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**Coal, coal mining and the enterprise culture. A study of
Doncaster**

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**A thesis submitted in partial fulfilment of the requirements for the
degree of Doctor of Philosophy in Business and Management**

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Declaration

The thesis is the product of my own work and the result of nothing done in collaboration. The thesis has not been submitted for a degree at any other University.

Abstract

This study adopts an historical approach to explore the impact of coalmining on the town of Doncaster. It finds that although Doncaster was not a typical mining town nevertheless coal's impact was widespread, and extended beyond direct employment to impact on socio-political factors including the town's external image. Whilst the study explores the impact over the entire one hundred years of mining around Doncaster, the rationale and focus of the study is an assessment of the legacy of the local mining industry, and the extent to which it has inhibited the town's economic competitiveness in what is today called an enterprise economy. In this regard the study contributes to a wider understanding of the nature of change in old industrial regions as well as considering the efficacy of current regional enterprise policy. In particular the study has explored the extent to which path contingency captures the transition from growth to decline in former industrial regions, more adequately than does that of path dependency (Hudson, 2005). The key distinction drawn between the two concepts is human agency which is identified as operating at a range of decision-making levels. Analysis comes through two related case studies which show that the coal industry provided the basis for diversification in to new products and markets offering the possibility to extend the industry's lifecycle and that of towns such as Doncaster which had come to depend on it. It is shown the fact that these opportunities were not taken was due to institutional failure associated with cognitive lock-in. This rather than any specifically industry or place-based factor explains the nature of Doncaster's decline.

1 Introduction

Numerous studies exist which focus on the impact traditional industries have had on localities. Checkland (1976) for example used the analogy of the Upas tree to describe the destructive effect that the heavy engineering sector exerted on the growth of other industries in and around Glasgow.¹ Other studies have focused on the steel and chemicals industries in Cleveland (Hudson, 1989; Macdonald & Coffield, 1991; Beynon et al, 1994), the steel industry in Sheffield (Tweedale, 1995), and the fishing industry in Grimsby (Thompson et al, 1983). However the mining industry and its communities have tended to be studied as an industry apart. The uniqueness of the coalfields derives in large part from the pace and intensity of industrial decline (Bennett et al, 2000). Between 1984 and 1997, 170,000 miners lost their jobs representing one quarter of the total male workforce in the English coalfields (DCLG, 2007). The legacy of closure continues to have a profound social, psychological and economic impact on many of the former UK coalfield communities (see Hudson & Sadler, 1990; Turner 1995; Beatty et al, 2005). Given that coalmining is an extractive industry the decline and closure of particular collieries and the communities dependent upon them is an inevitable fact of life, nevertheless there remains some debate as to the reasons for closure with it is argued more pits closed in the last decades of the 20th century for economic and political reasons rather than for reasons of geology or exhaustion of reserves (Bennett et al, 2000, pp. 2-3). This thesis contributes to this debate by re-thinking the decline of the UK coal industry through the experiences of the town of Doncaster.

It has long been recognised that the concentration of a single industry and/or employer within a town, city or region could lead to a degree of economic vulnerability once that industry declined. Writing at the time of the Depression in the 1930's, Allen (1933, p. 25) states that the development of such highly specialised industrial areas might reduce the

¹ The Upas tree was a tree native to Java, and according to legend was able to blight the growth of other trees in a radius of up to 15 miles.

range of its industrial interests in order to confine itself to what at that time were considered to be the more profitable trades. Such established industries were usually carried on in specialised rather than variegated areas, and in the event of their decay, would make the development of new economic trajectories more difficult. The narrow and highly localised character of the great British industries was, therefore, satisfactory only so long as the demand for their products continued to expand. The shift from first industrial revolution industries such as coal to second industrial revolution industries such as chemicals and engineering began to herald new considerations. Already in the immediate post World War One years, the tendency for industries to become concentrated in the proximity of coal mines was being modified by new influences. Economies in the use of coal and the introduction of alternative sources of power were already reducing the value of sites in the neighbourhood of the coalfields. At the same time improvements in urban transport were allowing employers to abandon the central and specialist labour centres, and seek sites for factories in smaller towns and districts where space was available and rates were lower.

Thus a decentralising movement was in sharp contrast to the 19th century trend towards increased concentration at the coal supplies. Olsen (1982) warned of the potential impact associated with industrial decline. He suggests that the decline of a region leads to an organisational and cultural hardening of the arteries, what he called 'institutional sclerosis'. These places, he suggests, which grow and prosper in one era find it difficult, often impossible, to adapt to new organisations and cultural patterns regardless of how beneficial they might be. Amin & Thrift (1994) have discussed this in terms of regions possessing an inappropriate institutional thickness that underpinned and supported economic activities located within a region, and which helped reproduce regionally specific competencies, tacit knowledge and trust, regarded as critical determinants of continuing economic well-being, but which came to be seen as barriers to moving a regional economy onto a new and more promising developmental trajectory (Hudson, 1994). The coal industry, probably more than any other industry has been studied in relation to its 'unique characteristics' which have been

judged as bequeathing a particular set of legacies (e.g. Fothergill, 1992). Some, such as the strict gender division of labour which had been established as a necessary part of the 'old' industrial economy, have proven to be relatively permeable and transformable and have subsequently broken down (Hudson, 2005). In UK coalfields, as male employment declined in the mines, many of the new jobs attracted to replace them were in industries which targeted female wage labour. Whereas domestic service had previously provided the majority of female employment, new job opportunities were developed for example in factories but more latterly in the growing public sector, in hospitals, schools and local government. In other respects established habits and routines proved much more resistant to change (Hudson, 2005).

These instituted legacies are said to remain in three main ways: in respect to peoples commuting behaviour; activity spaces; and aspirations and expectations about employment and work (Hudson, 2005). All three ways it is argued represent ways of cognitive lock-in in the way that people think of their labour market and their possibilities in it. Firstly, there is a marked reluctance to commute even modest distances for work. In many ways the region remains a series of small, discrete, and spatially bounded labour markets, rather than forming an integrated labour market in which people are linked to employment opportunities across the region. Secondly, there is a legacy of recruitment into 'traditional' industries with sons following dads resulting in limited aspiration and low skills levels (SBS, 1993; Bennett et al, 2000; Troni & Kornblatt, 2006). Thirdly, there is an enduring culture of waged labour. People expect to be employed rather than self-employed. This is not to say that they lack an entrepreneurial attitude or spirit, but that these endeavours are not funnelled into the more conventional channels of small business formation (Rees & Thomas, 1991; Meegan, 1990; Henderson & Shutt, 2004). This concern has become particularly apparent and relevant to policy makers and academics alike with the shift from the managed economy to the entrepreneurial economy, typically associated with greater levels of self-employment, a small

business-dominated economy and by levels of organisational flexibility (Audretsch & Thurik, 2004).

This study focuses on the impact of coalmining on the town of Doncaster over the course of the 20th century, with a view to understanding the extent to which the legacy of the mining industry has inhibited the town's economic competitiveness in the entrepreneurial or enterprise economy. The development of the coal industry in the surrounding villages from 1900 can in many regards be interpreted as heralding in a new progressive phase in the town's economic history, breaking as it did the industrial dominance of the local railways whilst also adding a degree of permanence for local businesses, which had become reliant on agricultural trade. However, the decline of the coal industry and in particular the pit closure programme of the 1980's and 1990's had a devastating effect on the town's economy. By the end of the 20th century Doncaster was one of the most 'business deprived' districts in England, performing poorly in comparison to other areas across all traditional indicators of enterprise (IPPR, 2006). Whilst Doncaster would remain untypical of most coal towns, having a fairly diversified, if ultimately precarious industrial base, the town's problems were very much identified with its association with coal mining.

In assessing the impact of mining on Doncaster the principal question in this study is how should decline be understood? Theoretically, path dependency has been used to explain the evolution of a particular industry in a given location. The explanatory power of path dependency has however been questioned, including recently in Hudson's (2005) rethinking of change in the North East of England. Drawing on evolutionary approaches in economics that eschew biological analogy and which emphasise that path dependency is socially constituted (Metcalf, 1998), Hudson concludes that path contingency captures the character of the growth process, and in particular the transition from growth to decline, more adequately than does that of path dependency. Specifically he argues that the State had a central role in determining a particular economic trajectory by creating and reinforcing lock-in to ensure path dependency development, and subsequently seeking to erode such lock-in to

facilitate new developmental trajectories (Hudson, 2005, p. 590). This study extends the focus beyond the North East and therefore contributes to a fuller understanding of the extent to which continuity and change in economic development trajectory can be understood in terms of path contingency.

In particular it will assess the varying engagement of the State, and its principal agent, the National Coal Board, with issues of socio-economic development and change. In doing so it highlights the contribution made by key decision makers and following Hudson (2005) shifts the focus from industry- specific determinants for lock-in to policy makers and policy choices. However, whereas Hudson limited his application of the concept of cognitive lock-in to inhabitants of former coal communities, this study extends the concept to focus on key decision makers within the context of the UK coalfield. It has been argued that cognitive, or political locks (Grabher, 1993) form when certain policies become entrenched as common practice and when reversal from them becomes unlikely (Forestiere & Allen, 2011). In exploring political lock-in, this study limits itself to highlighting examples of policy decisions which played a significant role in determining the trajectory of the UK coal industry and mining dominated areas, but is associated with entrepreneurial failure at an institutional level. In this regard the study contributes to those calling for a re-conceptualization of entrepreneurship beyond narrow definitions to enable a fuller understanding of enterprise and enterprise cultures (see e.g. Hjorth & Steyaert, 2003; Mazzucato, 2011)

To explore and locate entrepreneurial failure, decisions are considered at three distinct but interrelated levels: macro, meso and micro. Macro level analysis focuses on the role of the State and its engagement with the coal industry. Meso level analysis focuses on decisions taken at an industry level, whilst micro level analysis focuses on decision making at a local level. Given the importance of the coal industry to the UK economy and the nature of its development over the course of the century, it is recognised that at times the scope of agency between these three levels may change, with one level reducing the agency of another. For example local agency might be reduced by national public policy or where an

employer is dominant in a particular locality. Of particular focus will be the role of State involvement in the nationalised industry and the related impact on the economic trajectories of coal dominated areas.

