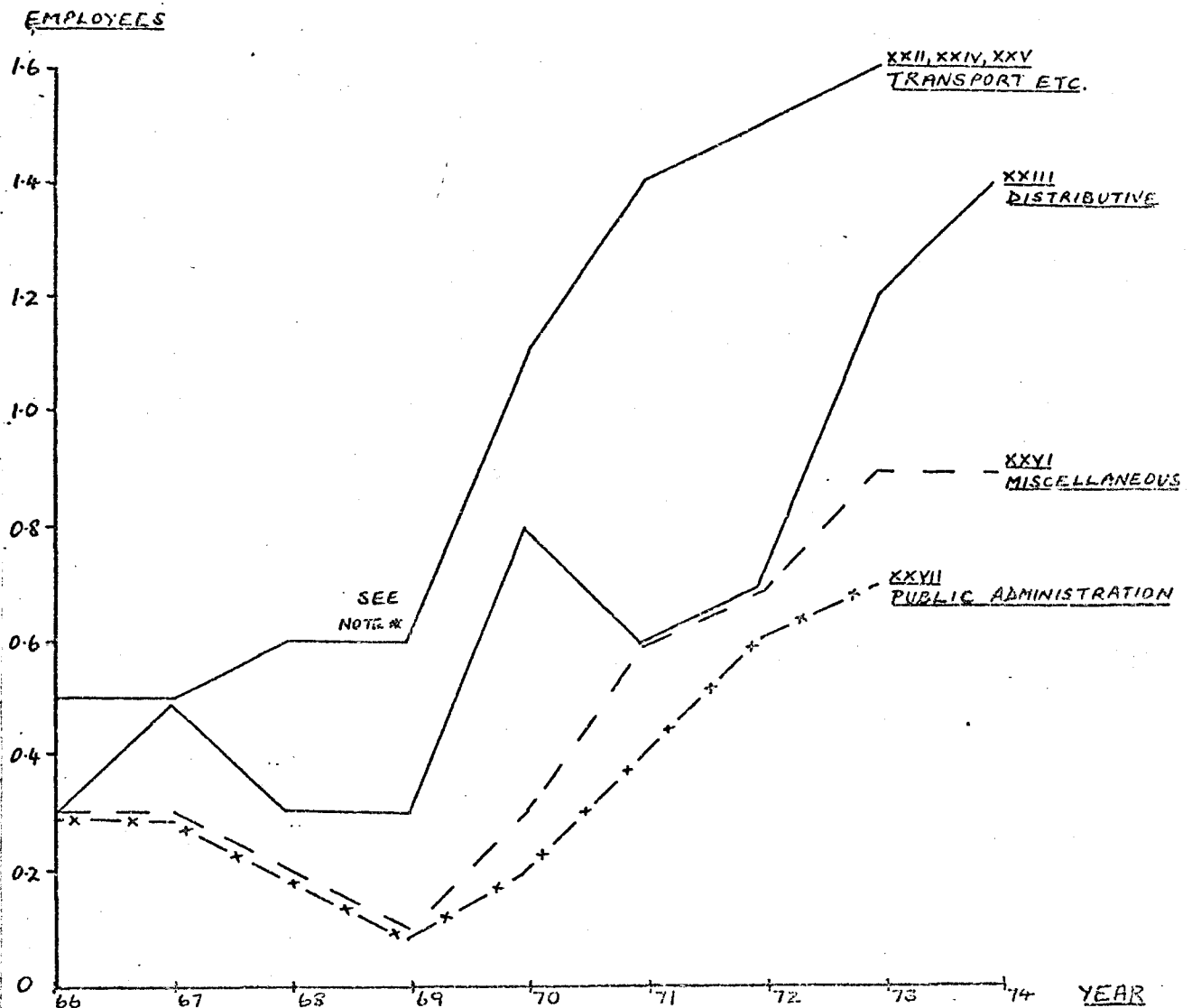


FIGURE 2.12

WASHINGTON: EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000s)



NOTE ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

XXI GAS, ELECTRICITY AND WATER.

XXII TRANSPORT AND COMMUNICATION

XXIII DISTRIBUTIVE TRADES

XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES

XXV PROFESSIONAL AND SCIENTIFIC SERVICES

XXVI MISCELLANEOUS SERVICES

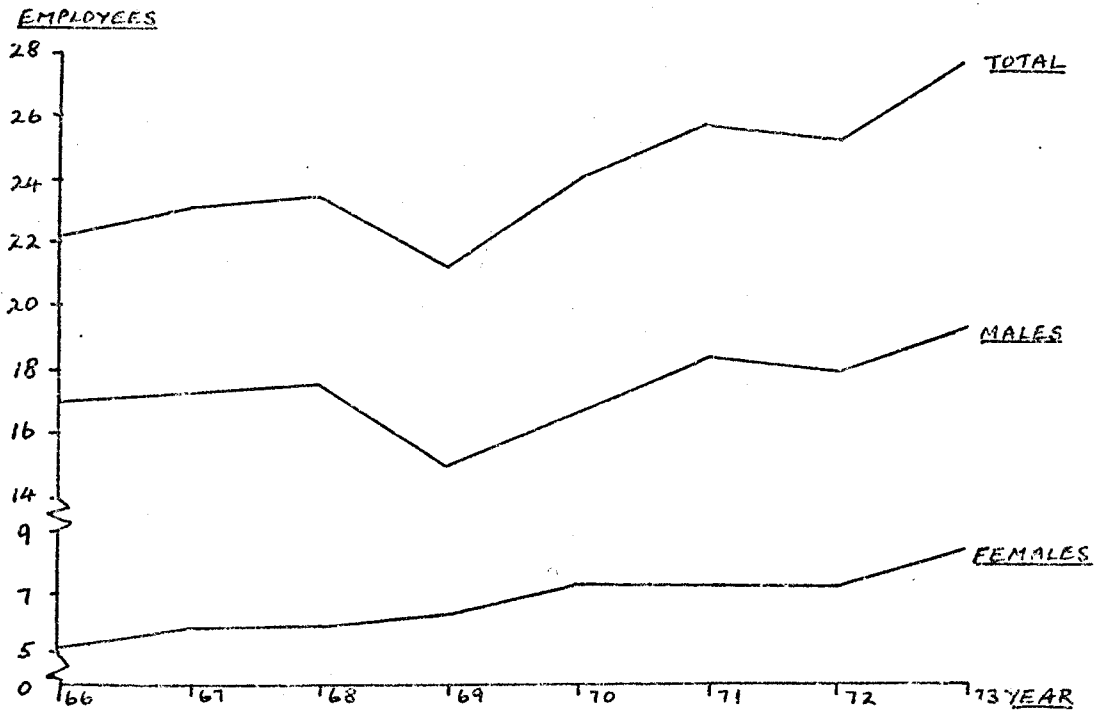
XXVII PUBLIC ADMINISTRATION AND DEFENCE

* NOTE: INCLUDES UNCLASSIFIED

NOTE: XXI GAS ETC. NEGLIGIBLE THROUGHOUT

FIGURE 2.13

ASHINGTON AND SEATON DELAVAL: TOTAL EMPLOYEES IN EMPLOYMENT ('000s)



ASHINGTON AND SEATON DELAVAL: EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)

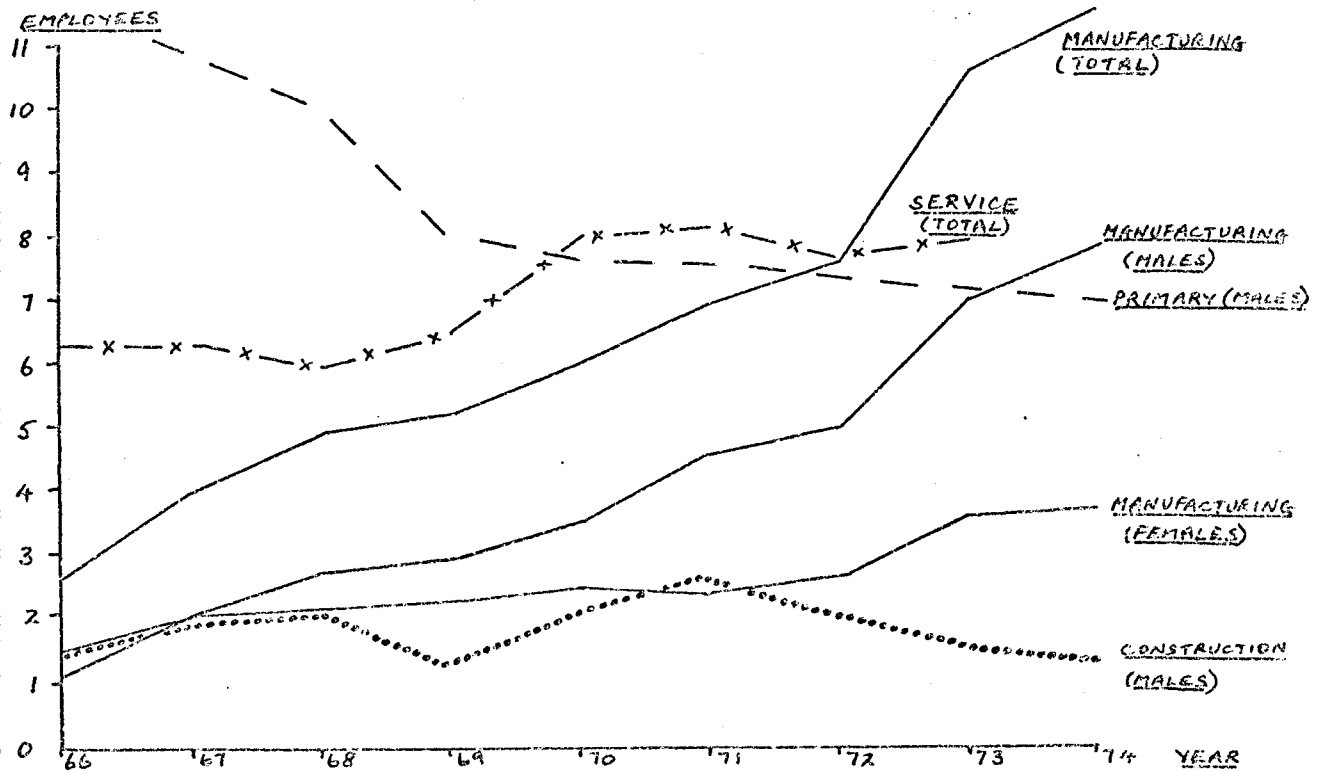
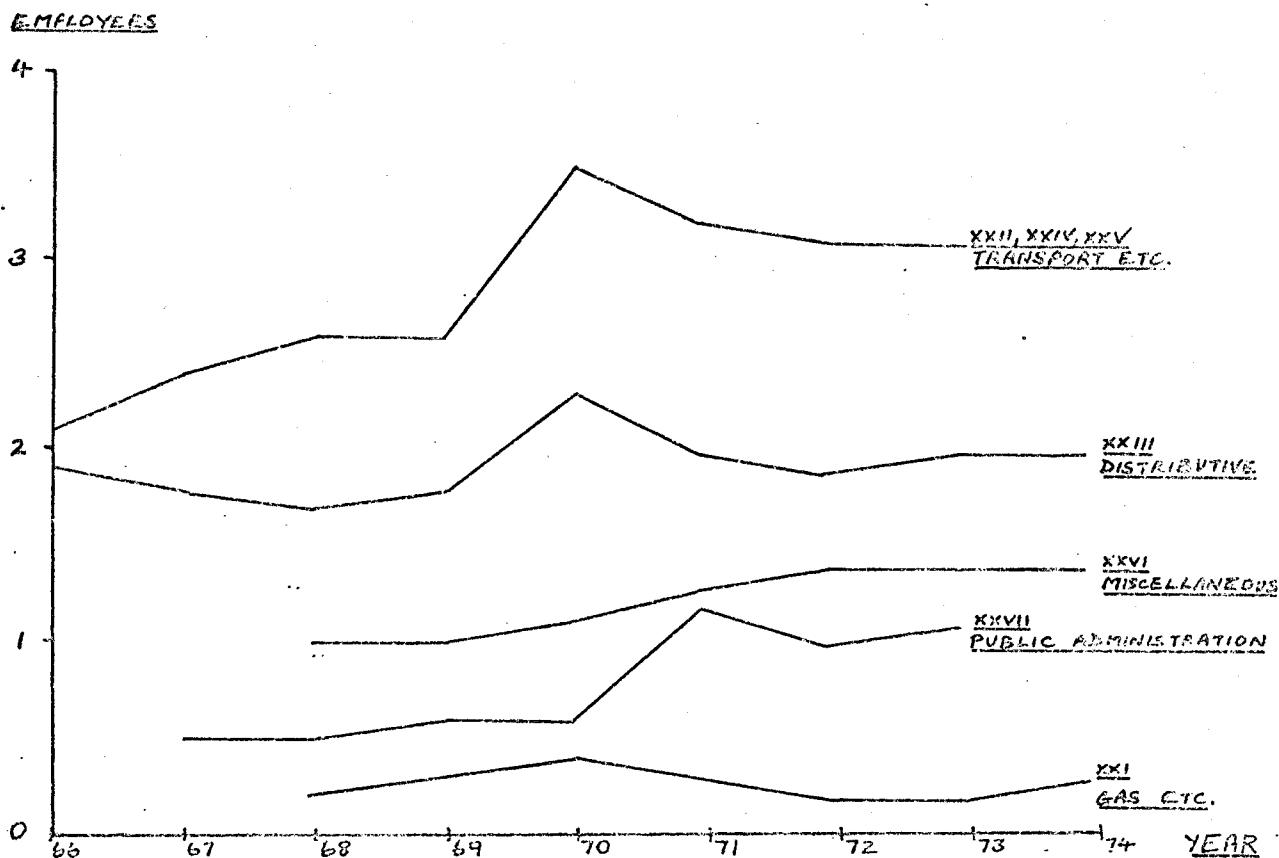


FIGURE 2.14

ASHINGTON AND SEATON DELAVAL: EMPLOYEES IN EMPLOYMENT SERVICE INDUSTRIES ('000s)

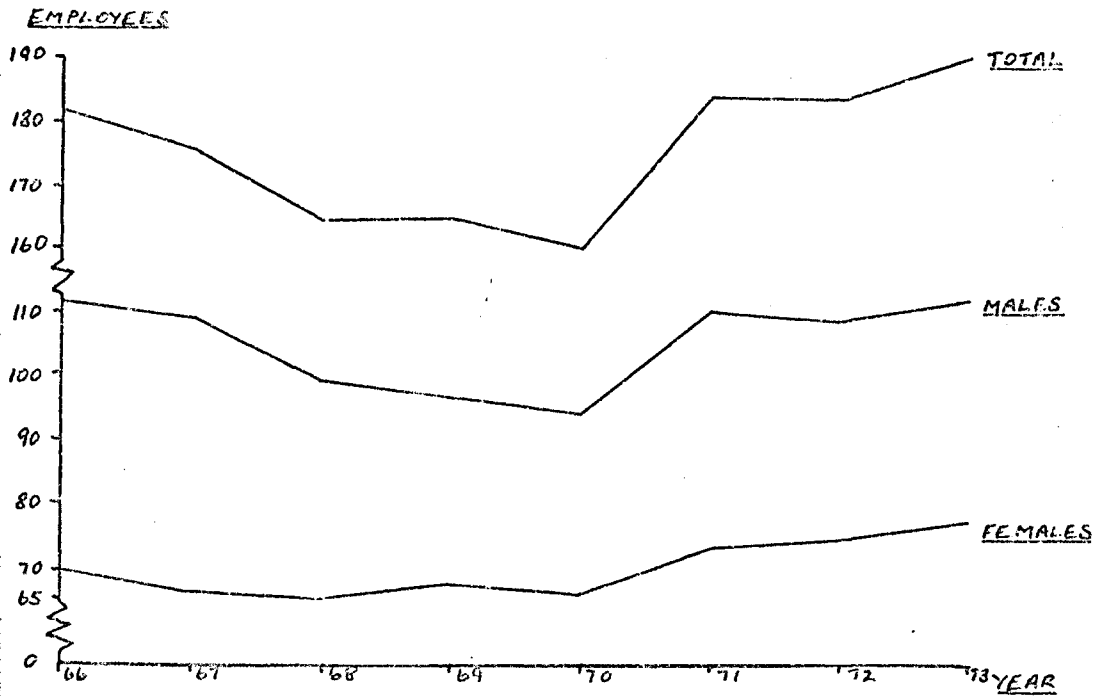


NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

- XXI GAS, ELECTRICITY AND WATER.
- XXII TRANSPORT AND COMMUNICATION
- XXIII DISTRIBUTIVE TRADES
- XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES
- XXV PROFESSIONAL AND SCIENTIFIC SERVICES
- XXVI MISCELLANEOUS SERVICES
- XXVII PUBLIC ADMINISTRATION AND DEFENCE.

FIGURE 2.15

SEATON DELAVAL AND 'NEWCASTLE': TOTAL EMPLOYEES IN EMPLOYMENT ('000s)



SEATON DELAVAL AND 'NEWCASTLE': EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)

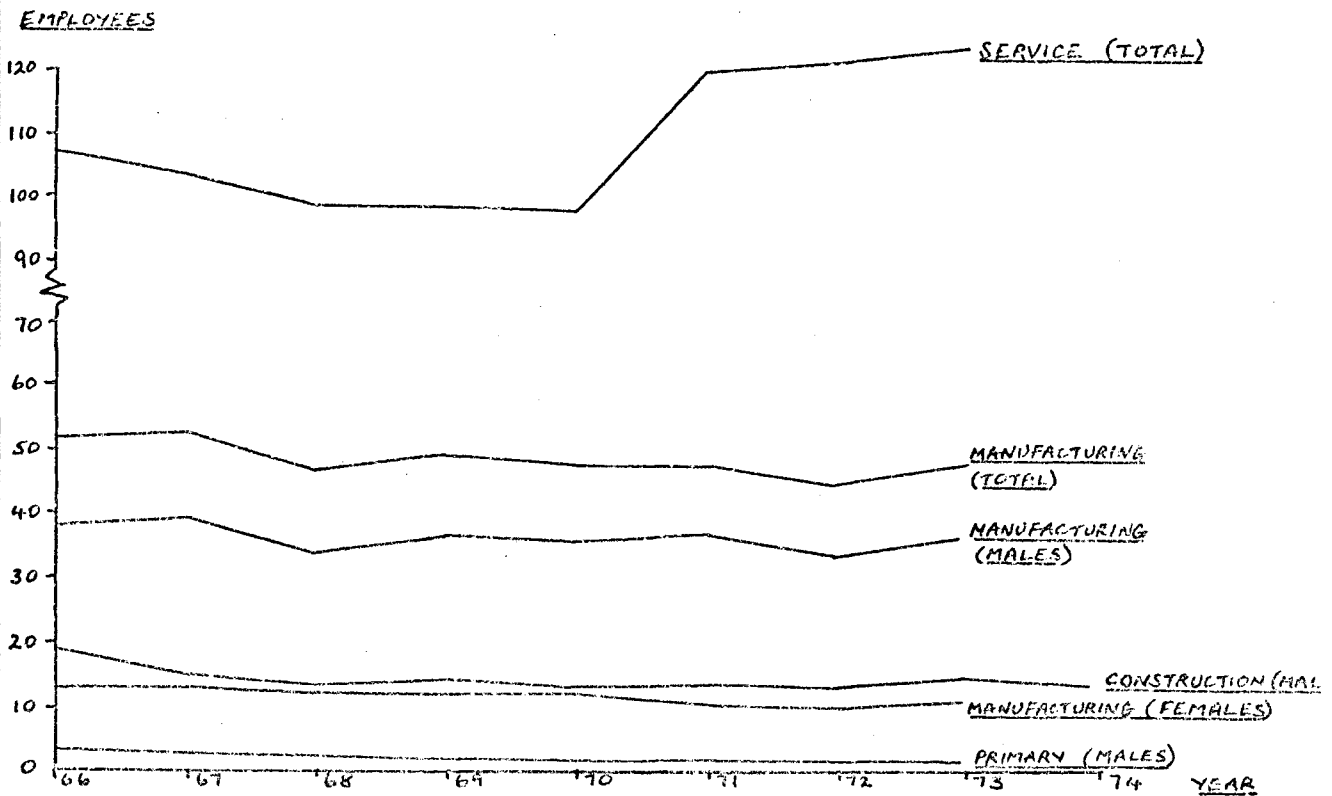
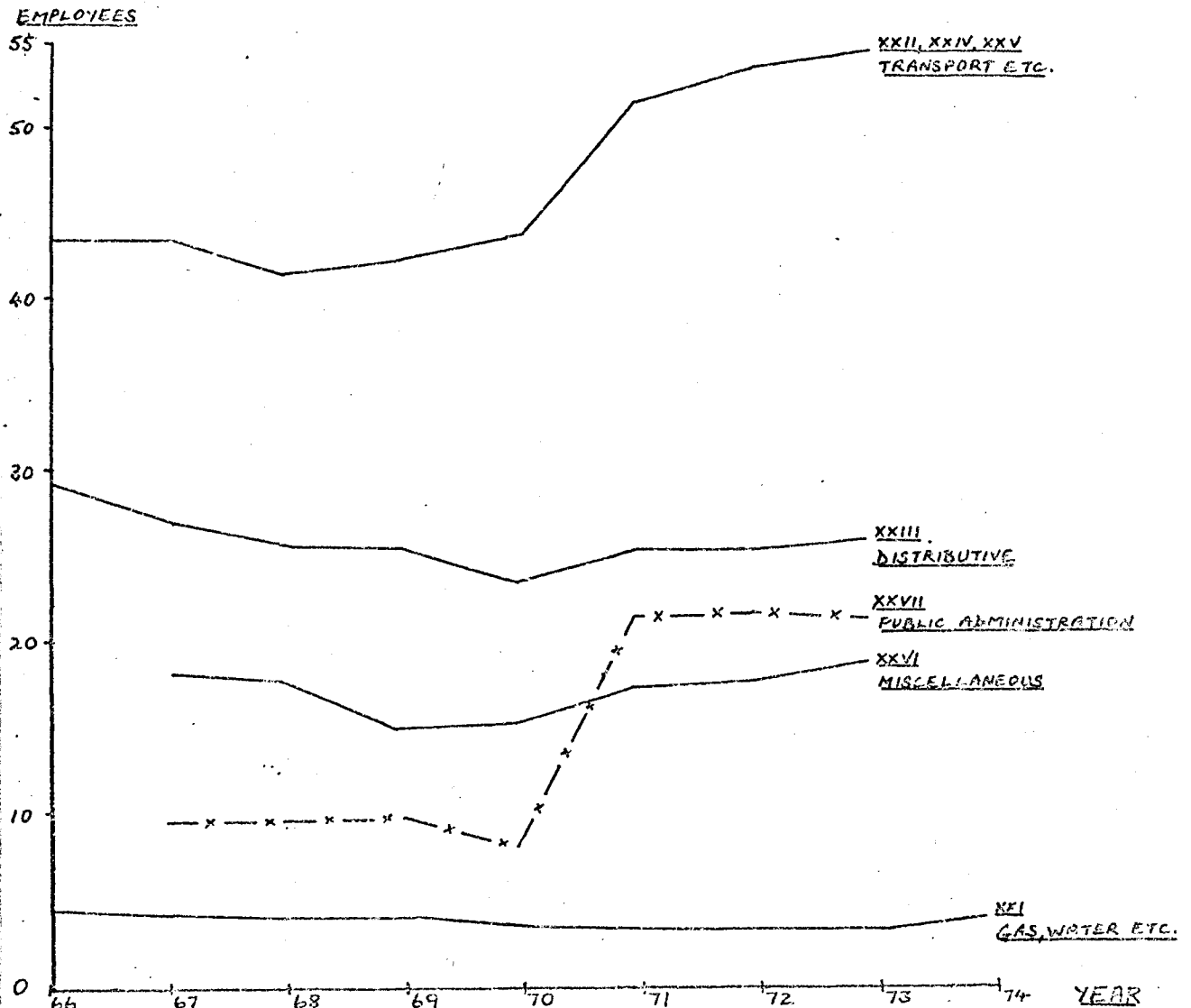


FIGURE 2.16

SEARON DELAVAL AND 'NEWCASTLE': EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000s)



NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

XXI GAS, ELECTRICITY AND WATER.

XXII TRANSPORT AND COMMUNICATION

XXIII DISTRIBUTIVE TRADES

XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES

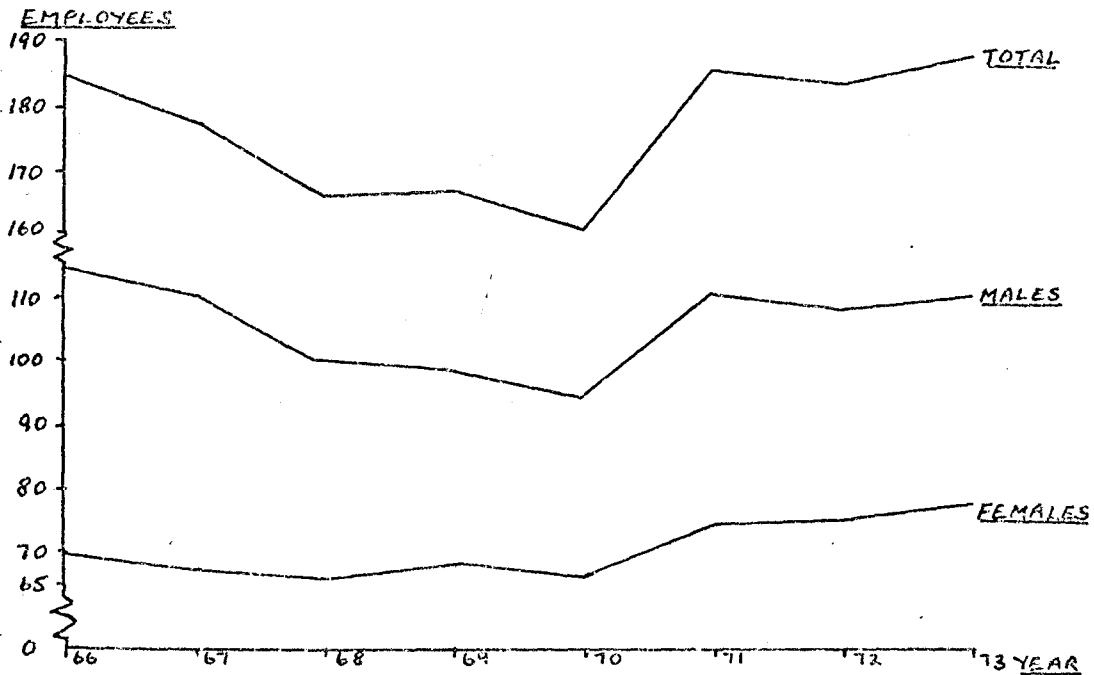
XXV PROFESSIONAL AND SCIENTIFIC SERVICES

XXVI MISCELLANEOUS SERVICES

XXVII PUBLIC ADMINISTRATION AND DEFENCE

FIGURE 2.17

NEWBURN AND 'NEWCASTLE': TOTAL EMPLOYEES IN EMPLOYMENT ('000s)



NEWBURN AND 'NEWCASTLE': EMPLOYEES IN EMPLOYMENT BY SECTOR ('000s)