Analysis is framed within two related historical case studies. The first focuses on the nature of decline in the UK coal industry and provides a reassessment of the history of the UK coal industry over the course of the 20th century. In particular it focuses on the industry's transition from growth to decline. The key contribution here is in its assessment of the contributory role played by key decision makers to determining a particular development trajectory. In this regard it focuses on the 'long decline' of the industry and argues that the nature, timing and impact of decline can be understood as contingent on institutional inertia which manifested itself through the development and maintenance of self-sustaining coalitions (Grabher, 1993; Hudson, 1994), rather than the inexorable outcome of the decline in coal usage. Evidence is drawn from across the 20th century and highlights critical junctures when alternative trajectories were possible but not taken. The second case study forms the empirical part of the study and considers the impact of mining and its subsequent decline on the town of Doncaster. Whilst never a classic mining town in the way for example Barnsley was, Doncaster nevertheless over time came to be dependent upon the fortunes of the surrounding collieries whether directly in terms of employment or indirectly through various inter-linkages and multipliers. The extent of dependence is evident in numerous local economic reports including post-coal studies, and which indicate a specific mining legacy detrimental to the town's subsequent economic development. Any legacy however was not inexorable but on the contrary the dangers associated with lock-in were known, and alternative trajectories were possible. The overall conclusion that lock-in occurred because of institutional inertia associated with political lock-in shows the key importance when studying regional lock-in in old industrial regions of engaging with an institutional context at all spatial levels. It thus throws light on how and why regions become associated with particular development trajectories.

There are those who have argued that it is futile to use case studies as the basis for studying the processes of contingency arguing instead that only simulation, experiments or counterfactuals are appropriate to study and test path dependency (Vergne & Durand, 2010). This study rejects this conclusion, instead following Garud et al (2010, p. 767) who argue conversely that “the theoretical substance of path dependency would be more readily applicable to situations where the complexity of the observed system can be circumscribed to a small and finite set of properties”.

The structure of the study is therefore cumulative. Taken together the two case studies contribute to a reassessment of how we understand decline in former industrial regions. Both cases assess whether there were windows of opportunity available when industry and/or regional trajectories could have been altered and new paths created. These windows of opportunities are discussed in terms of critical junctures, which despite their theoretical and practical importance have received little attention in analyses of path dependence (Capoccia & Keleman, 2007; Pierson, 2004). In particular there has been little application of the concept of critical junctures to regional economic trajectories. This study seeks to address this gap by extending its range of application to focus on the decline of the UK coal industry, and in particular to the experiences of the town of Doncaster. Where critical junctures were apparent and alternative trajectories available within the coal industry, through for example diversification into new markets, might these have enabled new or alternative economic paths to have been created which could have enabled the town to break any dependence on coal mining and launch a new economic path? Whilst this question suggests the consideration of a series of ‘what if’ scenarios, the study avoids the temptation to engage in counterfactuals. Its aim is both more focused and more limited, focusing on whether alternatives/opportunities were available, and on whether these alternatives were evident at the time. This we describe as *forseeability* - that publically available evidence existed of both threats and opportunities. Where both conditions, i.e. opportunities and *forseeability* can be demonstrated, the broad conclusion is that, rather than industries and regions sowing the

seeds of their own decline (Lamoreaux et al ,2007), the nature of decline is better understood as being contingent upon human agency (in this case at the level of policy decision makers). Whilst recent studies have suggested that many former coalfields have not entered a spiral of economic decline (Beatty et al, 2005), there nevertheless remain intractable and embedded problems with many of these localities (Gore et al, 2007). The study therefore has both practical as well as theoretical implications.

Working within a broad tradition recently populated by economic geographers and evolutionary economists, the study remains essentially a local history study. As such it adopts an historical non-linear narrative style and draws on the case study approach initially developed by the Annales School during the 1920's with their focus on communities and regions, and with the non-positivist historical approaches more latterly developed by social historians such as E.P Thompson, Raphael Samuel and the History Workshop. Both schools eschew quantitative data in favour of integrating a wide variety of local and often novel sources of information. Whilst not fundamentalist in any particular regard, drawing for example on statistical information to identify broad trends, these data are treated as indicators. What is important is the historically-informed awareness of other factors, which may affect the figures (Tosh, 2002). Consistency is a particular problem when collecting data over such a lengthy period and measures have been taken to control for such change where possible. Specifically, measures have been taken to address issues of geographic coverage,² industrial classification,³ ⁴ and multiple indicators of regional competitiveness (e.g. Bowes, 2003; IFO, 1990).

² As with any historical study it is not always easy to ensure exact continuity as geographic areas have been subject to change (Halsey 2000). However, broadly the study focuses on Doncaster's six central wards as they are designated today. That is the central wards existing in 1900, plus other wards drawn into the town as result of boundary changes in 1914 (Balby with Hexthorpe and Wheatley urban district) and in 1951 (Cantley including Bessacarr). This sample is largely urban and includes Wheatley Hall Road but not other industrial areas

³ Whilst comparability between successive censuses is clearly desirable, nevertheless such comparability is problematic. One such problem is that the whole period of census taking has been subject to change in the form in which information has been obtained and from whom; changes in definition; changes in classification, particularly in the case of occupations (OPCS, 1977). Another major reason for lack of comparability is the continuous process of movement such as associated with changes in boundary areas and/or the growth of urbanised areas. While general trends can be established for the earlier period, more detailed analysis of changes in the industrial structures (which only became possible from 1921) only becomes possible from the latter dates. Even after that, changes in classification between census and the inherent difficulties of allocating employment to specific industries, given the increasingly complex economic structure, mean that trend figures should be seen as

The latter have been aggregated but are not used in any standardised way. There are no hard and fast theories of regional competitiveness and therefore variables are not weighted equally nor are they organised into an 'ideal' type or model. Instead variables are discussed as part of themes which relate to other coalfield studies. These themes are: economic; infrastructural; social; educational; and political/institutional (Bowes, 2003).⁵

The principal primary source will be local newspapers published at the time. Newspapers represent public documents easily accessible to local people and would form a key source of people's information and understanding. The use of this source will help guard against what Lucian Febvre's (a founder of Annales School), called psychological anachronism: the unthinking assumption that the mental framework with which people interpreted their experience in earlier periods was the same as our own. Newspapers provide a direct connection with the particular period studied, offering a rich source of information on the political, social, economic and cultural activities of the town over the century, as well as capturing the habits, everyday local events, and a vast array of personal news items. The advertisements sections alone can yield rich socio-economic data as to changing levels of business activity and employment profiles, whilst the editorials offer insight into key local debates. Given the focus on decision making and the related concept of cognitive lock-in, particular attention will be focused on how the local coal industry was reported in the local newspapers. Specifically were there any indications of the nature and extent of the impact of mining on the town? In short were there any warning signs of any negative impact caused by the local mining industry? If so when were these warnings reported, what was the nature of concern and how if at all did these concerns change over time? Specifically the study

approximate (Gallie in Halsey 2000). For the inter war period there was variations in whether those out of work were included or excluded from census tables. Even in the post war period, obtaining a consistent series of figures for employment in different industries is far from straightforward. The Standard Industrial Classification (SIC) was heavily recast in 1968. There was a further adjustment of the industry categories for the 1980 Classification which required reallocation of particular industrial categories to maintain consistency (so have decided to use 1980 classification)

⁴ Although business classifications were taken down as they appeared in the appropriate Trade Directories, in order to standardise information the study has used the classification index to classify earlier periods in accordance with the 1980 SIC.

⁵ IFO and Bowes regional competitiveness indicators are provided in appendix 1 and 2 respectively

explores the extent to which there were any indications of the dangers associated with lock-in, and its causes. For the purpose of this study the *Doncaster Gazette* (DG) and its successors the *Doncaster Evening Post* (DEP) and *Doncaster Star* (DS) have been selected to provide consistency over the course of the century, although other local press will also be consulted where appropriate.

In addition to local newspapers the study also draws on local business directories.⁶ Whilst their limitations are well documented,⁷ they provide a complementary source to the more “homogenous, industry-as-SIC-code world of empirical analysis” (Klepper & Thompson, 2006, p. 862), and therefore in conjunction with other primary data such as census returns, provide the basis for a fuller mapping of the changing industrial/occupational profile of a town (Rimmer, 1967). Business directories for example have the potential to identify the extent to which groups of inter-related or complementary industries and activities are linked by either direct supply chain relationships or by various indirect dependencies especially spending multipliers. In reality even in the most heavily industrialised and seemingly single industry regions, economies are typically ensembles of sectors in which growth is linked by income and expenditure flows (Metcalf et al, 2006). An understanding of the interrelationships between coalmining and the town’s economy is therefore crucial to understanding long term impact, as the net result of the intersection and interaction of these linkages is often the creation and reproduction of the conditions underpinning a particular growth trajectory for a regional economy (Hudson, 2005). Given our interest in the extent to which mining’s legacy has impacted Doncaster’s ability to compete in the enterprise economy, currently typified by self-employment and small businesses, of particular focus will be the extent to which local directories suggest that the local coal industry supported wider spin-out and/or self-employment opportunities.