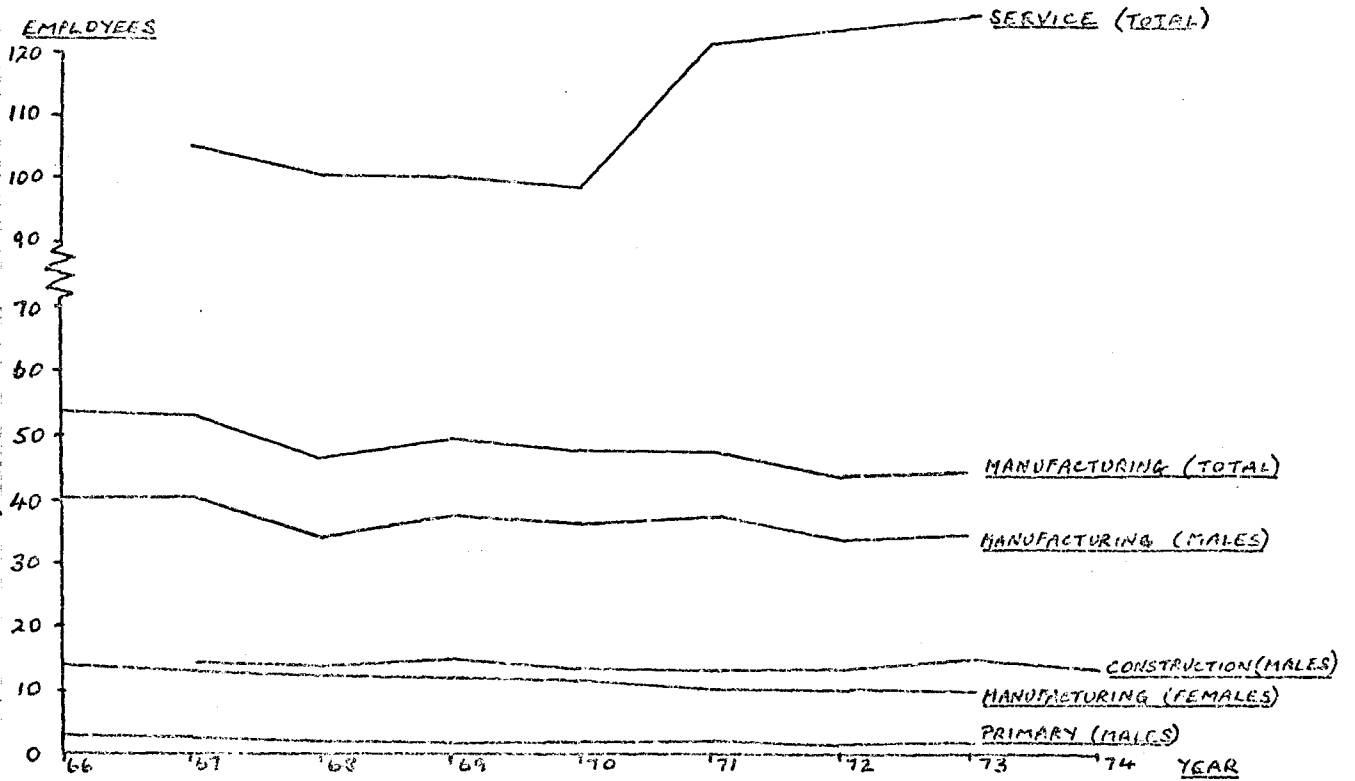
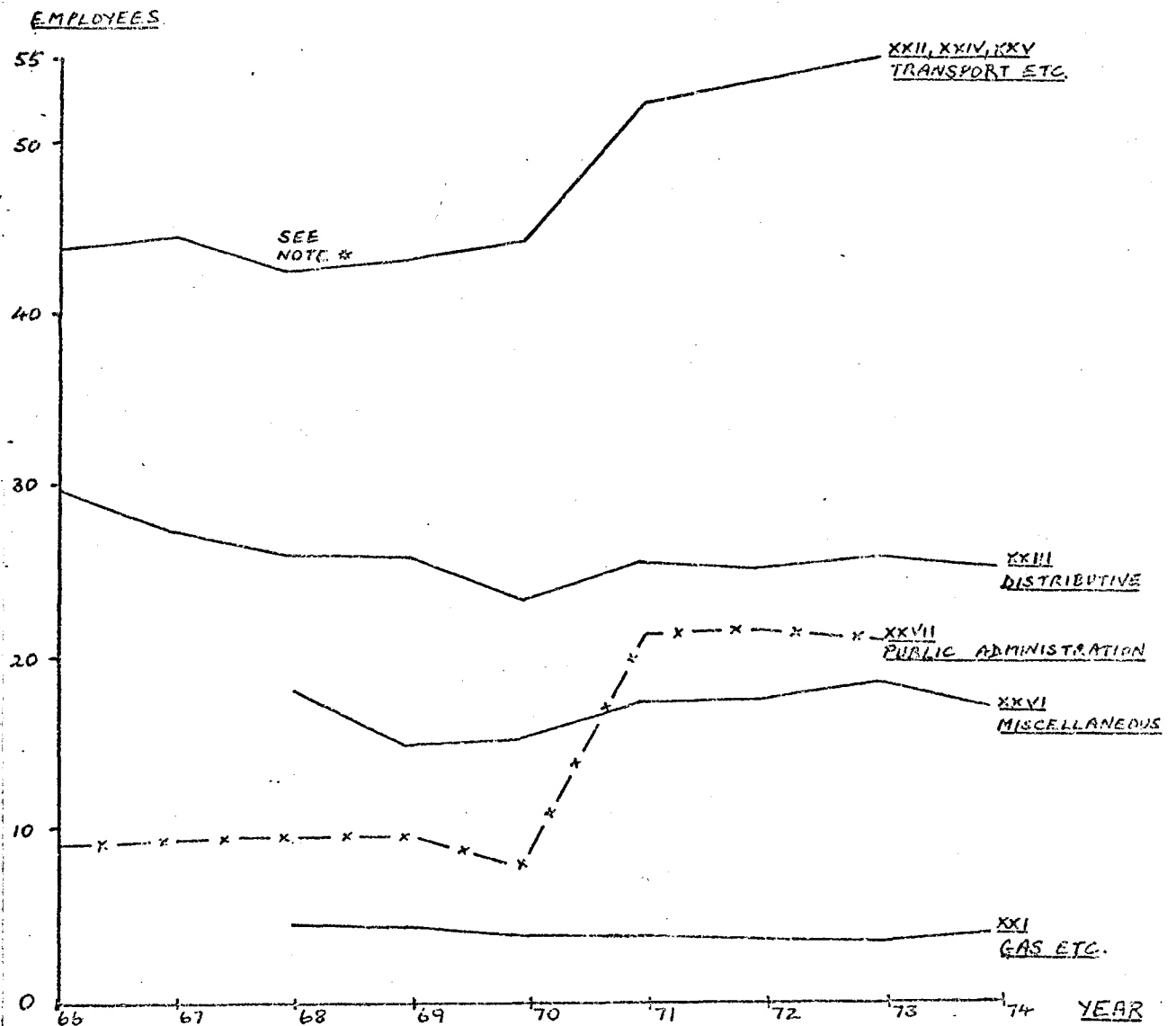


FIGURE 2.18

NEWBURN AND 'NEWCASTLE': EMPLOYEES IN EMPLOYMENT, SERVICE INDUSTRIES ('000s)



NOTE. ROMAN NUMERALS REFER TO S.I.C. ORDER TOTALS (1968 VERSION) AS FOLLOWS:-

XXI GAS, ELECTRICITY AND WATER.

XXII TRANSPORT AND COMMUNICATION

XXIII DISTRIBUTIVE TRADES

XXIV INSURANCE, BANKING, FINANCE AND BUSINESS SERVICES

XXV PROFESSIONAL AND SCIENTIFIC SERVICES

XXVI MISCELLANEOUS SERVICES

XXVII PUBLIC ADMINISTRATION AND DEFENCE

* NOTE: INCLUDES UNCLASSIFIED

FIGURE 2.19
MALE UNEMPLOYMENT RATES 1966 TO 1975: (ANNUAL AVERAGES) STUDY AREAS

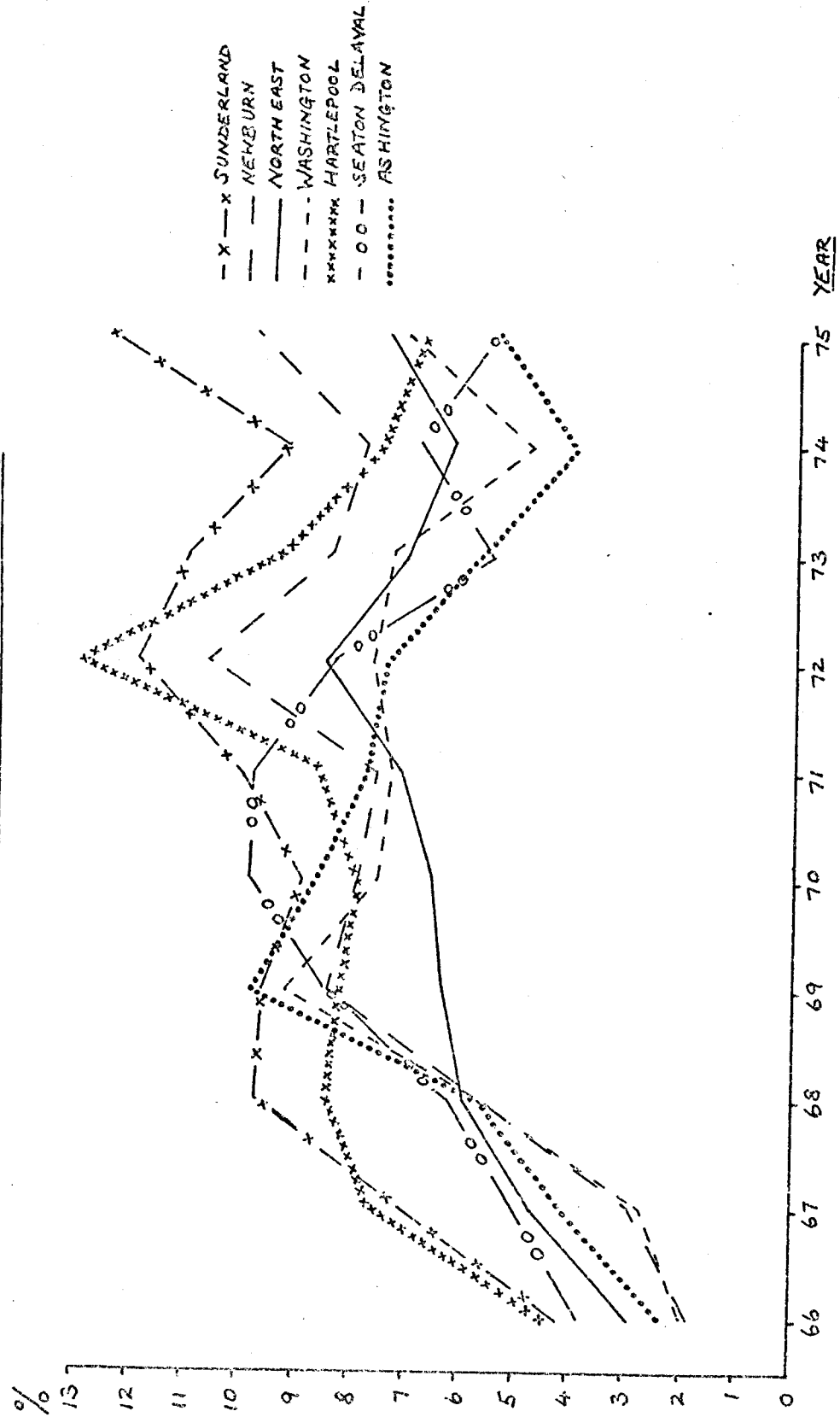


FIGURE 2.20

FEMALE UNEMPLOYMENT RATES: 1966 TO 1975: (ANNUAL AVERAGES) STUDY AREAS

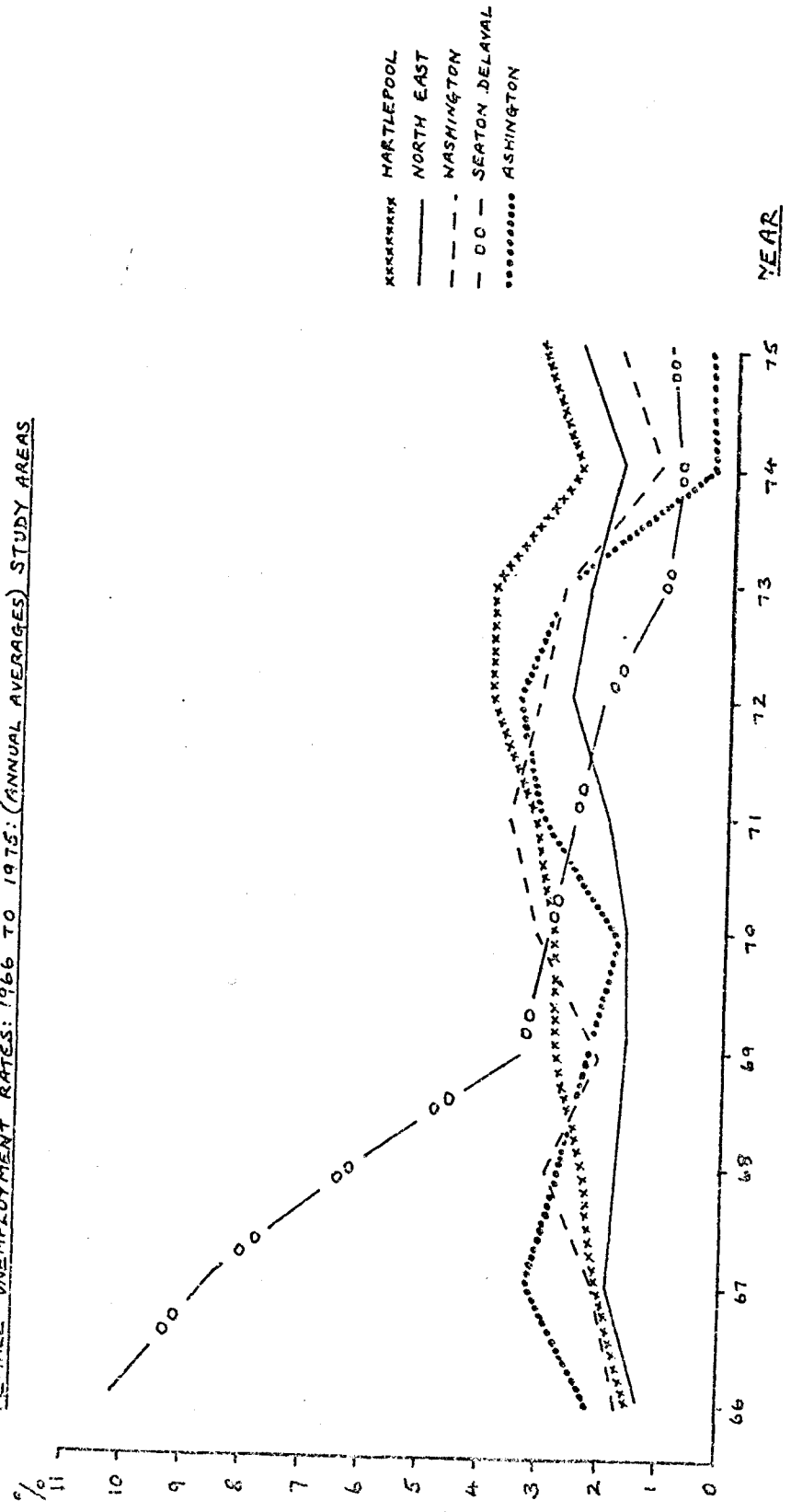


FIGURE 2.21

MALE AND FEMALE UNEMPLOYMENT RATES 1966 TO 1975: (ANNUAL AVERAGES) AMALGAMATED AREAS.

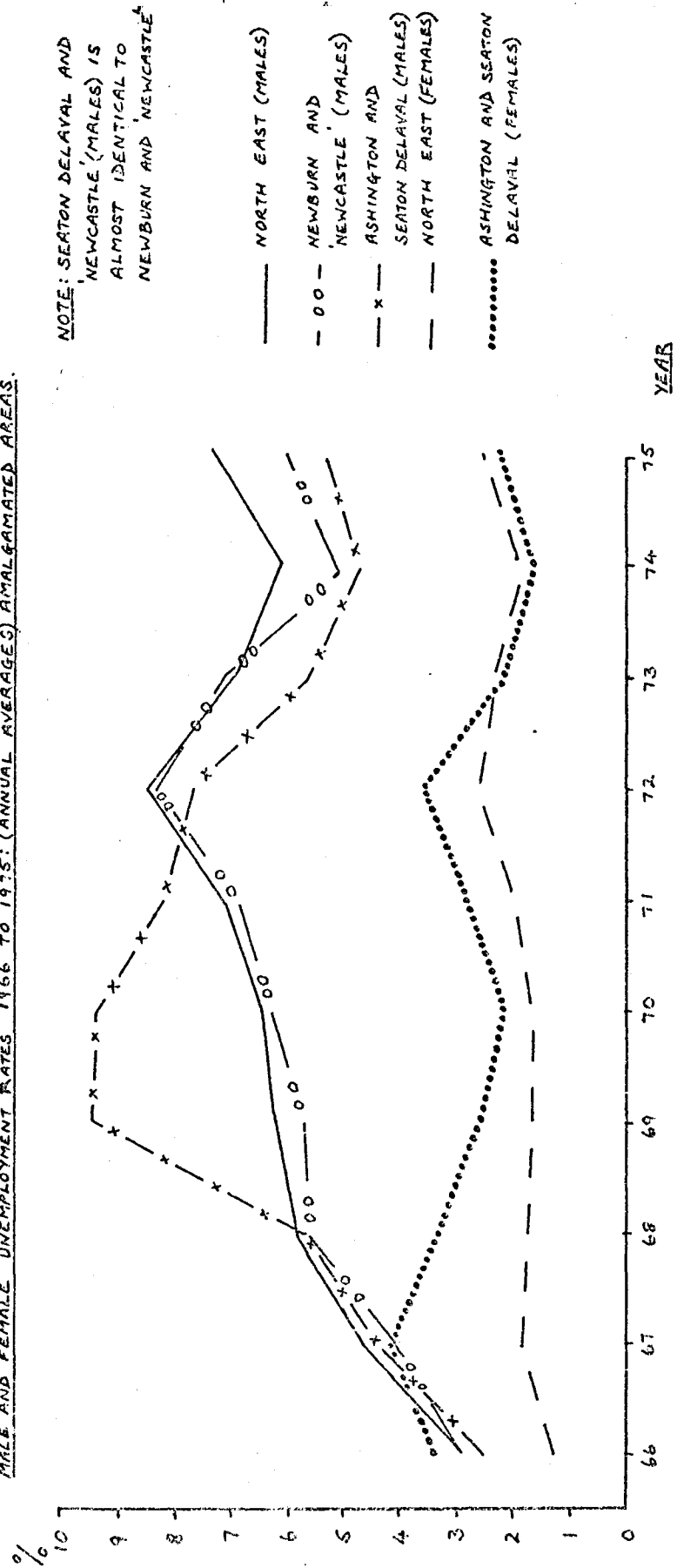


FIGURE 2.22

UNEMPLOYMENT AND VACANCY RATES BY SEX: 1972 TO 1975: NORTH EAST

U_M MALE UNEMPLOYMENT RATE
U_F FEMALE UNEMPLOYMENT RATE
V_M MALE VACANCY RATE
V_F FEMALE VACANCY RATE

~~~~~ DATA NOT AVAILABLE

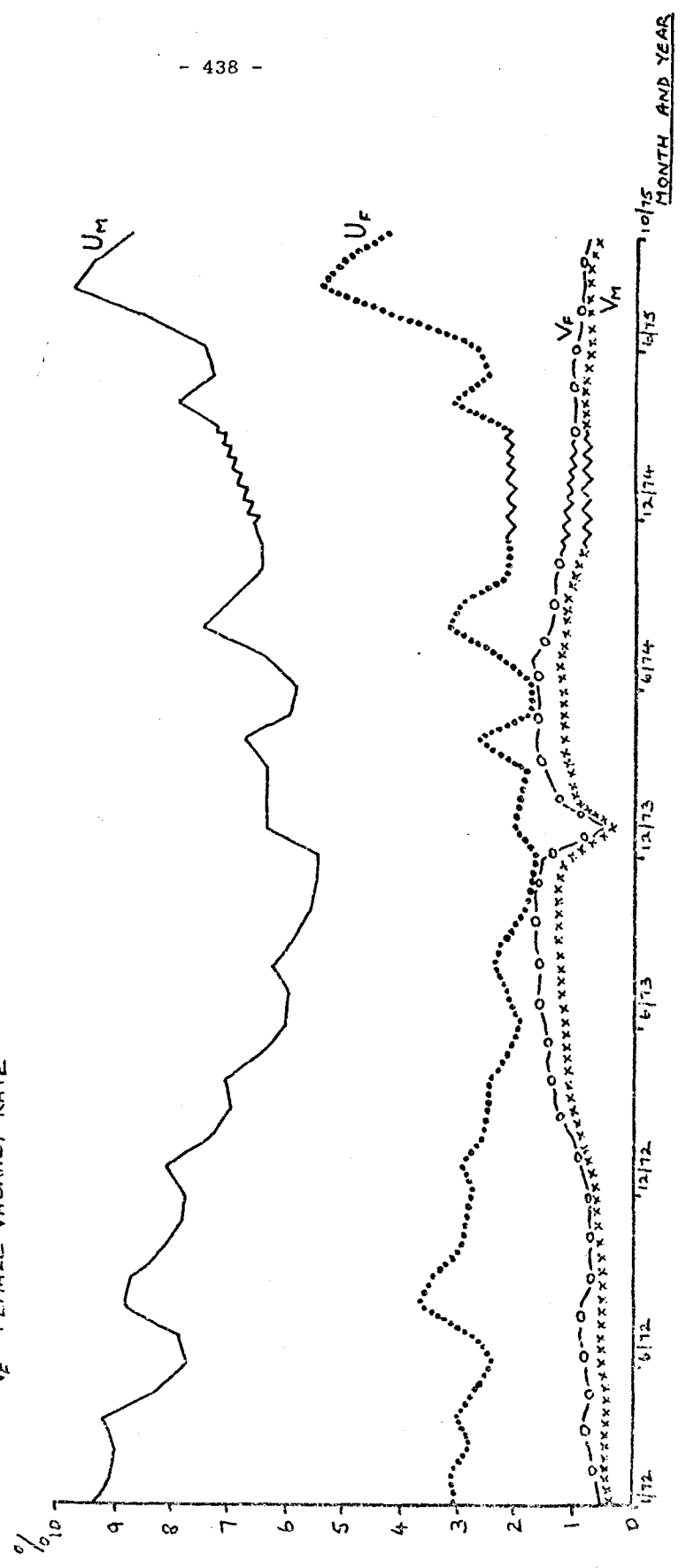




FIGURE 2.23

UNEMPLOYMENT AND VACANCY RATES BY SEX: 1972 TO 1975: ASHINGTON

~~~~~ DATA NOT AVAILABLE

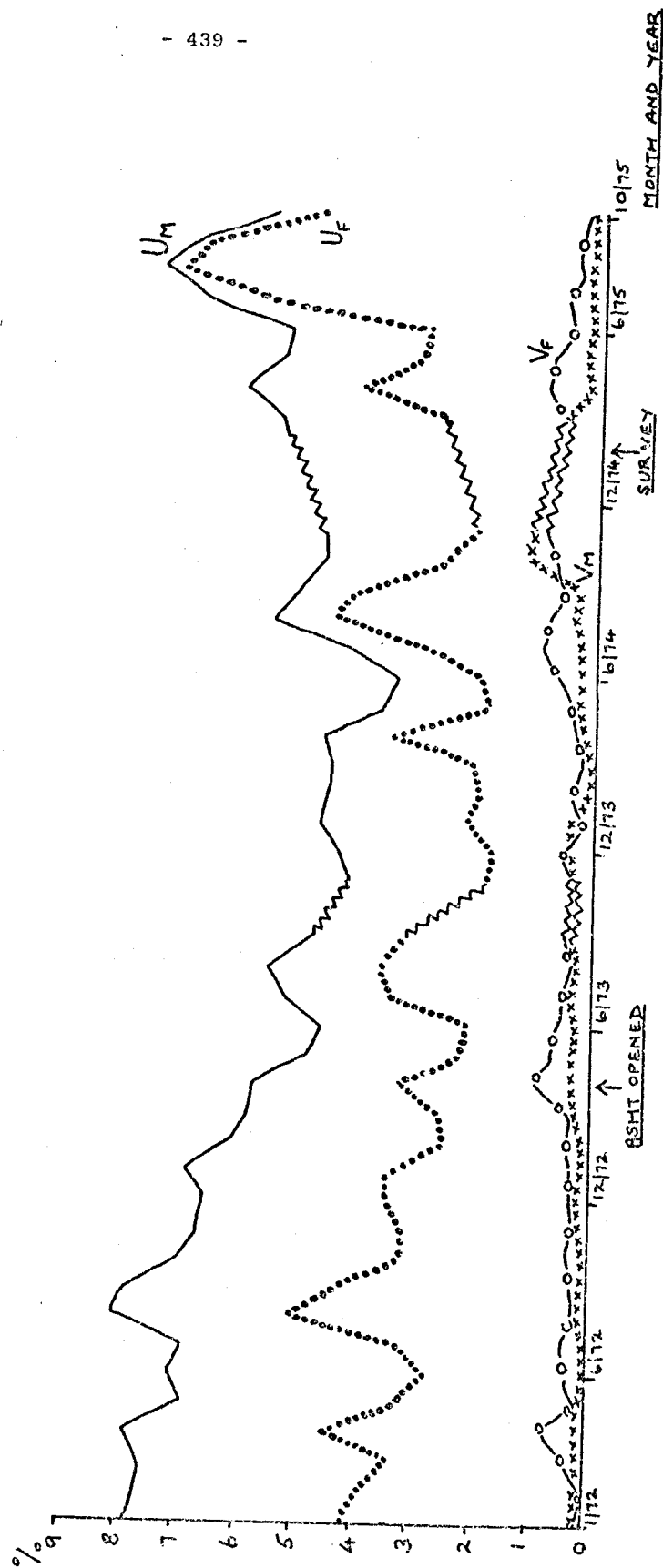
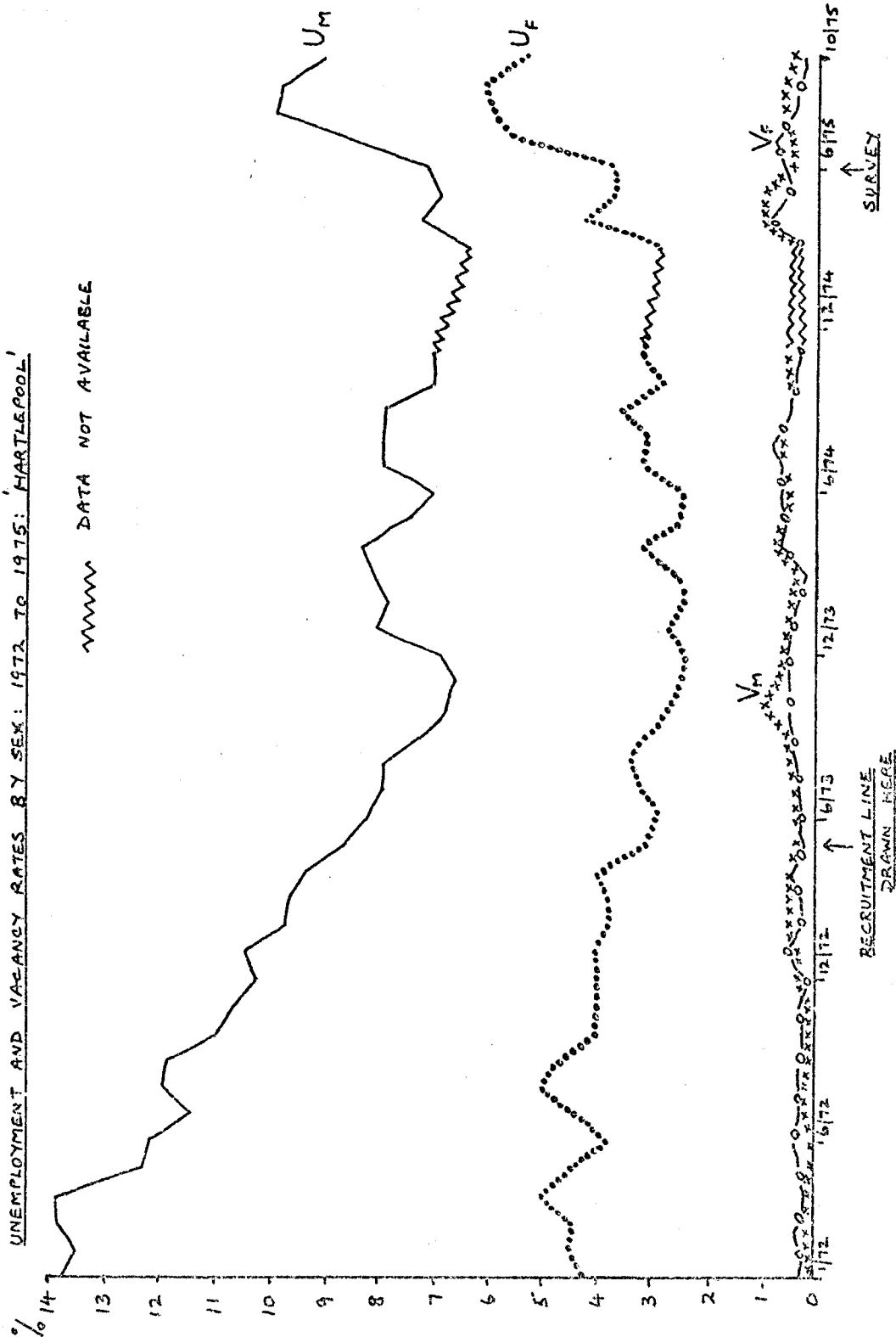


FIGURE 2.24

UNEMPLOYMENT AND VACANCY RATES BY SEX: 1972 TO 1975: 'HARTLEPOOL'

~~~~~ DATA NOT AVAILABLE



MONTH AND YEAR

FIGURE 2.25  
UNEMPLOYMENT AND VACANCY RATES BY SEX: 1972 TO 1975: SEASON DELAVAL