⁶ Businesses registered in the local directories largely relate to the boundaries of the town at the time of publication. That is the town geographic boundaries as designated in 1900; 1914; 1948 and 1983 (see 4.1 for fuller description).

⁷ See for example <http://www.historicaldirectories.org/hd/ud/usingdir8.asp> accessed 3/4/2006 for discussion of advantages and disadvantages of trade directories. The principal criticisms of the use of trade directories are; coverage can vary significantly, double counting of individuals or firms can be a problem, the classification of trades can vary significantly.

The study is presented in three main chapters. The first provides an assessment of the merits of path contingency as an alternative explanatory concept to path dependency. Drawing on a range of disciplinary traditions it will establish a broad conceptual framework and extends discussion of key related concepts such as critical junctures as well as considering political lock-in within the context of institutional inertia. Having established a conceptual framework the second chapter extends its range of application to focus on the experiences of the UK coal industry. This is divided into two related sections which together explore macro, meso and micro level issues related to the nature of industrial decline. Macro issues are particularly associated with the way in which national government viewed the role and purpose of the UK coal industry, and related policy choices. Meso issues are closely associated with corporate decisions within the National Coal Board but also consider the role of coal owners prior to nationalisation. Specifically it assesses the extent to which there were any potential opportunities to extend the lifecycle of the industry through for example product or sectoral diversification. This assessment is considered in relation to micro level impact. As coal declined so too did the fortunes of areas that came to depend on mining. Therefore where the coal industry could have adapted so too could have these localities. This micro level analysis is related in particular to the fortunes of the town of Doncaster.

The final chapter focuses on the development of the town of Doncaster over the entire period of the 20th century. For practical reasons this chapter has been divided into three broad chronological periods in the development of the Doncaster area coal industry. These are: pre and early coal, which is associated with the period from 1900 when most of the collieries were first sunk around the town but also includes the inter-war years; the post Second World War years, which focuses on the 1950's and 1960's, and which we suggest represents a mature industry and a period of considerable expansion; and finally decline and post-coal from the 1970's through to the closure programmes of the 1980's and 1990's. These periods, whilst not directly comparable in any particular sense, do relate to similar sociological typologies associated with coal communities which define the three periods as:

youth; maturity; and old age (Taylor, 1979). This focus also allows data from newspapers and business directories to be supplemented with extant but unpublished local sources available in the Doncaster local history library and the town archives. In particular it allows the integration of local economic impact studies conducted during the 1920's, 1960's and 1980's, enabling the incorporation and integration of the widest range of data on the town, and thus ensuring a more complete picture of the causal relationship between coal and the economic fortunes of the town of Doncaster.

2 Path dependency or path contingency?

2.1 Introduction

Former UK coalfields have experienced some of the most dramatic declines in prosperity levels of any equivalent Western European region. Although no longer an industry of any standing, this decline in mining and the manner in which it was brought about continues to have a profound social, psychological and economic impact on the former UK coalfield communities (e.g. Hudson & Sadler, 1990; Beatty et al, 2005; Troni & Kornblatt, 2005; Gore et al, 2007). Even where progress is reported, regional winners and losers are evident (Gore et al, 2007), and stubborn problems associated with hidden unemployment often hides the extent of the problem (Beatty et al, 2005). Whilst most former coal areas have shifted towards service sector-dominated economies, often seen as an indicator of progress, studies have shown that few have managed to do so whilst maintaining comparative levels of affluence, a factor which might explain their inability to re-orient themselves within the current dominant economic milieu – the enterprise economy. Understanding the lessons of decline is therefore of practical as well as academic interest.

In order to understand regional trajectories in all of their manifestations, it is necessary to draw upon a variety of theoretical and disciplinary perspectives, notably history. The recognition of the importance of history in understanding regional trajectories is nothing new. Marxist analysis for example has been used to explain uneven development as an historical process (e.g. Massey, 1984). That 'history matters' has certainly become prominent in more recent analysis of regional development. Perhaps the most prominent theory that has sought to take history seriously in studies of regional development is that of path dependency, which has been defined in terms of "complex processes that are unable to shake free of their history" (David, 2001, p. 19). Simply put this means that current and future states, actions, or decisions depend upon the path of previous states, actions or decisions (Page, 2006).

Numerous theoretical, historical and empirical studies of path dependence are available, covering topics ranging from the selection of institutions (North, 1991), to the formation of government policies (Hacker, 2002), to the choice of technology (David, 1985; Arthur, 1994), to the location of cities (Arthur, 1994; Page, 1998). Whilst in many disciplines path dependency has come to dominate thinking (Boschma & Martin, 2010), many of its assumptions are not unproblematic. Particularly, its overly deterministic nature, which suggests a council of despair, and results in processes which have an irreversible and inexorable influence on the ultimate trajectory of industries and economies. This leaves limited scope for human agency.

Alternative approaches question the value of path dependency for assessing the nature of growth and decline in former industrial regions. Economic geographers for example are keen to assess the extent to which path dependence can be seen as a process or effect that is locally contingent. Coal areas have tended to be described as places apart, dominated by strong cultures, which have both negative institutional and cognitive impacts on regional trajectories, and in particular their ability to forge new and sustainable development paths. The focus on path contingency therefore provides an alternative perspective highlighting the possibility of actors at a micro (local) level affecting the overall trajectory of any given region. Where economic geographers focus on locally contingent processes, it is also important to recognise the potential contribution of wider structural issues and the role played by actors at both a meso (industry) and macro (government) level. In reality agency at a micro level is often constrained by decisions taken at either or both meso and macro levels. In the case of the UK nationalised industries it is also important to recognise that industry level agency may also be contingent on decisions made at the level of the State.

Whilst we know something of the cause and impact of industrial decline we know less about the contributory processes at play. The central question here is do regions sow the seeds of their own decline? Are processes place/industry dependent, or can answers be found in more structural factors? The present chapter addresses this question by assessing the

explanatory merits of path dependency. Its value is considered in relation to path contingency. The chapter highlights the room for human agency as the key distinguishing factor between the two concepts, and places agency within a range of political and economic contexts. The chapter also explores the extent to which agency can work as both enabler and constrainer in determining regional economic trajectories, identifying that opportunities to intervene, to 'nudge' development trajectories and regional economies onto new and different paths are time limited but are available. That these opportunities are not taken suggests that development paths are not inexorable in their emergence and consequences, but contingent upon other factors such as institutional inertia or political lock-in.

2.2 Path dependency or path contingency

Concepts of path dependence are clearly useful in understanding the development of regional trajectories. Hudson (2005) for example shows that the North East's long period of growth from the early 19th century to the 1920's was based on close and mutually reinforcing links of intraregional traded dependences between the mining of coal, the production of iron and steel, and a wide range of engineering products manufactured from iron and steel. However he concludes this path dependent trajectory of growth was ultimately based on conditions which were contingent and conjunctural, and that therefore path contingency captures the character of the growth process, and in particular the transition from growth to decline, more adequately than does that of path dependency (2005, p. 583). Others have also criticised path dependency as being too deterministic. Within the domain of economic geography for example Martin and Sunley (2006; 2010) seek to reconceptualise path dependency as a dynamic open historical process by which technologies, industries and institutions, and therefore regions, evolve along unfolding trajectories. These trajectories, they argue, are shaped not only by the sequences of prior developments and influence, but also by the evolution of processes of path dependency themselves. This perspective has important implications for our understanding of both product and industry life cycles, with

recent explanations identifying generic forms of path dependency in a range of industries but which are not deterministic.

For example, important departures from the life cycle model have been found in some industries, as new markets and niches are repeatedly constructed and exploited. A case illustrated by Klepper & Thompson (2006) who suggest that the continual rise in the number of new entrants in the laser industry may be because of the importance of specialised submarkets. These submarkets can be differentiated along numerous dimensions such as the technology they use, the geographical areas in which they operate or the services that they provide, and that the number will change over time. However, investment decisions through for example research and development provide new opportunities for firm diversification and growth, whereas firms which choose to remain specialised in a single market or submarket can be expected to vanish when that market dies. Further evidence of the 'enabling' forms of path dependency, often also referred to as 'path creation', is that product innovation does not always wane during the mature phase of some industries. Instead it may rise sharply. For example in the mature automobile industry, Japanese and some European producers gained an innovative lead over American producers through both process and product innovations (Hefferman, 2003; Klepper, 1997). Such cases of 'resurgent innovation' have been described as evidence of a phase of 'dematurity' (Storper, 1985). Processes of this sort would seem to fit a less deterministic development model in which an industry (and that part of a local or regional economy dependent upon it) undergoes radical adaption, in effect renewing (or extending) the industry's (regions) development path (Martin & Sunley, 2010). However, recent empirical evidence suggests that new development pathways are more evident in regions which do not have long industrial histories (Simmie et al, 2008).