~~~~~ DATA NOT AVAILABLE

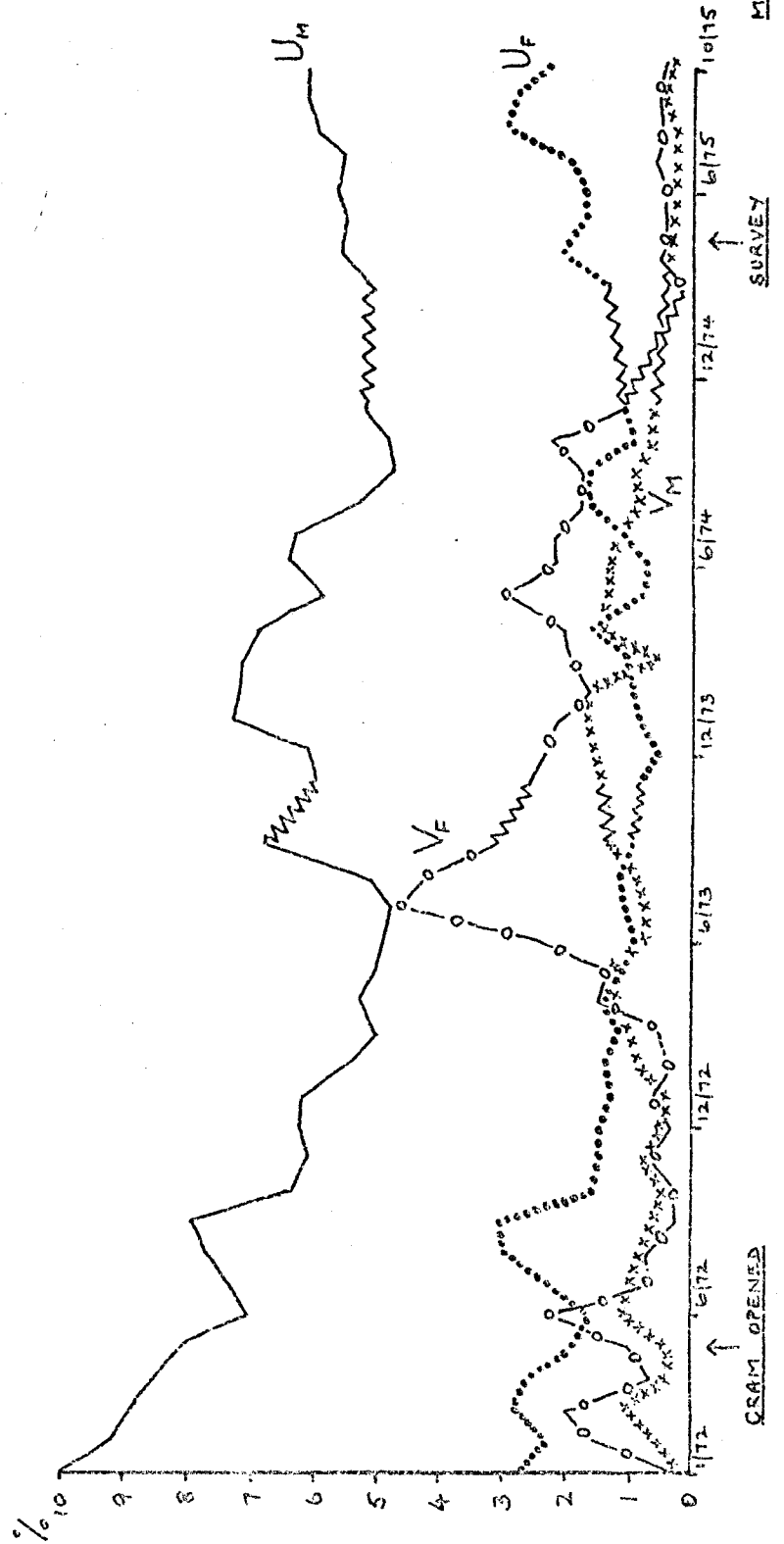


FIGURE 2-26
UNEMPLOYMENT AND VACANCY RATES: 1972 TO 1975: 'SUNDERLAND' MALES

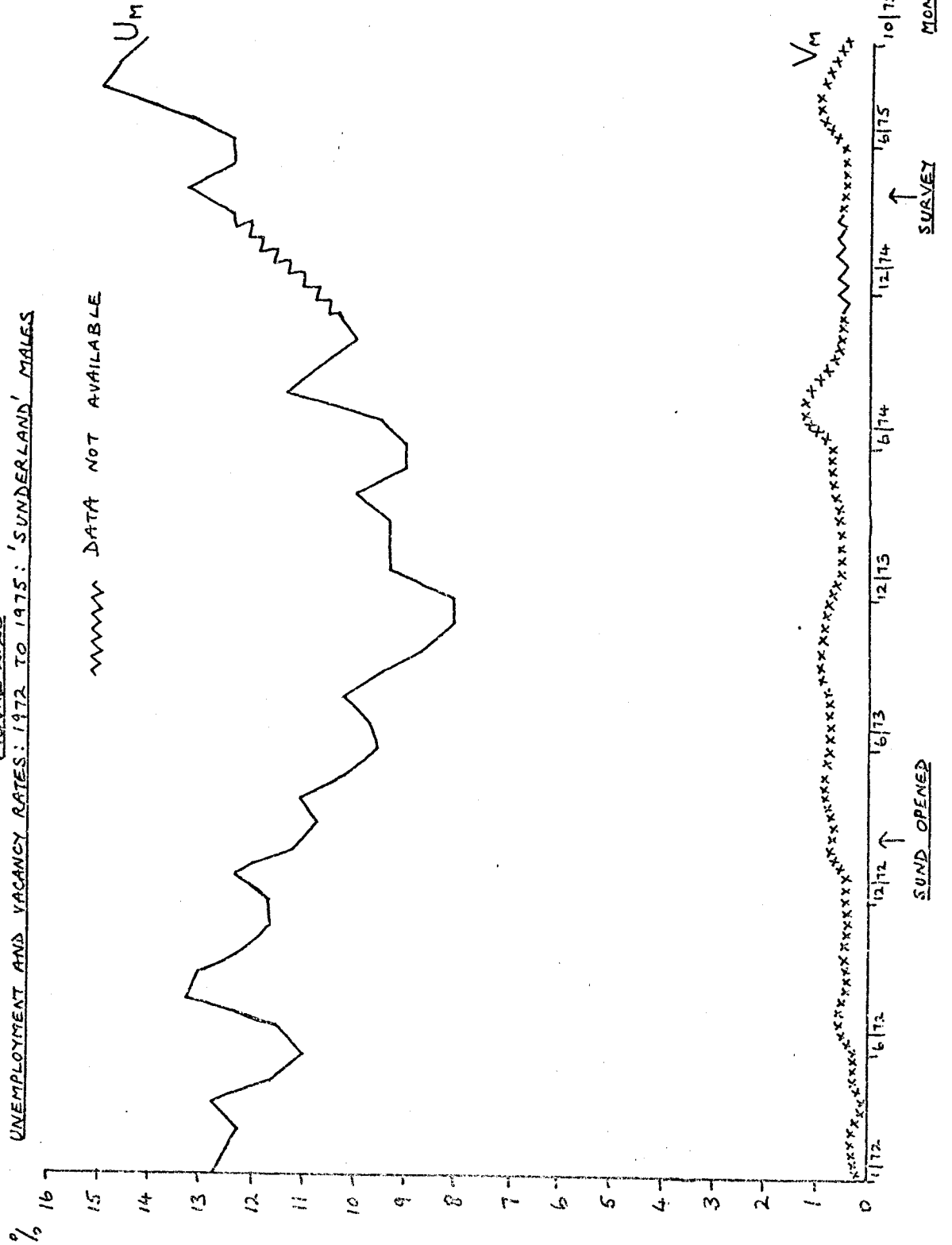


FIGURE 2.27
UNEMPLOYMENT AND VACANCY RATES: 1972 TO 1975: NEWBURN MALES

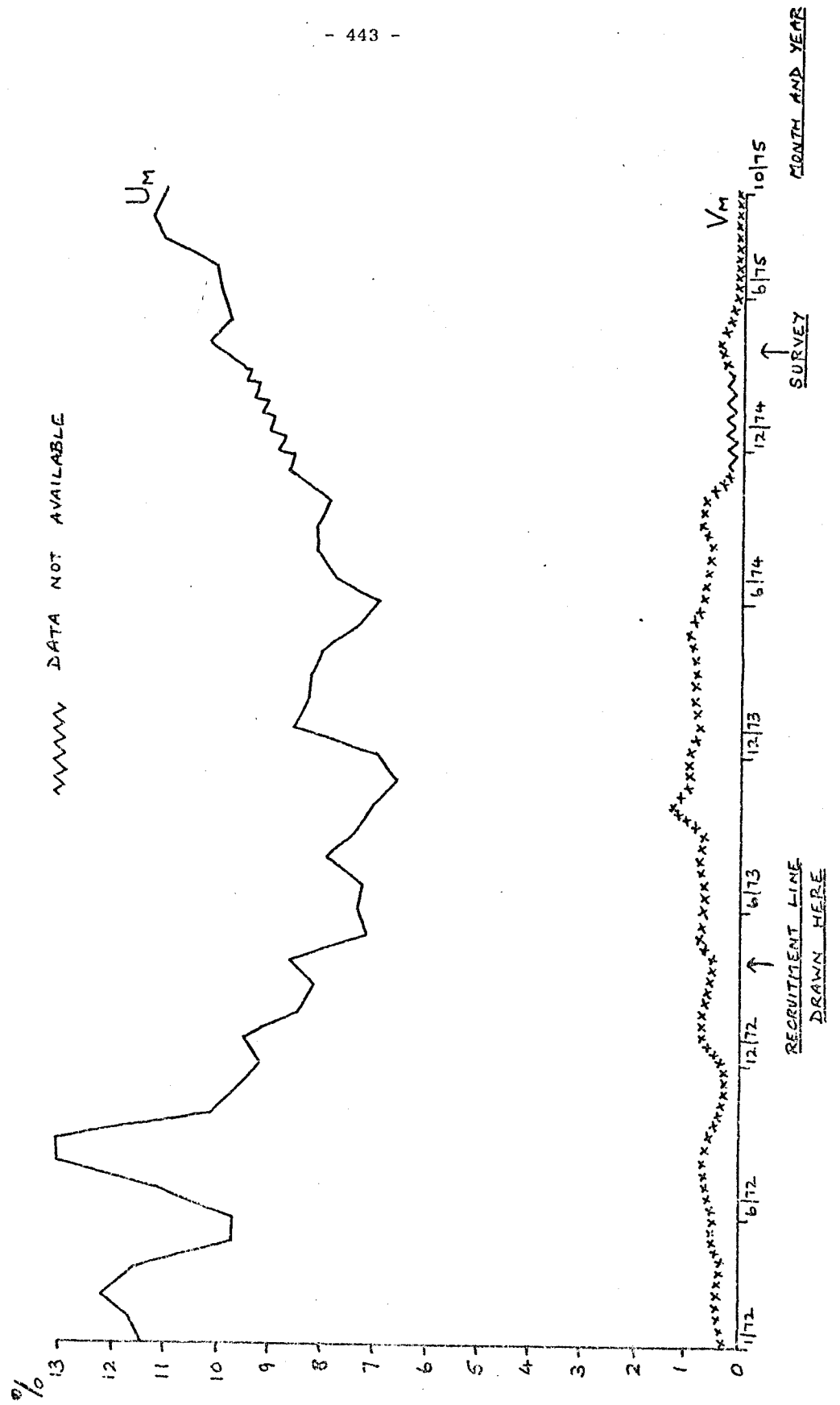


FIGURE 2.28
UNEMPLOYMENT AND VACANCY RATES BY SEX: 1972 TO 1975: WASHINGTON

~~~~~ DATA NOT AVAILABLE

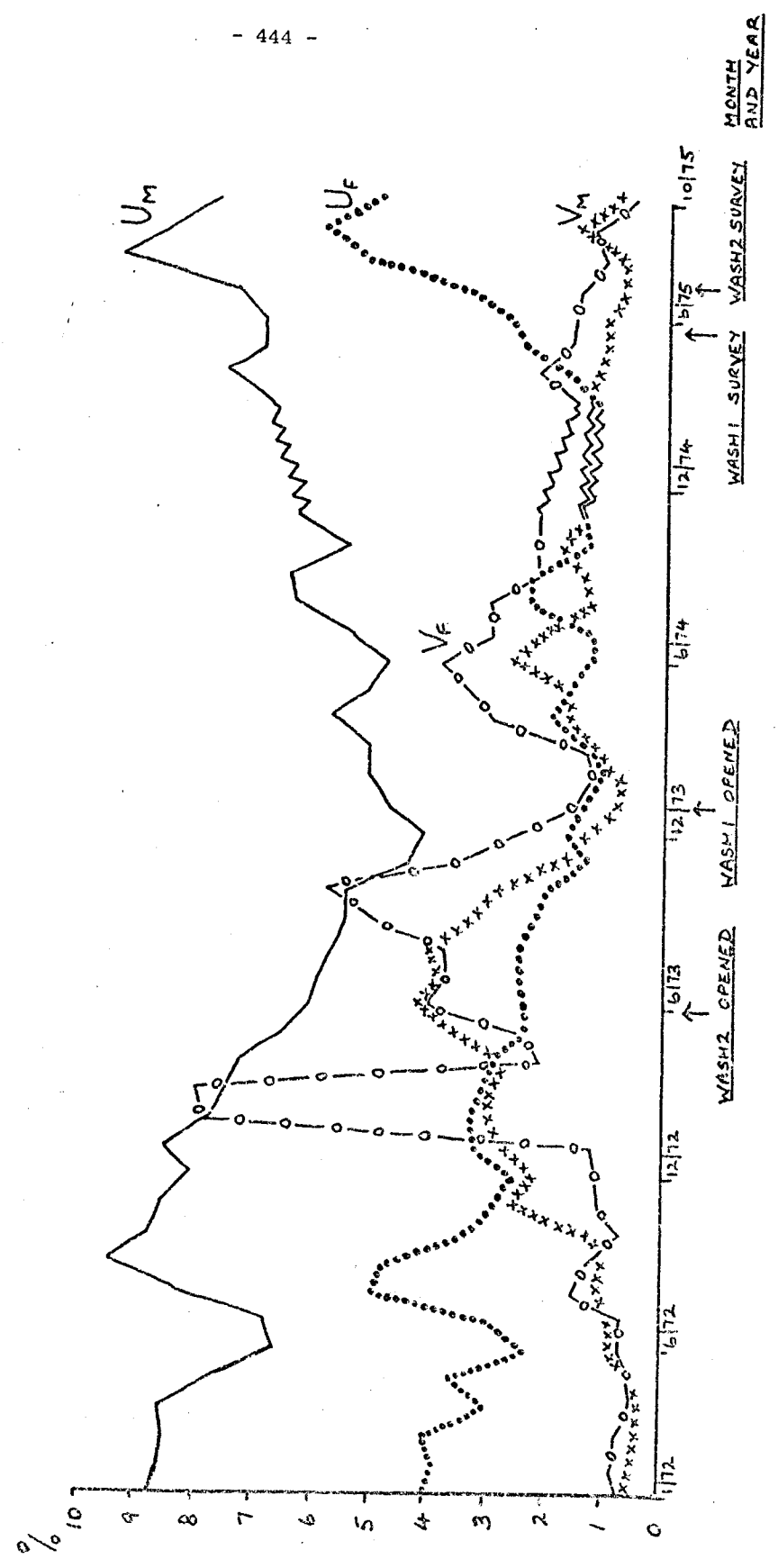


FIGURE 2.29  
UNEMPLOYMENT AND VACANCY RATES BY SEX: 1972 TO 1975: ASHINGTON AND SEATON DELAYAL

~~~~~ DATA NOT AVAILABLE

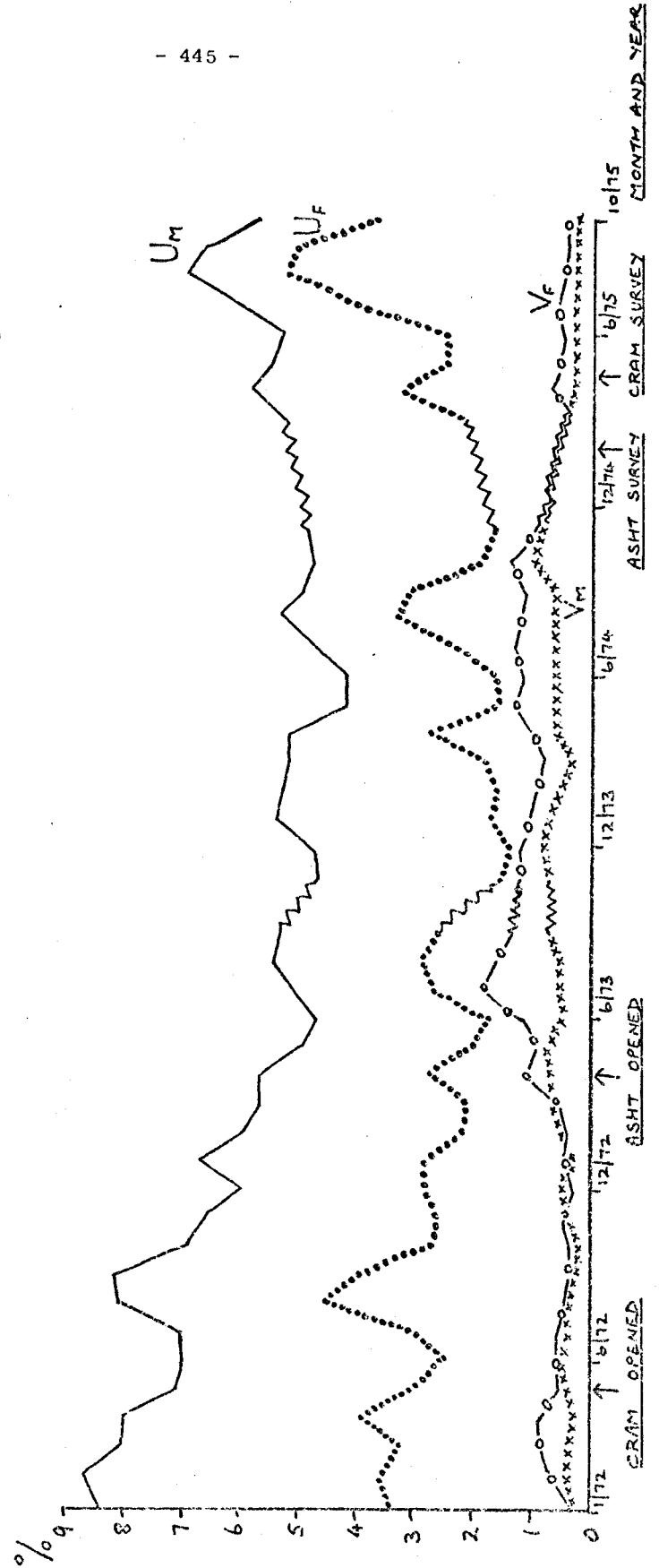


FIGURE 2.30
UNEMPLOYMENT AND VACANCY RATES: 1972 TO 1975: SEATON DELAYAL AND 'NEWCASTLE' MALES

~~~~~ DATA NOT AVAILABLE

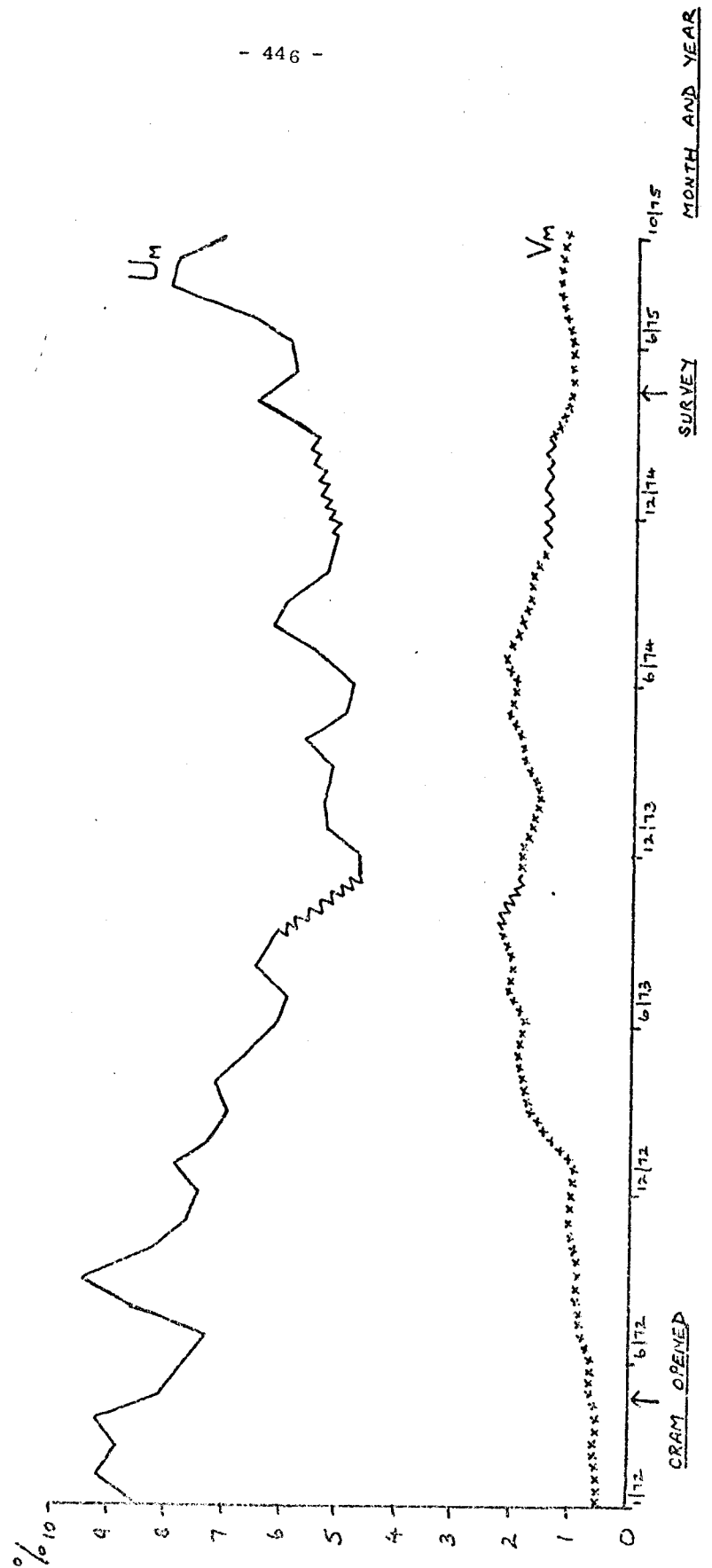
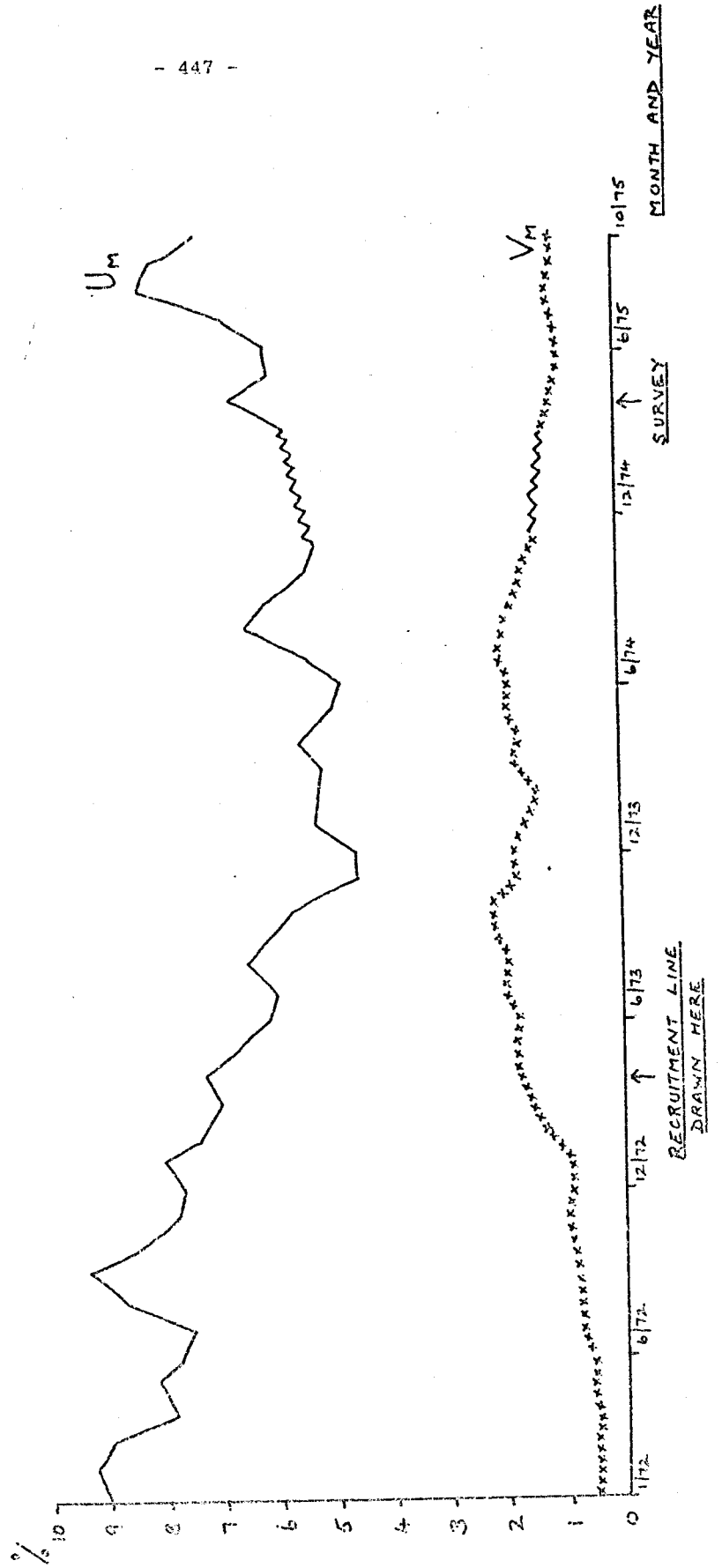




FIGURE 2.31  
UNEMPLOYMENT AND VACANCY RATES: 1972 TO 1975: NEWBURN AND 'NEWCASTLE' MALES

~~~~~ DATA NOT AVAILABLE



APPENDIX 4.1

Use of Census Data to Derive Labour Market Areas:
Problems and Results

1. Contiguity. Smart's method involves a process of aggregation of Local Authority areas, the basic geographic unit of the 1971 Census Workplace Tables. Only areas which share a boundary line can be associated and then only if the shared length constitutes a substantial proportion of the boundary of each of the areas. After aggregation the new area is treated in the same way as the basic unit for purposes of association. This rule is termed the "principle of contiguity" by Smart.

An example of the sort of problem which can arise from strict application of this rule was Easington R.D. This area has its strongest tie with Hartlepool C.B. but Stockton R.D. (associated with Teesside) intervenes between the two areas. No doubt the majority of people who live in the strip of Stockton R.D. which lies between Easington R.D. and Hartlepool C.B. travel to both of these areas to work.⁽¹⁾ In terms of numbers, however, these people are swamped in the statistics by those who live in the rest of Stockton R.D. and travel to the nearest major source of employment - Teesside. The system does not permit an association between Easington R.D., Hartlepool C.B. and a portion of Stockton R.D.

2. Local Authority Areas. Part of the problem of Easington R.D. lies in using Local Authority areas as the basic geographical unit.

(1) But note that this area is represented by Peterlee and Wingate in the Department of Employment monthly area Statistics of Unemployment and is treated as a separate area.

If Easington R.D., Hartlepool C.B. and the intervening portion of Stockton R.D. had been one Local Authority area there would not have been any difficulty. Similarly, the system does not permit the identification of any labour market enclaves within the basic units. An example of this might be the New Town of Peterlee which lies within Easington R.D.

A further example of the problem can be seen in the results (below) for S.W. Durham. The implication in delineating labour market areas at all is that there is substantial effective competition for jobs and workers among residents and firms within each area and that there is no encroachment upon surrounding areas. Thus, workers in Lanchester R.D. must compete with workers in Barnard Castle R.D. for jobs in Sedgefield R.D. and not for jobs in Weardale since we will see that the first three of these must be amalgamated but not Weardale, (see Chart I in Chapter 4).

This is not as ludicrous as it seems at first sight. The method establishes that links between Barnard Castle R.D. and Weardale and between Lanchester R.D. and Weardale are negligible. What the system does not establish is the validity of amalgamating Barnard Castle R.D., Lanchester R.D. and Sedgefield R.D. in the same labour market area. The relevant link values are almost as negligible as those with Weardale.

The situation arises primarily because of spatial distribution of jobs and places of residence. If jobs and houses are clustered at a large nodal point within a Local Authority boundary or boundaries - e.g. Darlington C.B., Darlington R.D. and Croft R.D., then the system will produce compact labour market areas, provided

the nodal points are surrounded by relatively thinly dispersed populations. If employment and population are more evenly distributed and there is no dominant centre - approximating to a village system - it is probable that the resultant labour market areas will sprawl across several Local Authority areas. South West Durham is closed to the latter example. It is probably the village populations that cross the Bishop Auckland U.D. - Barnard Castle R.D. boundary to work that prevent the Barnard Castle U.D. - Barnard Castle R.D. - Startforth R.D. area achieving labour market status. Yet it is precisely in an area like S.W. Durham that we expect to find a multiplicity of very local labour markets because they are relatively poorly endowed with roads and public transport, a factor which might tend to re-inforce local affiliations. Partly offsetting this, however, is the high proportion of working class owner-occupied dwellings relative to (for example) Tyne and Wear - see Appendix Y to NRST (62).