In order to understand why some mature industries (and therefore regions) succumb to negative lock-in and complacency whilst others demonstrate increased innovativeness, it is important to understand the intersection of enabling and constraining processes. Martin

(2003) identified five possible factors of which three are relevant to this study. These are firstly: increasing returns whereby the more profits that can be made from the selling of a particular product or service, the more producers are inclined to produce it. This factor results in firms, consumers and regions being locked into repetitive patterns of production, consumption and employment and hence limiting the opportunity for the development of new products, services, regional economic trajectories and career opportunities. From this study's perspective the focus is the extent to which the National Coal Board maintained a commitment to the production of coal but which was to the longer-term detriment of the coalfields and their communities. Given the close relationships developed between large enterprises such as the Coal Board and its supply chain, any assessment should consider any negative impact, and in particular the ability of suppliers to develop what has been called boundary-spanning functions such as research and development and marketing (Hassink, 2010), and diversify into new markets. The second and related factor is technological lock-in whereby regions are tied to existing technologies. This can be either a good or a bad thing. One recent comparative study conducted across UK regions found for example that whereas Cambridge had developed a trajectory of 'cumulative innovation' fuelled by the co-evolution of a highly entrepreneurial environment and based on a high-tech economy, the opposite is true of the old industrial city of Swansea which remains locked into a low skill economy (Simmie et al, 2008, pp. 59-61). Within the context of this study the focus is the extent to which an entrepreneurial environment was evident within the coal industry whereby technological innovation was encouraged, supported and exploited. The third factor relevant to this study is institutional inertia which is associated with governmental, organisational or cultural systems which lag behind economic change. This institutional inertia or political lock-in (Grabher, 1993) has been described as the development over time of thick institutional tissues aimed at preserving existing structures, and therefore unnecessarily slowing down industrial restructuring, as well as indirectly hampering the development of new development trajectories (Hassink, 2010). Institutional tissues consist both of networks of organisations, such as trade unions, business support agencies but particularly political administrations at

all spatial levels, and large enterprises, and who through the development of self-sustaining coalitions (Grabher, 1993; Hudson, 1994) influence disproportionately regional patterns of behaviour, such as norms, rules and written and unwritten laws, and subsequently a region's development path. In such a situation, large companies might not want to give up sites for the attraction of inward investment, as they might be concerned that they will lose qualified employees to competitors. Local authorities might not see the point of attracting inward investment or promoting restructuring in another way, as large tax incomes are paid by traditional industries (Hassink, 2010). In some regions, the spirit of entrepreneurship might dwindle because of increasing industrial concentration and the domination of large companies. These self-sustaining coalitions are also influential and are able to lobby for sectoral interventions often at a national level, which hamper the restructuring process more than they support it (Hamm & Wienert, 1989 in Hassink, 2010). Institutional milieus also change more slowly than industries, and therefore a sclerotic milieu can remain embedded within networks often constraining efforts to enable new trajectories (Callon, 1998). Institutional inertia or political lock-in is the central focus of this study as it suggests that the development trajectory of industries and regions is not just the result of economic factors, but better understood as much as a socio-cultural and political phenomena and one that can operate at all spatial levels. Although this factor is less well documented (Hassink, 2010; Simmie et al, 2008) it could be argued that all factors are dependent upon it.

Two examples can illustrate this point. Swansea has witnessed two phases of economic development. The first developed during the 19th century and was based on extractive industries such as coal and tin (Simmie et al, 2010). The second triggered by decline in these industries was developed in the 1970's and focused on electronics. However both led to a negative trajectory. The decline of Swansea's traditional extractive sectors left it with pools of unemployed labour with limited re-training potential. Yet a combination of foreign investment in electronics, mass production branch plants and growing public sector employment provided new sources of employment. However the historical development of

this particular set of knowledge and skills limited both the range of possibilities that may have led to newer and more sustainable trajectories (Simmie et al, 2008, p. 63). The case can be made that in failing to learn the lessons of history those actors responsible for key investment and policy decisions and embedded within self sustaining coalitions, were responsible for locking the city into a narrow and ultimately unsustainable development pathway. Arguably this is currently happening in the UK's defence industry. Championed by successive governments as a British success story, the defence industry has in fact been operating in a declining market and one increasingly constrained by ethical considerations. Yet arguments that have been promoted which challenge the industry to break with the current trajectory and utilise the current workforce's skills to diversify into civil manufacturing and /or emerging technologies have so far met with little support at either industry or governmental level (see e.g. *The Guardian* letters page 30 Sept, 2011). Both examples are illustrative of how institutional inertia, through political lock-in, can determine narrow technological and developmental trajectories which eschew new opportunities for shorter term objectives.

Whereas path dependency tends to suggest that industries (and regions) are buffeted by a series of unpredictable, non purposive and somewhat random events resigned to being locked in through self reinforcing mechanisms that we have no control over (Garud et al, 2010, p. 765), path contingency leaves a space for human agency. This is the key distinction this study draws between the two concepts, and is one that has to date received limited investigation (Simmie et al, 2008). It is argued that agency can be used to lock regions into declining development pathways but equally that it can be used positively to create new paths and trajectories. Path contingency therefore envisages the possibility of agents or entrepreneurs searching for new opportunities, re-using resources, transferring competences as the basis of new growth previously referred to as path creation. These entrepreneurs (as key agents) it is argued are embedded in paths but not completely constrained by them: indeed they demonstrate 'mindful deviation' from prevailing ideas and

accepted ways of doing things (Garud & Karnoe, 2001). Whilst studies of entrepreneurship over the past forty years or so have tended to limit analysis to easily measurable units of assessment, principally new business start up (rates), this study adopts the Schumpeterian point of departure that entrepreneurship exists in all types of settings (1934/1994), irrespective of size or type (Burgelman, 1983; Miller, 1983; Gartner, 1985), and including the public as well as the private sector (Kearney et al, 2007).

The notion that there is a strong connection between entrepreneurship and the private sector has resulted in entrepreneurship in the public sector being underestimated resulting in theoretical, practical and political shortcomings. Entrepreneurship and entrepreneurs, are important for the development of society in other ways than through starting businesses, for example, through effecting change (Sundin & Tillmar, 2008), or as a catalyst for innovation (Mazzucato, 2011). Entrepreneurial behaviour is here defined not only as the identification and discovery of opportunities (Shane & Venkataraman, 2000), but also the shaping and crafting of the necessary institutional infrastructure in order to capitalise on and exploit these opportunities (Djelic & Quack, 2003). Where organisational and institutional contexts are engineered such that they create enabling conditions, they can also themselves create further opportunities for entrepreneurship (Alvarez & Barney, 2007). This might manifest itself in terms of new businesses started within a locality but equally could result in the development of what Burns (2005) calls an entrepreneurial architecture.⁸ Entrepreneurial behaviour in the public sector differs from that of private sector entrepreneurship in that the profit motive is not its primary goal (Forster *et al*, 1996), although this is a distinction of type and not of the value of its economic and social contribution. In this study the profitable exploitation of coalmining and in particular the ability to exploit new or emerging opportunities is related not only to the strengthening of the industry's position and the fortunes of coal owners, but more specifically in relation to the fortunes of communities that

⁸ Burns reference is to the entrepreneurial DNA of an organisation which he argues is built on the three pillars of leadership, culture and structure and underpinned by appropriate strategies, and follows Drucker's (1985) observation that entrepreneurship is based on the same principles, whether the entrepreneur is an existing large institution or an individual starting a new business.

became dependent on the industry, whether through employment (direct or indirect), or spending multipliers. To this end entrepreneurship, and an enterprise culture, is reconceptualised and related to an individual or institutional behaviour which is socially as well as economically useful (Hjorth & Steyaert, 2003), and one which may result in negative short term effects but with a view to longer term benefits. Conceptualised within this space, entrepreneurship and enterprise cultures are locally and historically situated and preclude the tendency towards one sized-fits-all policy approaches.

This study explores the role of enterprise within two related contexts; corporate entrepreneurship and political entrepreneurship. The term corporate entrepreneurship has been used to describe entrepreneurship within large organisations (Burgelman, 1983). In this study the focus is on the coal industry , predominately but not exclusively under State ownership, and explores actions which might have been taken to diversify and change the industry's linear decline, and which might also have enabled regions dependent upon mining to change their economic trajectory. Political entrepreneurship is associated with state agents operating at both a national and local level. The notion of state agency is not novel: it has previously been addressed by economists and sociologists, particularly those studying developing economies. For example Evans (1995) noted that whilst the classical role of the State is seen in terms of regulation enforcer, in more recent times a more critical and proactive role has come to the forefront, highlighting the key enabling role of the State in the creation of new opportunities. The transformative role involves "eliciting entrepreneurship and facilitating the creation of productive capacities" (Evans, 1995, p. 6), often through its role as a funder of organisations (Mazzucato, 2011). Whilst largely discussed in relation to national government, the concept has also been applied to local levels (see Schneider & Teske, 1992). Both corporate and political entrepreneurship are explored more fully below.

2.3 Corporate entrepreneurship and business choices

The creation of new paths of technology and industrial development is critical to the survival of both firms and regions. The alternative has been described as being associated with lock-in. Decisions taken within existing organisations are therefore crucial. A range of options are open to the corporate entrepreneur. Patel & Pavitt (1997) argue that firms can launch new paths by modifying processes, or by branching out of existing industries into new but technologically related activities. Some firms such as 3M are renowned for this (Bartlett & Mohammed, 1999; Robinson, 2001). New paths can also be created by upgrading, renewing or revitalising existing industries through the introduction of new technologies, or the setting up of new products divisions. Whilst there is a strong argument to suggest that firms can only do a few things well at any one time (Nelson, 1995, p. 79), there is an equally strong argument, as shown by the case of 3M, that long term and sustainable competitive advantage emerges from organisations institutionalising innovative and stimulating environments which recognise and incentivise staff and encourage new developments across a wide range of product areas. These firms have been described as having an 'entrepreneurial orientation' (Miller, 1983), that is they have a heightened risk orientation, a commitment to innovation and a proactive approach to developing opportunities. Typically, firms which demonstrate an entrepreneurial orientation develop most of their new technologies in-house, a process leading to what Patel and Pavitt (1997) call technological accumulation. Others working in the domain of organisational learning suggest similarly that the key to sustainable innovative organisational cultures is the development of a strong in-house knowledge base. This would be evident for example through a commitment to research and development. The underlying ability to create new knowledge through innovation is the ability to recognise, understand and use relevant knowledge. These attributes have come to be known as absorptive capacity which is identified as being essential to the development of new paths (Cohen & Leventhal, 1989).

Whilst Mazzucato (2011) has argued recently that State funded organisations can be nimble and innovative, which help to transform economies, these organisational characteristics have been less apparent in the public sector where larger, hierarchical and relatively rigid organisations are typical, and which have conflicting but well understood objectives and generally less control over resources (Sadler, 2000). Further the external environment of a public organisation is littered with political considerations (Nutt, 2005, p. 5), which often means they have less freedom to react as they see fit to the circumstances they face (Boyne, 2002). As a result of political constraints there are frequent changes in policy, and the imposition of short-term time horizons on key corporate decision makers. The views of opinion leaders, outright manipulation by legislators and interest groups, and opposition to organisational prerogatives are more important than economic issues (Levine et al, 1975).

In assessing the extent to which the nature of the mining industry's decline was contingent on decision making this study will explore the extent to which this was true of the coal industry. Specifically was there evidence of such entrepreneurial leadership in the industry? Were decisions taken which enabled the industry to develop existing or new business opportunities be they through diversification into new markets or products and services, or was it constrained by wider political factors? And if so, why and what was the impact on both industry and dependent areas?

2.4 Political entrepreneurship and policy choices

The idea that innovative individuals contribute to institutional change has a long history in political science although it is less evident in other disciplines (where there is a tendency to view political activity as playing a largely unproductive role in entrepreneurship e.g. Baumol, 1990). In his case study of political power in New Haven USA, Dahl (1961) introduced the term "political entrepreneurs," to describe these agents, which he defined as individuals who recombine resources in the policy arena to bring about change. Policy interventions can emerge at a local, national and increasingly today at a supranational level. This study

focuses on local (micro) and macro (national) but recognises the growing importance of the supranational level. Levels of regional autonomy may determine agency but local political entrepreneurs can be elected politicians, such as Mayors or members of town councils, leaders of established interest groups, or creators of new bodies (Schneider & Teske, 1992).

Local level decisions might include the granting of planning permission for new commercial development, the provision of appropriate housing, or the provision of local tax incentives to attract factory location. A more recent example would be the decision to apply for or award Enterprise Zone status. These interventions can have intended and unintended consequences, which in turn can have both positive and negative impacts on a region both in the short and in the long term. Positive impacts might include the introduction of policies which lead to greater local and regional connectivity. A good example of this would be the UK government's motorway building programme during the 1950's which proved to be the catalyst for private sector developments in the depressed regions (Bale, 1974). Connectivity more broadly has consistently been identified as having a positive effect on regional competitiveness, including as part of efforts to regenerate former coalfield areas (Bowes, 2003; Troni & Kornblatt, 2006; Gore et al, 2007). Conversely, policy decisions can also have negative effects on regional trajectories. These can often be contradictory in nature. For example the very fact that regional connectivity is improved can often lead to the out migration of the younger, more skilled, members of the population, something which often "strips communities of their most dynamic and prosperous element" (DETR, 1998, p. 10-11). Similarly the granting of Enterprise Zone status to one region may have a negative impact on neighbouring regions in the short-term and for the recipients of Enterprise Zone status in the long-term once the tax relief disappears (Sissons & Brown, 2011).

The negative implications of policy interventions are not new and in fact can be dated back to the origins of UK regional planning. Possibly the best example being that prior to the late 1970's, regional policy interventions were predominately associated with the steering of industry into the development areas (Hudson, 2006). Whilst on the surface this seems to be

an enlightened policy, it has subsequently been shown to have had negative consequences for affected regions, commonly referred to as 'branch plant syndrome'. Research on the branch plant question from the 1970s has found that externally controlled branch plants typically lacked managerial authority and were functionally 'truncated', i.e. they concentrated on production activities whilst 'higher functions' such as research and development were conducted elsewhere within the parent firm (Watts, 1981). As a consequence of these features, regions with a high concentration of branch plants were likely to be deficient in white collar and high-skilled occupations (e.g. Townroe, 1975; Hayter, 1982) and technologically dependent, lacking innovative and entrepreneurial activity (e.g. Firn, 1975; Hayter, 1982; Scott, 2009). Branch plants themselves were also criticised for their lack of linkages with local companies (e.g. McDermott, 1976; Stewart, 1976; Hoare, 1978; Stopford & Turner, 1985) and for their apparent vulnerability to closure during recessionary periods (e.g. Harris, 1988; Fothergill & Guy, 1990; Scott, 2009). Whilst there has been some shift in understanding in recent years it is still generally concluded that a high concentration of branch plants in a region is a risky strategy without some degree of local autonomy and local embedding in local supply chains and networks (Simmie et al, 2008). The experience of Swansea again illustrates this point. As does Northern Ireland whose role as a low cost production location seems to have owed much to a government assisted wave of branch factory inward investment that characterised the region in the 1960's and 1970's (Crone, 2000). Branch plant syndrome is therefore illustrative of a negative impact that policy-makers decisions can have on the longer term development of a region.

2.5 Policy choices and political consensus

In seeking to highlight that economic and regional trajectories are contingent on decisions and decision-makers often operating as part of self-sustaining coalitions, it should be recognised that the line between economic adjustment and renewal can be thin (Boschma & Lambooy, 1999; Martin & Sunley, 2006), and that in most instances regional economic

trajectories including path creation will inevitably involve a complex admixture of deliberate agency and accidental and unintended consequences (Martin & Sunley, 2010, p.79). Meyer & Schubert (2007) for example, argue that the formations of all paths lie somewhere on a continuum between completely accidental and random emergence, and a deliberate intended creation. This could range from acts of God such as the recent economic impact of hurricanes and tsunamis to the impact of globalisation and the increasing levels of supranational decision-making. Within an institutional context this means decisions are often taken which have consequences but which are not always as initially intended. However from a political choice perspective the outcomes of policy can be identified with institutional inertia and political lock-in.

Understanding what factors drive policy decision-making has been considered in political science (e.g. Dunleavy, 1995). It was recently explored by Johnson (2005) from a small business policy perspective. He argues that politicians (as the key decision-makers) are primarily interested in their own welfare, defined as enhancing their chances of re-election. This leads them to seek ways to ensure that they are seen as 'popular'. This means politicians typically follow a short election cycle so they are more likely to favour short-term benefits, such as the application for, and the granting of Enterprise Zone status. Secondly, that they will be tempted to favour interventions that they judge will benefit particular electorally influential groups, rather than those that maximise overall and longer term economic welfare. In short they might take conscious decisions out of short-term political expediency but which may not be in the longer term interest of the local areas they may represent.

An alternative perspective, more closely associated with a Marxist approach suggests that all policy interventions are ultimately motivated by a desire to benefit the ruling class rather than the ordinary worker/community. Viewed from this perspective interventions would be driven by a desire to maintain an ideological or political orthodoxy over and above the concerns and needs of individual regions. The result is often one-size-fits-all regional

policies determined by a national or industrial strategic agenda but which are pursued at the expense of specific regional needs. Whilst these agendas and priorities can shift over time as parties of differing political persuasions reach office, nevertheless regional policy making in the UK has tended to be typified by a broad consensus (Parsons, 1988). This political consensus could be seen to emerge in the 1930's and was associated with maintaining a particular view of a capitalist economy. In the 1930's talk was of the maintenance of an economic orthodoxy, and from the later 1970's onwards about the hegemony of the free market. This consensus revolved around an arrangement for handling and defining the economic problems of the time in certain specific ways. In the 1930's it was 'derelict' or 'depressed areas', in the 1950's and 1960's it was 'growth zones', and 'regional planning.' From the late 1970's regional policy focus shifted to the creation of an 'enterprise economy'. In the period before the 1970's regional policy was associated with the maintenance of the staple industries and the steering of industry into depressed regions or growth zones. From the late 1970's increasing pressure was placed on local authorities to expand or develop their own autonomist economic development and employment programmes, principally based on encouraging the growth of local small firms (Hudson, 2000).

Each intervention "was designed to effect a change in what we might term the 'meta' policy, and each adopted what was then the prevailing discourse of the day" (Parsons, 1988, p. 13). Each was designed to divert attention from the fundamental cause of the problem towards the particular local problems and associated with the alleged peculiarities of places and people (Davies and Green, 1979 in Parsons. 1988). Any scope for local agency would be within the parameters established by the meta policy with local authorities enmeshed and effectively incorporated into accepting the State's definition of the problem and its proposed solution (Davies & Green, 1979 in Parsons, 1988). A degree of local consensus was therefore often evident although the commitment was often underpinned by a range of financial incentives. Hudson's (2000) description of Labour councillors in the north east for example, as 'the last entrepreneurs', is a pejorative comment based on his observation that

local authorities had (often reluctantly) accepted that competition in the market place was the only way to solve their problems, to a point of vigorously and often successfully competing for enterprise zone status, or Local Enterprise Growth Initiative (LEGI) funding.⁹

2.6 Critical junctures and decision making windows

Path contingency recognises that during any given time period there will be opportunities to break economic (industry) and regional trajectories and to create new developmental pathways. These opportunities can be said to reflect critical junctures (Collier & Collier, 1991) which are defined as branching points, resulting in the adoption of one course of action from among alternatives (Mahoney, 2000, p.512). Thereafter, developments continue along that particular path (Mahoney, 2003; Pierson & Skocpol, 2002). What constitutes a critical juncture has been variously explained but with little consideration of regional economic trajectories. For example Garrett & Lange (1995) showed that electoral landslides create critical junctures as they provide clear mandates for policy change. Karl (1997) employed the concept in analysing the "petro-states" development paths, whilst Haggard (1988) used it to assess the changing influence of trade unions. From a regional perspective critical junctures present policy and decision makers with what economic geographers have termed windows of locational opportunity (Storper, 1995; Boschma & van der Knaap, 1999; Boschma & Frenken, 2003). However, these windows are often narrow and are likely to be both locality specific and with long term implications. Policymakers should therefore endeavour to keep such 'windows' open to avoid lock-in to a restricted technological path (Simmie et al, 2008).