3. Occupational and Industrial Groupings. The Census data do not permit any investigation into the possibility of industrial or occupational differences in the spatial extent of labour market areas. We expect occupational differences to be the more important of the two. In Smart's system the definition of a traveller is a person who crosses a Local Authority boundary in his daily journey to work. A person who does not do this is classified as a non-traveller. If a centre of employment is near the periphery of its Local Authority area it may draw many of its workers from a neighbouring area, depending upon the distribution of population. These people will be considered travellers even though they may only

journey one mile while other workers at the plant, who might travel ten miles, are considered non-travellers if they do not cross a Local Authority boundary. If we subscribe to the view that Local Authority boundaries bear some relationship to existing communities - and therefore centres of employment - then we will consider that these examples will not occur frequently. Perhaps this argument is stronger with reference to the post-1974 Local Authority areas than to those to which the 1971 Census data relate.

Let us assume for the moment that the argument is valid and that no centre of employment lies within (say) two miles of the Local Authority boundary. If there is any value in the results of the exercise then the travellers must be reasonably representative of the working population as a whole. The respondents to the survey were asked how far they travelled to their present place of work. The replies are shown in the table.

TABLE 1

Sex and Social Status by Travel to Work Distance at Time
of Survey

	<u>0-1 mile</u>	<u>2-5 miles</u>	<u>6 miles and over</u>	<u>Row Totals</u>
Male White Collar	8	10	28	46
Female White Collar	8	6	4	18
Male Blue Collar	56	87	33	176
Female Blue Collar	75	60	18	153
	147	163	83	393

Table significant at 1% level, chi-squared test.

Thus 49% of females travelled less than two miles to work, compared with 29% of males. If we divide the respondents into 'blue collar' and 'white collar' - a division based upon a classification by the firm for which the respondents worked - we find that

nearly half the female blue collar workers restricted their travelling to under two miles. Nearly a third of male blue collar workers and just under half female white collar employees did the same. Only 17% of male white collar workers could not have crossed the assumed Local Authority boundary. Thus the people who cross Local Authority boundaries are likely to be male and white collar workers especially. If these results are at all typical of the working population then Smart's system has a bias towards male non-manual behaviour patterns because (in 1971) only 43% of the Great Britain work force (male and female) were non-manual employees.⁽¹⁾ The situation is even worse than this because we expect a disproportionate number of male non-manual employees to be 'spiralists' who frequently move house with a change of job. The labour market for these people will stretch beyond a locality to a regional or national level. Thus, the system gives undue weight to a minority of the work force who travel further than the residual and some of the minority do not reveal their labour market areas by their travel to work patterns.

4. Aggregation. The first step in the process of associating areas is to identify regions or sub-regions which have relatively little travel to work movements across their boundaries. Unfortunately no guidance is given on how to select these areas so, anticipating subsequent stages of the process, link values were calculated for every Local Authority area. This revealed five Rural Districts in Northumberland which had virtually no link with any other areas

(1) Department of Employment Gazette, p.985, October 1975.

(and each met the 75% criterion on self containment levels) and nine other groupings, the members of which each had their strongest link with another member of the same group (see Table 1).⁽²⁾ These groupings had to be revised, however, because "Hexham" did not aggregate to the 75% self containment minimum.

Prudhoe and Hexham R.D. when associated gave an area with a RWA/REP ratio of 52.6 and the RWA/DEP ratio was 76.9. Adding Hexham U.D. improved the figures to 70.8 and 84.3 respectively. The only course of action was to associate these areas with their next strongest link. For Prudhoe and Hexham R.D. this meant Newcastle but for Hexham U.D. it should have meant Haltwhistle R.D. Since the two areas are not contiguous, however, Hexham U.D. had to follow with Hexham R.D. This suggests that the arbitrary 75% criterion needs to be more flexible.

"Consett" proved the most difficult problem. Neither Consett U.D. nor Stanley U.D. appear in Table 2; Consett U.D. had self containment levels just above the 75% minimum. Association with Stanley U.D. (which had its strongest link with Consett U.D.) "weakened" the area so that it had to be aggregated with another labour market. But it was not a simple matter of following the "Hexham" precedent because Consett U.D. had its strongest link with Lanchester R.D. which, in turn, showed very strong ties with Durham M.B. and had already been associated with the "Durham" group. Stanley U.D. also had strong links with Lanchester R.D. but these were virtually matched by its ties with Gateshead C.B.

(2) With the exception of Easington R.D. and Hartlepool C.B. which are dealt with above.

and other Tyneside Local Authority areas. It was decided to use Consett U.D. and Stanley U.D. as an example of a borderline case and the exercise was worked through leaving these two areas aside until the final stages. Subsequent analysis showed that if these two areas had been included in the initial groupings of either "Durham" or "Tyne and Wear" their association would have been the last step in the process anyway.

After the procedure had been completed for all groups, link values were calculated for Consett-Stanley with "Tyneside" and "Durham". The higher value was with "Tyneside" and this decided that Consett U.D. and Stanley U.D. should become part of the Tyneside labour market. If the system had been adhered to strictly, these areas would have become part of the Durham labour market.⁽³⁾

There is little doubt that other judgments could decide upon other borderline cases and produce a table of labour market areas vastly different from that which appears at Table 2 and re-draw the map shown as Chart I (in the main text).

TABLE 2

Initial Groupings of Areas Ranked by Critical (*) Self
Containment Levels

'Isolated' Areas

Self Containment Levels

<u>Area</u>	<u>RWA/REP</u>	<u>RWA/DEP</u>
Belford R.D.	87.6*	91.2
Bellingham R.D.	85.1*	86.9
Glendale R.D.	88.3*	92.7
Haltwhistle R.D.	80.2*	88.9
Rothbury R.D.	77.3*	88.7

(3) Note that the Department of Employment monthly Area Statistics of Unemployment treat Consett, Lanchester and Stanley as a single area. The 1974 reorganisation of local government grouped these areas together as Derwentside District Council.

<u>Area</u>	<u>Self Containment Levels</u>	
	<u>RWA/REP</u>	<u>RWA/DEP</u>
<u>'Alnwick'</u>		
Amble U.D.	42.7*	72.6
Alnwick R.D.	63.5	62.5*
Alnwick U.D.	75.5	62.6*
<u>'South East Northumberland'</u>		
Newbiggin U.D.	21.2*	69.5
Morpeth R.D.	45.9	36.4*
Bedlington U.D.	45.5*	59.8
Morpeth M.B.	52.5*	53.9
Ashington U.D.	62.6	53.0*
Blyth M.B.	62.4*	76.7
<u>'Darlington'</u>		
Croft, R.D.	46.6*	71.9
Darlington R.D.	59.6	55.0*
Darlington C.B.	84.7	76.3*
<u>'Tyne & Wear'</u>		
Castle Ward R.D.	26.4*	60.0
Whickham U.D.	28.4*	57.5
Newburn U.D.	29.2*	60.2
Gosforth U.D.	29.3*	29.6
Ryton U.D.	29.5*	65.3
Felling U.D.	29.8*	56.1
Boldon U.D.	30.4*	60.9
Whitley Bay M.B.	32.6*	65.4
Longbenton U.D.	33.7*	35.4
Chester-le-Street U.D.	34.1*	47.6
Blaydon U.D.	36.9*	56.0
Hebburn U.D.	57.1	38.0*
Jarrow M.B.	40.8*	48.8
Seaton Valley U.D.	41.5*	56.9
Chester-le-Street U.D.	43.0*	48.4
Newcastle C.B.	76.0	45.8*
Wallsend M.B.	55.0	46.1*
Gateshead C.B.	62.0	47.3*
Houghton-le-Spring U.D.	48.9*	66.9
Hetton U.D.	52.0*	71.7
Washington U.D.	57.7	55.9*
Tynemouth C.B.	61.5*	68.2
Easington R.D.	66.9*	86.9
Seaham U.D.	69.3*	70.0
South Shields C.B.	70.3*	80.1
Sunderland C.B.	87.6	83.4*

Area	<u>Self Containment Levels</u>	
	<u>RWA/REP</u>	<u>RWA/DEP</u>
'Hexham' (subsequently amalgamated with 'Tyne & Wear')		
Prudhoe U.D.	41.7*	61.9
Hexham R.D.	51.4*	74.7
Hexham U.D.	76.6	58.4*
<u>'Durham'</u>		
Durham M.B.	61.9	29.3*
Lanchester R.D.	35.5*	67.7
Brandon & Byshottles U.D.	37.9*	67.9
Durham R.D.	37.9*	53.5
Spennymoor U.D.	68.9	44.1*
Sedgefield R.D.	44.6*	68.0
Barnard Castle R.D.	49.1*	86.3
Tow Law U.D.	52.6*	60.7
Sildon U.D.	53.6*	59.2
Startforth R.D.	58.5*	84.7
Barnard Castle U.D.	74.3	57.2*
Crook & Willington U.D.	57.2 *	83.6
Bishop Auckland U.D.	63.3*	64.1
Weardale R.D.	79.2*	81.5
<u>'Berwick'</u>		
Norham & Islandshires R.D.	68.4*	95.4
Berwick M.B.	94.9	80.6*
<u>'Teesside'</u>		
Saltburn & Marske-by-the-Sea	25.2*	59.0
Skelton & Brotton U.D.	28.3*	82.1
Stockton R.D.	29.4*	39.5
Guisborough U.D.	36.4*	69.0
Stokesley R.D.	49.2*	74.2
Loftus U.D.	65.4	58.8*
Hartlepool C.B.	85.8	83.0*
Teesside C.B.	95.4	83.9*
<u>'Richmond'</u>		
Richmond M.B.	25.2*	66.7
Richmond R.D.	87.3	70.3*

Table 3

Labour Market Areas in North-East England showing Self
Containment Levels after Aggregation

	<u>L.A. Areas Covered</u>	<u>Self Containment Levels</u>	
		<u>RWA/REP</u>	<u>RWA/DEP</u>
Belford	Belford R.D.	87.6	91.2
Bellingham	Bellingham R.D.	85.1	86.9
Glendale	Glendale R.D.	88.3	92.7
Haltwhistle	Haltwhistle R.D.	80.2	88.9
Rothbury	Rothbury R.D.	77.3	88.7
Alnwick	Amble U.D.	84.7	85.8
	Alnwick R.D.		
	Alnwick U.D.		
S.E. Northumberland	Newbiggin U.D.	79.9	88.0
	Morpeth R.D.		
	Bedlington U.D.		
	Morpeth M.B.		
	Ashington U.D.		
	Blyth M.B.		
Darlington	Croft R.D.	77.9	97.9
	Darlington R.D.		
	Darlington C.B.		
South Shields	Boldon U.D.	76.9	84.9
	Hebburn U.D.		
	Jarrow M.B.		
	South Shields C.B.		
Sunderland	Houghton-le-Spring U.D.	85.2	90.8
	Hetton U.D.		
	Easington R.D.		
	Seaham U.D.		
	Sunderland C.B.		
Tyneside	Castle Ward R.D.	90.6	88.5
	Whickham U.D.		
	Newburn U.D.		
	Gosforth U.D.		
	Ryton U.D.		
	Felling U.D.		
	Whitley Bay M.B.		
	Longbenton U.D.		
	Chester-le-Street U.D.		
	Blaydon U.D.		
	Seaton Valley U.D.		
	Chester-le-Street R.D.		
	Newcastle C.B.		
	Wallsend M.B.		
	Gateshead C.B.		
	Washington U.D.		

<u>Area</u>	<u>L.A. Areas Covered</u>	<u>Self Containment</u>	
		<u>Levels</u>	
		<u>RWA/REP</u>	<u>RWA/DEP</u>
Tyneside (cont'd.)	Tynemouth C.B.		
	Prudhoe U.D.		
	Hexham R.D.		
	Hexham U.D.		
	Consett U.D.		
	Stanley U.D.		
Durham	Durham M.B.	78.7	84.2
	Lanchester R.D.		
	Brandon & Byshottles U.D.		
	Durham R.D.		
	Spennymoor U.D.		
	Sedgefield R.D.		
	Barnard Castle R.D.		
	Sildon U.D.		
	Startforth R.D.		
	Barnard Castle U.D.		
	Crook & Willington U.D.		
	Bishop Auckland U.D.		
Weardale	Weardale R.D.	75.4	79.6
	Tow Law U.D.		
Berwick	Norham & Islandshires R.D.	94.2	88.4
	Berwick M.B.		
Teesside	Saltburn & Markse-by-the Sea	96.1	92.9
	Skelton & Brotton U.D.		
	Stockton R.D.		
	Guisborough U.D.		
	Stokesley R.D.		
	Loftus U.D.		
	Teesside C.B.		
Hartlepool	Hartlepool C.B.	85.8	83.0
Richmond	Richmond M.B.	88.5	84.0
	Richmond R.D.		

Appendix 4.2

Job Search Method of Estimating Labour Market Areas:
Problems and Aggregation

1. Survey Questions. Q.24 "While you were looking around for a job before you joined this firm, which geographic areas did you consider working in? Why this area?" Q.24 is discussed in the main text. In an attempt to offset the leading nature of this question and to obtain interesting answers regarding the respondents' perceptions of local areas, the question "Why this area?" was asked in respect of each area named. It was believed that enquiring about the reason why each area was searched was some guarantee of receiving only considered replies.

A.24a "Why not (other areas)?"

For this question interviewers were given a list of four areas for each location and were instructed to ask the question of each respondent in respect of each area he had not already mentioned in reply to Q.24. The four areas were decided after analysis of 1966 Census Workplace Tables of the localities in the cases of Ashington, Newburn and Sunderland. Subjective judgment was used for the other three areas. Even where Census data was used it was recognised that industrial development since 1966 could have had a radical effect on travel to work patterns, and local knowledge was incorporated before the final decision was made. In the 'New Towns' of Cramlington and Washington almost all the industry has been developed since 1966 so the areas selected here were little more than educated guesses. Hartlepool posed a difficult problem because its only substantial link is with Easington R.D., which

has few centres of employment apart from large mines and some industries and services at Peterlee. Once again, subjective judgment played a major role. An additional justification for rejecting objective criteria was that the addresses of the respondents prior to the interview were unknown so the question had to be in general terms to yield useful replies and not appear stupid to the respondents.

It was thought that this question would further extend the spatial limits of job search areas, supplementing the replies to Q.24. We were also hoping to discover the perceptions of the respondents of standard local areas. In practice it was not clear whether the replies related to actual or hypothetical behaviour and for this reason they have not been included in the exercise to determine the boundaries of local labour markets.