⁹ See for example Convery's (2006) review of the six winning bids for Local Enterprise Growth Initiative funding. LEGI represents the most significant source of economic development funding currently on offer, with a budget of £300 million over the period 2006-2009 (date of initial publication of thesis). The areas eligible to apply are those that had been listed at least once within the 50 most deprived local authorities under the various domains of the Indices of Deprivation 2000-2004, with Government stating that it was particularly interested in bids from local authorities that have the 'lowest rates of enterprise formation' and are furthest from meeting their enterprise targets'. The South Tyneside bid recognised that its area was characterised by an 'enterprise deficit and persistent underperformance arising from a dependence on large employers in declining industries...'. St Helens declared itself to be at the bottom of the league and states its ambition to become a 'self-sustaining economy which no longer requires special measures.'. Primarily the bid intends to change a culture in which 'for generations, almost everyone worked for a few large companies' and to demonstrate that now 'there is life beyond benefits and that self-employment and enterprise is a real option. Hastings describes itself as 'the most deprived town in the country's most prosperous region, and County Durham's bid has one of the most ambitious visions; to develop 'the most enterprising communities in the North east and the fastest improving area for enterprise and productivity in England'.

The contribution of the critical junctures concept is its focus on historical causes (Collier & Collier (1991)). However, if focusing on the formative moments of new paths during narrow windows of opportunity is critical, then only being able to do so long after the critical juncture could be considered to be a significant weakness as an analytical framework and policy-making tool. From a policy-making perspective this would suggest that in order to instigate change, policy-makers and organisational leaders would need foresight as well as the ability to act. Given the focus on contingent causes of decline, this study assesses the evidence as to whether alternatives were available, and whether alternatives were apparent at the time - foreseeability. Were there, for example, alternative technological paths available to the coal industry which offered opportunities (for both the industry and dependent region) or was the industry a single product industry which offered little by way of spin out potential? Secondly, was decline foreseeable? Where decline was foreseeable and alternatives not developed then a conclusion would be that decline was contingent and the result of political lock-in or institutional inertia.

2.7 Conclusion

The chapter has outlined the conceptual underpinning for the study drawing on and integrating a range of disciplines including economic geography, evolutionary economics, political science and history. It establishes that whilst industrial and regional growth and decline is often associated with path dependent processes which lock in particular economic and cultural trajectories, path contingency provides a more convincing concept for understanding the nature of decline of old industrial regions. The chapter has related path contingency to both industry and regional decline but focused on the related concept of institutional inertia or political lock-in as a key contributory factor in determining economic and cultural trajectories. Political lock-in has been related to regional industrial legacies, grounded within the concept of entrepreneurship, which has been further extended to consider its relationship with decision making at both an industry (meso) and policy-making

level – at both a local (micro) and national (macro) level, and broadened to recognise social as well as economic value. This decision-making nexus has been located within the concept of self-sustaining coalitions, which are networks of interests which act to constrain regional opportunities in line with a particular cognitive or ideological perspective. It has been argued that regional lock-in is a multi-scaled process, and one which also has a high degree of place-dependence, but is in fact influenced and affected by both intra-regional and extra-regional factors. Human agency within and between these levels is identified as the key determining factor in understanding the nature of regional decline. Signalling the potential constraints on regional agency provides a caveat to place-based conclusions but is significant given the 'political' history of the coal industry in the UK. However, this does not detract from the broader conclusion that regional trajectories are contingent on human agency (at some institutional level). Windows of opportunity for enabling interventions, which can steer industry and regions on new, different and sustainable development paths are here associated with critical junctures, and although these interventions may have short term drawbacks, for regions and policy makers, they would have longer term benefits for regions.

3 Coal and coal mining

3.1 Introduction

The coal industry occupies a central place in Britain's industrial history (Scott, 2006) having occupied a strategic importance to the UK economy few other industries could. The industry became a catalyst behind Britain's industrial revolution and provided most of the energy needs of the country's population for much of the 20th century. Throughout the 19th century (and to a lesser degree in the 20th century), coal was also viewed as the main force in determining the localisation of wider trades and industries (Allen, 1933), acting for example as a catalyst for the expansion of manufacturing in the north east's economic development during the second half of the 19th century (Hudson, 2000). Geology and natural resources certainly influenced the location of the industry, unlike the spatial pattern of many sectors such as the textile industry in and around Manchester, or shoes and leather in towns in southern England which seemed at best only tenuously related to a set of underlying physical conditions (Scott, 2000). Strongly embedded within often geographically isolated coal communities, the coal industry has typically been studied as an industry apart. The extent of industrial 'uniqueness' has subsequently been qualified, but nevertheless remains a central factor in understanding both the industry's growth trajectory (Hudson, 2005) and the nature and impact of its decline (Fothergill, 1992). This chapter explores the nature of the coal industry. Specifically it assesses the industry's transition from growth to decline over the course of the 20th century.

The overall objective of this thesis is to explore the nature of change in old industrial regions. It does so by exploring the relationship between mining and the town of Doncaster over the course of the 20th century, and the extent to which coal mining locked the town into a narrow trajectory which offered little opportunity for movement on to different, new and sustainable development paths. This chapter therefore provides the wider industry context. Specifically

this chapter will assess the extent to which the coal industry's development path was locked in to a narrow economic trajectory limited to the production of its principal product - coal. Industries which remain specialised in a single market or submarket can be expected to vanish when that market dies: regions which become dependent upon them likewise. The processes by which lock-in occurs provides the key focus and will enable an assessment of the extent to which decline is better understood as path contingent rather than path dependent. Agency had earlier been identified as the key distinguishing factor between the two concepts and therefore analysis will be based on evidence that alternative product and market trajectories were available which could extend the lifecycle of the industry and/or enable coal communities to re-orient themselves onto to newer and more sustainable development paths, and that these were recognised but rejected. Within this chapter agency is considered in relation to two decision making levels: macro to explore the role of the State and, meso to explore the role of the industry.

Evidence is organised within two related sections. The first section 3.2 explores the long decline of the coal industry. The purpose is not to give a comprehensive historical account of the changes in the industry, but to examine the decline of the coal industry by focusing on key decisions taken by industrial and political actors and their impact on the overall trajectory of the UK coal industry. The narrative highlights examples of key decisions taken where alternative development paths were possible. As such, there is a deliberate selectivity in the choice of evidence. To aid analysis, comparison is provided with the West German coal industry. Whilst any generalisable comparison of coal areas is difficult (whether national or international), the German experience in terms of the sheer scale of regionally concentrated industrial decline is close to the experience of that of the UK's. At the time when decline intensified from 1980, both governments believed that the free market should be the basis of energy decision making. In 1980 UK government policy objectives were stated as ensuring the 'adequacy, security, and efficient use of energy supplies', whilst in 1983 West Germany's objective was to ensure a 'safe and economical supply of energy' (BMW1, 1986, p. 9.48). In

both countries coal would remain important but its decline would continue as nuclear power took a larger share of electricity generation. There were, however, significant differences in coal policy between the two countries. What were they, and how did they affect the coal regions?

To simplify matters the 20th century is broken down into four main periods relating to major phases in coal output, employment, investment and ownership etc. Each period, it is argued, offered a policy window of opportunity to shift the subsequent trajectory of the industry onto a more sustainable path whether through improved levels of investment, productivity or diversification. Briefly, 1913-1946 was a period of fragmented private ownership and limited investment. Whilst the poor state and performance of the industry meant that it was subject to numerous government enquiries, the period is nevertheless typified by government inertia and most notably associated with the pressing question of public ownership of the industry. This is surfaced here but developed more fully in section 3.3. 1947-1956 marked the beginnings of state ownership. Whilst coal was the dominant fuel source at this time, institutional inertia again determined that the industry's development path remained constrained. This is highlighted through the lack of coordination between the State's fuel policies and the long term plans of the Coal Board, which is also symptomatic of the wider constraints on Coal Board agency, and highlights the fundamental ambiguity of purpose which threatened to undermine the competitiveness of the industry. Whereas 1947-1956 had been a period of expansion, conversely 1957-1973 represented an era of rapid contraction in deep mining capacity, as new energy sources were available and promoted at the expense of mining. Whilst unwilling to intervene to support the industry the self-sustaining coalition comprising the State and Coal Board nevertheless determined to a great extent that coal areas would remain locked-in to a declining industry and unable to diversify into new emergent sectors. Finally 1974 saw the publication of the *Plan for Coal* and an upturn in coal investment and output, although this was short-lived and was followed by another sharp period of contraction during the 1980's and 1990's and the subsequent ending of deep

mining in the UK. This period is therefore associated with large scale pit closure programmes, mass job losses and highly localised unemployment (Beatty et al, 2005). Whereas pit closure was a fact of life for many coal areas in preceding decades, during the 1980's and 1990's there were few alternative jobs available, as pit closure often coincided with retrenchment in other local heavy industry. Timing and the response to pit closures is identified as the final critical juncture, with political lock-in determining not only the speed of decline but also the inadequate response to regional economic dislocation. The four periods cover the 20th century and therefore provide the basis for a reassessment of the nature of decline of the coal industry. Windows of opportunity are identified as providing critical junctures which offered the opportunity to enable a different and more sustainable development path. That these opportunities were not taken represent failure at an institutional level previously described as institutional inertia or political lock-in.

Section 3.3 develops the argument but extends its analysis to consider the case for corporate entrepreneurial failure which prevented the industry from diversifying into related and new markets, whether through a lack of investment or wider institutional inertia. The failure of the British coal industry has been the subject of extensive study over many years with a number of causes identified. Here the debate is re-categorised and simplified into two schools of thought which on the one hand view decline as being path dependent and determined by the nature of coalmining, and on the other as contingent on wider structural and institutionally factors. In the former category, mining is viewed as a single product industry which offered few spin out opportunities, ensuring a trajectory based on a narrow and ultimately unsustainable economic base (e.g. Church, 1986; Outram, 1997; Garside & Greaves, 1997). Decline was therefore linked to the specific product lifecycle of coal as an energy source and inexorable. Regional economic trajectories therefore can be understood this way. Conversely decline has been interpreted as the result of corporate entrepreneurial failure. Coal was not an undifferentiated product, and submarkets and uses for its various types provided opportunities for diversification. Many colliery companies combined

coalmining with ownership of coke ovens, with metallurgical production, and in the case of the Doncaster Collieries Association with an integrated sales agency (Supple, 1987). However that these, and other, submarkets were not developed to any degree has been blamed on the entrepreneurial failure of British coal owners (Chandler, 1990). Institutional and structural factors related to export and capital markets for example have been explored in mitigation of the actions of coal owners. For most of the inter war period the prospects for good profit-making in the coal industry were poor: the demand was inelastic yet the supply was competitive and the investment costs of innovation high (Supple, 1987, p. 408). Within this dynamic context a degree of caution is understandable. However, there was also scope for agency at a company level. For example, whilst recognising that capital markets might be tight, the structural insularity associated with family ownership played a part in both a desire to invest, and in limiting access to capital to invest. Similarly, almost more than any other industry, coalmining exemplified a potentially sharp disjuncture between its business and its technical functions ensuring that resource allocation decisions were not also coordinated. Notably, it has been argued that a cultural flaw lay at the root of the problem, compounded by what has been described as a brotherly ethos which enjoined Britain's leading mining men to the discipline of civic activism which took them away from their businesses This resulted in a preference for managerial strategies that were most immediately to hand and least demanding in terms of time and attention (Dintenfass, 1988; 1993; 1996). Whilst the robustness of these culture-based conclusions have been questioned on methodological grounds,¹⁰ and examples of entrepreneurial activity at a firm level are evident, the central argument that a poor entrepreneurial spirit was endemic in the UK industry at large, including the coal industry has received considerable support.¹¹ The entrepreneurial failure thesis focused on the coal industry under private ownership but is here extended to consider

¹⁰ As with their countryman Martin Weiner, both Chandler and Dintenfass, have had their conclusions questioned on methodological grounds. Chandler due to his US centric analysis. Wiener for basing his thesis on selective quotations from literary sources (Thompson, 2001, p.155) In the case of Dintenfass, the robustness of his generalisations have been questioned as being based upon the study of just four mining companies and more recently the personal biographies of 155 Men of Note (Walton, 2000)

¹¹ See for example Sampson (1962), Johnson (1977), Bellini (1981), (Wiener (1981), Barnett (1986), Elbaum & Lazonick (1986).

the period under public ownership. It therefore assesses the validity of the claim that managerial inadequacy was an inherited weakness of the industry not easily susceptible to reform by public ownership (Supple, 1987, p. 677). Was therefore the coal industry institutionally a bad entrepreneur? In assessing the contingent nature of decline it asks specifically, were alternative trajectories available? Did for example targeted investment in new products and sectors offer potential access to new and sustainable markets? Evidence is organised under pre and post-nationalisation headings. When considering the private industry it limits its analysis to the single issue of investment demonstrating how the interests of a self sustaining coalition comprising both industry and landowners, was supported by government to the detriment of the industry, its workforce and dependent communities. For the period after nationalisation it considers why state ownership was mainly confined to the working and getting of coal, and why there was so little diversification from the outset into related activities. Why for example was nationalisation not used to coordinate vertically integrated production processes? Whilst the section examines the National Coal Board's (NCB) attempts at diversification and greater integration, it focuses on the production of mining capital goods and the Coal Board's in-house engineering facilities. In the former it asks why were the ancillaries not developed further, and in the latter it asks why did the NCB adopt a tacit policy of non-competition with the private sector and leave the supply of a vital capital good almost entirely to the private manufacturers? Conclusions are considered in relation to the implications for both the nature and impact of decline on coalmining regions. As with the earlier section an international comparison is provided to aid assessment. Whilst in Britain the division between public and private sectors was rigidly drawn this was less the case in industries in other countries. Austria, Sweden and Italy for example used holding companies to enable state-owned companies to diversify and expand into new fields (Saville & Kerevan, 1987). In the Dutch state owned coal industry, diversification and expansion was encouraged from the outset. Comparison with Dutch State Mining (DSM) therefore provides an appropriate comparison with the UK coal industry, under both private and state ownership. In both cases it highlights the potential for diversification, both as a reaction to

adverse market conditions and as a way of developing new business opportunities in key emerging markets.

3.2 The long decline of the coal industry

3.2.1 Introduction

This section explores the long decline of the British coal industry. The purpose of the following is not to give a comprehensive historical account of the changes in the industry, but to examine the decline of the coal industry by focusing on key decisions taken and their impact on the overall trajectory of the UK coal industry.

3.2.2 1913-1946

The rise and decline of the coal industry occupies a central place in Britain's industrial history. At its peak year of 1913, the industry's coal production stood at 287.43m tons per annum: there were 3,024 pits and 1,127,900 miners (Allen, 1981). The industry constituted the largest industrial employer of male labour, around one in twelve of the population being directly dependent on it, while providing a key input to other industries and an important contribution to exports. Yet during the inter-war years the industry witnessed a dramatic decline. By 1937 employment and tonnage exported had fallen to only 63.1% and 66.3% of their 1924 levels (Supple, 1987). This was the product of a number of developments, including external factors which affected industrial agency such as adverse movements in the demand for coal and the growth of international protectionism. However, a major cause of the industry's declining international competitiveness was its poor labour productivity, a factor often associated with poor management decisions and which resulted in the slow diffusion of mechanisation and associated production techniques (Scott, 2006).

Table 1 provides a useful breakdown of statistical information related to the level of mechanisation in the inter-war years. It shows that there were increases in the number of

coal cutters and mechanical conveyors, and that the percentage of coal cut by machinery increased from 19% to 59% between 1924 and 1938. It also shows that there was a corresponding rise in the use of electrically- driven machines and lamps underground. All this might indicate rapid technical change within the industry, but in comparison with other European and US coal producers, Britain's advance towards mechanised mining was slow and uneven, with great variations in levels of capital investment in machinery between and within regions. In mitigation, uneven distribution of machinery can be attributed to a range of different physical conditions specific to individual mines such as the unevenness of roads, the stability of roofs, faults and thickness of seams (Supple, 1987). Boyns (1994) for example shows how the speed and nature of diffusion of mechanical cutters in south Wales's collieries can be explained and justified by geological factors as well as by the social nature of work which ensured the continuation of hand filling alongside mechanical conveyors. Others have added similar warnings against any sweepingly generalised conclusions in relation to the speed and nature of diffusion of technology in the UK coal industry. Greasley (1979) for example warns against viewing mechanisation as a panacea for the British coal industry. The introduction of machinery at the coal face could for example lead to bottlenecks further outbye (Supple, 1987). That said, the fact that incremental introduction of machinery may have an adverse affect on production also serves to highlight managerial failure within the industry, within which a planned and coordinated approach was needed to investment in other operations particularly haulage, as well as in more and better trained workers (Reid Report, 1945).

Table 3:1 also shows there were over 2,000 working mines in Britain on the eve of the Second World War. The small scale of most of these mines has been identified as restricting the possibility for mechanisation and the achievement of economies of scale although not necessarily profitability (see for example Fine, 1993). In contrast many mines in Europe were deliberately laid out on a large-scale from the start. Whilst many British mines were typically producing 100,000 tonnes of coal per year, large-scale German mines were raising almost

one million tonnes per year and some Dutch mines almost two million tonnes. Before the General Strike of 1926, Britain's national average mine productivity was as high as Poland's coal industry, the highest in Europe, and about level with the Ruhr coalfield and Europe. A decade later, output per man-shift was half that in Poland and had slipped well behind German and Dutch levels of productivity. Between 1913 and 1938 output per man-shift OMS increased by 13% in Britain, whereas over the same period, the Ruhr had increased 64%, in Poland by 63%, and in the Netherlands by 101% (Grundy-Warr, 1989). This discrepancy can be explained by a range of factors but central amongst these was the fact that British mine owners were slower to adopt mechanised methods than many other European producers. Collieries in the Ruhr won some 97% of their coal from mechanised means in 1934, compared with only 2% in 1913, whereas less than half the coal cut in Britain was by machine (Table 3:1).