Q.25 "Will you tell me the names of any factories and other work places at which you seriously considered getting a job? Which of these did you actually contact?"

This question is discussed in the main text. In the pretest there were two additional parts to the question:-

"Which firms and how?"
"What happened?"

The anticipated replies to the first of these questions were "Personal contact", "Via third party", "Post" and "Telephone". The original idea was that the method of communication would indicate the intensity of interest of the respondent in the job for which he applied. More ambitiously it was thought possible to assign a probability on an ordinal scale according to the method of contact and attribute this to the respondents' assessment of his chances of obtaining employment. The pretest revealed that this was too

ambitious and it was not, in fact, possible to get a clear answer to the question because the process of applying for a job is often complicated and involves more than one form of communication. A similar reason was used for discarding the question "What happened?"

2. Aggregation of Replies

By eliminating Q.24a, for the reasons discussed above, we are left with five meaningful ways of aggregating the replies to Q.24 and Q.25. These are:-

- (a) Q.24 alone.
- (b) Q.25 alone "contact only".
- (c) Q.25 alone all replies.
- (d) Q.24 and Q.25 "contact only".
- (e) Q.24 and Q.25 all replies.

In practice there is little difference between Q.25 "contact only" and Q.25 "all replies" so we will only consider the latter. Q.24 replies relate to geographic areas; Q.25 replies name specific firms. It can be argued that the replies to Q.25 indicate willingness to work only at a specific firm in an area, that this may be because that firm offers the highest wages, which more than compensate for travel costs and so such answers do not indicate willingness to work anywhere else in the area. This may be so but what it really means is that ex post the respondent would only work at that one factory. We are interested in ex ante behaviour, where the respondent was willing to look to discover that it was only worthwhile to work at the one factory. If the replies to Q.25 are different from those to Q.24 it probably indicates that the respondent simply forgot to mention, in Q.24, the areas in which the factories named at Q.25 are situated. It may also mean that he himself did not look in these areas, but his agent - friend,

relative or employment exchange - looked on his behalf and drew a job vacancy at the factory to his attention. The behaviour of an agent on behalf of an economic actor may be as important as the actor's own behaviour.

The main exercise will therefore aggregate Q.24 and Q.25; (e).

The replies to Q.24 pose some difficulties. They were of four general types; (1) local area named or implied; (2) centre of employment named which would have meant commuting across other areas where job opportunities exist - for example an Ashington respondent said "Newcastle" whereas Cramlington, Killingworth and Longbenton lie between Ashington and Newcastle; (3) general replies which were difficult or impossible to interpret at the geographical scale of this Chapter, e.g. "The North East"; (4) migratory replies, e.g. "Canada".

From accumulated local knowledge and conversation with many respondents it proved possible to assign an area to each of the local names classified as (1). Type (2) replies could also be mapped. Type (3) replies were considered too nebulous for aggregation and were not included. The fourth type of reply was very much in the minority and belongs to a different conception of a labour market. Aggregation with local labour market areas could not be justified. Note, however, that the exclusion of these two types of replies does not necessarily exclude the respondents because they may also have given replies of other types.

Preliminary analysis showed that for each locality it was possible to classify the replies broadly by radial distance and

direction from the factory. In order to simplify the procedure the most extreme areas were ignored (extreme in terms of number of replies, not distance from the factory). Thus, if an area received only one mention from all respondents at one location - out of five possibilities for Q.24, three for Q.25 - it was omitted from the classification. Exclusions for this reason and because the replies were of types (3) or (4) resulted in the omission of 27% of respondents. Most of these people were excluded because they gave general or migratory replies. Thus, although a substantial minority seem to operate in a market which extends beyond fairly narrow limits, the term "local labour market" is still relevant to a large majority.

The system gave rise to a number of "stages" of aggregation which varied in number between locations. To assist the reader these are given in full for Sunderland.

Stages of Aggregation: Sunderland

Stage

I	"Sunderland", "Sunderland Metropolitan District", "Around here", "Near home", "Pallion", "Hendon".
II	"Washington"
III	"Fencehouses"
IV	"Tyneside", "Jarrow", "Hebburn".
V	"Hartlepool", "Hartlepool District".

Distance from the factory generally increases through stages I to the last. Note that for each factory the replies "Around here" and "Near home" were taken to mean the local areas named by the respondent's workmates. For each "Near home" reply it was confirmed from the data that the respondent concerned lived within the stage I areas.⁽¹⁾ This probably leads to an overstatement of the local

(1) Except in one case where the relevant area was part of stage II; this reply was transferred to stage II from stage I.

labour market since many respondents will have meant the same trading estate as the study factory when they said "Around here". In general, stage I extends some $1\frac{1}{2}$ miles from the factory.

Four methods of aggregation were considered. The objective was to discover a "watershed" or clear dividing line which would indicate the extent of the local labour market. Hopefully it would enable us to draw a boundary line across which the majority of respondents would not venture in order to obtain work. If the local labour market is a useful concept in economic theory we should find some evidence of its existence. If it applies to only a small minority or is outdated then we may find evidence which suggests an alternative more meaningful concept. The relevant population in this sense comprises all those who replied to the questions, including "Not looking" and replies of types (3), general, and (4) migratory (see above) as valid replies. This excludes only six respondents, at three locations who did not reply.

The first method of aggregation considered (Method 1) was to total the number of mentions received by the areas in each stage. This has the effect of giving respondents more than one "vote" at each and every stage, giving great weight to those people who searched intensively and in several areas and reported their behaviour. But the relevant unit in economic theory, and especially competitive theory must be the number of people since each person can only get one full-time job. The number of mentions might be some measure of the probability of success in job search, or it may just offset other inherent disadvantages the individuals suffer in the labour market.

The second method (Method 2) was to allow people only one "vote" at each stage but at any number of stages. This eliminates the weight given to the man who searched intensively but still attaches too much importance to people who tried several areas.

The economic justification for both these methods is that they provide some measure of market activity in each of the stages. This activity has results possibly in terms of wage levels, which accrue to both the job searcher and the man who does not search. The results for both these methods were very similar, showing little reportage of intensive searching. To prevent duplication Method 2 was discarded.

The third method (Method 3) considered involved the contentious assumption that a respondent who mentioned stage IV (for example) also implied search in stages I through III because they are closer to the study factory. In this method radial distance is considered the important variable and no account is taken of direction. Yet direction is important because had public transport may mean it takes longer to travel five miles one way than 10 miles in another direction. A further example would be a man prepared to travel 10 miles to area A but not five miles to area B because A is known as a high wage area while B is a low wage area. In other words, for perfectly rational reasons the assumption may be contravened. This method was not tried.

Method 4 also counts people and takes account of both distance and direction. Each respondent is allowed only one 'vote' and initially it is the closest area to the factory he names. Each

step in the process involved adding the geographical areas and calculating the scores at each stage to give the increments of people included by virtue of extending the area. Thus the first area was Stage I, the second Stage I plus Stage II, the third area Stage I plus Stage II plus Stage III and so on. The home addresses of respondents are not included in the analysis. This allows people the choice, through their questionnaire replies, of not working near their home.

There is little to choose between the key results of the different methods but Method 4 does lend itself to the calculation of a simple statistic showing the proportion of the sample covered by the local areas. This is useful in comparing the relative "strengths" of self containment of the different areas. We will therefore adopt Method 4 as our main measure of local labour markets, but we will find it useful also to study Method 1. The results are reported in the main text.

APPENDIX 8.1

Index for Expressing Earnings Data at Constant Earnings Levels: Problems and Demonstration of Acceptability

1. The Index

1.1. Respondents were asked for details of their gross and take home pay in their previous job and the job they held at the time of the survey. The resultant data relate to a variety of dates over a period from 1972 to 1975 when inflation in the U.K. was running at very high levels. In order to interpret these data it is necessary to express them at a common date by the use of an index. Since our main interest is in the remuneration of workers and not consumption patterns an earnings index rather than a prices index is appropriate. We will assume that in comparing the rewards from different jobs workers are more interested in earnings than wage levels so a wages index is not suitable; in the same comparison it is more appropriate to consider gross pay than take home pay since, for the individual, tax rates are constant between jobs. Similarly we will assume that weekly earnings rather than hourly are most relevant to job choice.

1.2. Most respondents gave weekly pay data; monthly and annual figures were converted to this basis for comparative purposes. Some workers left their previous job before December 1971; applying an index to data as old as this is likely to lead to aberrations in the results so such individuals (17 in total) have been excluded from the calculation of earnings statistics in this appendix and the index-adjusted figures quoted in Chapter 8. Table 1 shows the unadjusted gross pay distributions on this basis.

Table 1

Unadjusted 'Normal' Gross Pay Distributions; Previous and
Present Job. (£ p.w.)

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>
Previous Job	34	32	20
Present Job	45	42	16

The wider spread of gross earnings in respect of previous job is to be expected since the data relate to different jobs in a wide variety of firms at diverse locations over a much longer period of time than the gross earnings figures for the respondents' present job.

1.3. Most respondents were manual workers but a substantial minority held white collar jobs. Although an ideal would be the use of separate indices for different grades of labour for practical purposes it was decided that a single index for all workers should be used.

1.4. Perhaps the most important distinguishing characteristic of workers revealed by the survey was sex. An attempt was made, therefore, to calculate a separate index for each sex but it proved unsuccessful. A justification for using one index for both males and females is that although earnings levels are very different, we expect less variation in the rate of change of earnings.

1.5. The inflation rates recorded for the period 1972 to 1975 were so high that a monthly index was used. This creates possible problems because different groups of workers achieve annual increases at various times of the year in the 'wages round'; there are

therefore important discontinuities in the rise of earnings which are not revealed by an index. Nevertheless it was considered that the errors involved in using an annual index would be greater.

1.6. Earnings differ between industries, especially between the manufacturing sector and the service sector. All the survey firms are manufacturing establishments so 'present' earnings were adjusted by an index specific to manufacturing. The previous jobs of respondents were in many industries, including the service sector so for this data an index relating to all industries and services was used.

1.7. The regional distribution of earnings is not equal. An attempt was made to calculate an index specific to the Northern Region but it did not prove successful. The index used relates to Great Britain.

1.8. Table 127 of the Department of Employment Gazette 'Index of Average Earnings: all employees: GB' was chosen as the earnings index. Figures which have not been seasonally adjusted are used throughout. As discussed above it provides a choice between an index for manufacturing industries and one for 'all industries and services' although, unfortunately, the latter excludes distributive trades and professional services and public administration. This may not result in large inaccuracies, however, since we are concerned with changes in earnings and not levels.

1.9. The index was used to adjust gross earnings data to April, 1975 earnings levels, a date which permits comparison with the figures in the New Earnings Survey. The dates for adjustment purposes were taken as date of leaving previous job for previous

gross earnings and date of interview for present gross earnings.

Thus problems of any 'gap' between jobs were avoided.

2. Demonstration of Acceptability

2.1. In the survey respondents were asked if they would give permission for the team to inspect the records of the firm in respect of their previous earnings. Each of the firms was asked to provide facilities for this work but only three complied. This means that it is possible to compare the replies to the questionnaire with the records of the respondent's firm in only 64 cases.

Two of these did not reply to the question asking for their 'present' normal gross pay and for an additional seven analysis of the data for the relevant week from the firm showed that pay had not been 'normal' - either because of short time working or abnormal overtime.

2.2. The demonstration of the acceptability of the index, by comparing index-adjusted figures with the firms' records relates, therefore, only to 55 respondents, 32 men and 23 women at WASH 2, ASHT and SUND. We cannot tell whether these individuals are representative of all respondents to the survey.

2.3. Use of the index assumes that the survey firms have kept in step with the changes in earnings levels at the 'average' manufacturing establishment. This is perhaps more important in the demonstration of acceptability than in the wider use of the index on the survey data as a whole since we are concerned here with data for only three firms while the survey data for earnings in respondents' previous job relates to a variety of firms. The adjustment to earnings at the time of the survey is marginal

because all the interviews were conducted in the first six months of 1975 and there are only seven firms involved.

2.4. The comparison we will make is between the gross earnings of respondents for the first pay week after the end of their initial training period and the normal gross earnings reported in the survey adjusted back to the month each respondent began work at the 'full' rate. Any promotion received between this date and the time of the interview will be a source of variation but the incidence of such promotion is low.

2.5. A further source of variation in the demonstration will be cyclical fluctuation not reflected in the index; this may stem from abnormal overtime, bonus or shift payments. We have no measure of the size of this problem, but, as mentioned above obvious abnormalities have been excluded.

2.6. Table 2 shows the characteristics of the distributions of the data from the firms' records and the adjusted survey data.

Table 2

Distributions (a) Firms' records (b) Adjusted survey data
at month after each respondent ended training period (£ p.w)

Mean		Standard Deviation		Number of Respondents	
(a)	(b)	(a)	(b)	(a)	(b)
27.52	28.64	8.92	6.97	55	55

The pooled standard deviation is £1.53 per week giving a t-value of -0.73 which is not significant on a one tail t-test at the 1% level, indicating that there is no difference between the means and that the index gives tolerably acceptable results.

2.7. From the same data a one tail F-test is not significant at the 1% level, indicating that the sample variances have been drawn from the same population and confirming the acceptability of the index.

2.8. As a further demonstration the index-adjusted earnings reported in Chapter 8 were subjected to sensitivity analysis and it was shown that a wages index⁽¹⁾ and the retail prices index⁽²⁾ produce very similar results. The conclusions of Chapter 8 are not sensitive therefore to the choice of index.

2.9. Separate indices specific to sex and the Northern Region were calculated and rejected because the demonstration reported above could not be repeated from the results for males although the index for females seemed acceptable.

3. Results

Table 3 shows the adjusted normal gross earnings distributions equivalent to the unadjusted figures of Table 1 above.

Table 3.

Adjusted 'Normal' Gross Pay Distributions: Previous and Present Job (£ p.w.)

	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>
Previous Job	43	37	25
Present Job	44	41	16

The wider spread of gross earnings in the respondents' previous job is retained in line with expectations. The higher mean and

(1) Table 130 Department of Employment Gazette 'Weekly Wage Rates in Manufacturing Industry'

(2) Table 132 Department of Employment Gazette 'Retail Price Index'.

median figures for present job compared with previous job disguises the fact that 39% of respondents took a reduction in gross pay, on adjusted data, by virtue of changing job. This is an indication of the problem facing economic theory; although we do not expect all workers to achieve an increase in earnings by changing job, since some may take a decrease if there is an improvement in non-pecuniary advantages, if remuneration is the most important factor affecting supply decisions we anticipate a higher proportion than three-fifths to be better off financially.

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