Table 3:1 – Mechanical and electrical machinery in use in coal mines, 1924-38, (including number of horses and ponies)

Year	No of mines at work	Coal cutting machines							Mechanical conveyors and loaders			Safety lamps in use		Electrical equipment			Number of horses and ponies employed below ground
		Number and kind of machines in use				Totals	Coal cut by machinery		Number in use			No of flame lamps	No of electrical lamps	No of motors in use	Aggregate horse powered installed		
		Disc	Bar	Chain	Percussive and other machines		Quantity 1,000 tons	Percentage of total output	Conveyors on coalface and elsewhere below ground	Loaders	Tonnage coal conveyed (1,000)				Below ground	Above ground	
1924	2855	1213	921	2281	2812	6830	49911	19	1373*	-	-	576318	356817	-	810896	671036	65210
1925	2840	978	767	2645	2122	6512	27778+	22	1667*	-	-	493325	370123	34257	852045	768100	56762
1928	2539	793	635	3391	2312	7131	61388	26	2856	-	27976	416018	375186	36695	897660	824672	50405
1930	2328	572	566	4131	2367	7637	75756	31	3747	453	42495	379551	389238	39979	954789	861680	49243
1932	2158	300	412	4442	1983	7137	80286	38	4120	526	52666	295521	391142	41358	970131	885131	41764
1934	2123	257	325	5006	1818	7406	103701	47	5369	637	81493	242901	394820	45342	1022104	927082	37751
1936	2080	206	251	5516	1627	7600	125670	55	6727	716	109318	209539	407318	50081	1104318	974284	33136
1938	2125	140	186	6005	1398	7729	134958	59	7826	766	122915	175462	474913	55809	1198261	1045726	32524

Source: Based on the Annual Reports of the Secretary for Mines accessed in Grundy-Warr, 1989

Notes: + 1926 Miners' Strike led to low production figures

* Mechanical conveyors used at the coalface only (Figures for elsewhere below ground are not recorded prior to 1928)

- Not recorded

Coal owners were constantly attacked for neglecting investment and for seeing no need for change in their methods. They were accused of a persistent conservatism in the face of technical, organisational and market pressures. Even within the Mining Association of Great Britain (MAGB) senior voices were raised to acknowledge the failing of the coal owners (Supple, 1987, p. 396). The numbers of Government enquiries into the industry during the inter-war years also testify to the widespread nature of concern. However, and despite a degree of public sympathy for greater state intervention no significant action was undertaken to address the fundamental problems. Thus by the late 1930's, the British coal industry was generally in a bad shape and technically backward compared to several other coal producing nations. It was as Pagnamenta and Overy (1984. p.182) put it:

“weighed down by hundreds of worn out businesses, paying low wages to a workforce that was getting older as younger men left for the better-paid jobs elsewhere. The old, bad, coal industry was the one the public heard about, and the one that provided the case for state ownership.”

3.2.3 1947-56

For the Attlee government, the coal industry's performance was at the centre of its whole economic programme, and it was, as the first industry to be nationalised after the war, a test case for the government's nationalisation programme. Thus, in stark comparison with the period under private ownership, there was no shortage of funds for the industry in the first three years of state ownership. In terms of wider strategic management of the industry however continuity rather than change would be the dominant theme.

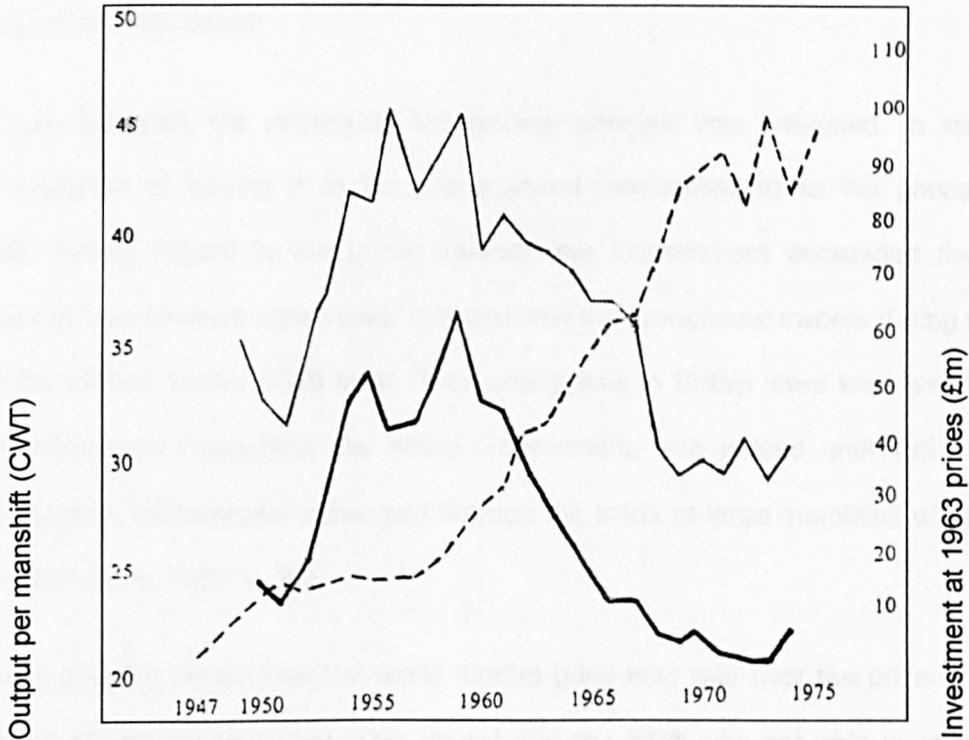
In 1950, the NCB introduced its first *Plan for Coal*, which was supposed to act as a production guide and capital expenditure outline for the industry until 1965. As coal was the dominant fuel source, accounting for approximately 90% of the nation's fuel needs, the Plan was of considerable importance to the energy future of Britain. In fact by the late 1950's the

Plan was becoming an irrelevance (Grundy-Warr, 1989) and a *Revised Plan for Coal* (1959) envisaged a reduction in output from the 244 million tonnes estimated in the 1950 Plan, to an output of 200-215 million tonnes by 1965 (Taylor, 1992). Why and what were implications for this sudden change for the NCB?

The 1950 *Plan for Coal* estimated that some £635 million would need to be spent on the industry. The emphasis for investment was placed on capital expenditure at the collieries. During the first six years of the Plan money was readily available. According to one observer, money was "too readily available... the industry has tended to look on the signing of blank cheques as the one and only solution to its problems" (see Connor, 1962). In just five years, the NCB invested £353 million, an average of £60 million a year. By 1955, annual capital expenditure was approaching £100 million (see Fig 1 below). This level of investment was predicated on the belief that coal output would continue to increase. In 1956, the NCB's strategy document *Investing in Coal* envisaged that some 230 million tonnes of coal would be produced annually between the years 1961-65.

Even though large amounts of capital were necessary simply to maintain output levels, the NCB was investing capital to expand capacity. To do this the NCB had to invest on the basis of long lead-in times between the date of investment and the date of production. The fact that the NCB was having to plan, invest and operate to such long lead times meant that any sudden and unplanned change in energy demand leading to a drop in coal sales could literally wipe out millions of pounds of capital investment projects. This is exactly what happened in the late 1950's.

Figure 3:1 - Productivity 1947-75 Investment (£ million)



- _____ Overall colliery investment
- Productivity
- _____ Investment in major schemes

Sources: *National Institute Economic Review*, 1960, 64,72,75. *NCB Annual Report 1974/75*

What is of interest here is the lack of coordination between the State's fuel policies and the long term plans presented by the NCB, and highlights the ambiguous nature of both the purpose of the industry and the overall location of strategic agency which would bedevil the industry throughout its period under public ownership. In 1955, the Conservative Government announced its intention to supplement coal supplies with other kinds of energy, including atomic energy and oil (Reid, Allen & Harris, 1973. p.16). However, the NCB was allowed to continue its expansionist policy, and borrow capital at high rates of interest from the government when it was already saddled with paying back compensation to the old private owners. Furthermore the NCB was unable to charge the prices it wanted for its coal. From the time the NCB was established the government interfered in its pricing arrangements, making it impossible for the Board to operate independently at arm's length

from government or to react to changing market conditions. As Lord Ezra, the former NCB Chairman (1971-82) noted:

'Right from the start, the underlying Morrisonian principle was breached. In spite of the explicit intention of leaving it to the management themselves to fix the prices for their products, having regard to the public interest, the Government persuaded the NCB to continue the "gentlemen's agreement" reached with the former coal owners during the war to peg prices at their former 1939 level. Thus coal prices in Britain were kept well below the world market level throughout the Attlee Government, and indeed until 1957 when the market situation fundamentally changed through the influx of large quantities of oil from the Middle East' (Ezra, 1987, p. 39).

Coal price pegging meant that the world market price was well over the price of domestic coal, up to £2 per tonne higher. This meant that the NCB was not able to maximise the benefits from coal sales when there was a shortage of coal in Britain and on world markets. Between 1946 and 1956, the NCB produced some two billion tonnes of coal which, as Ezra (1987) pointed out, would have built up a substantial financial reserve for the coal industry at a time when it was beginning to face severe price competition from cheap oil and gas imports. Ezra estimated that the industry lost at least £2,000 million of justifiable revenue in the first decade of nationalisation, and £500 million in the period to 1975 (Investors Chronicle, 12th December, 1976). In common with other nationalised industries, the NCB did not receive any compensation from price restraint, and its capital investment programme was undoubtedly limited by lack of internal resources in the late 1950's and throughout the 1960's.

Another factor highlighting the NCB's limited agency was that the organisation was also restrained from borrowing from the private capital market, which meant that it had to borrow from the government and often at higher rates of interest than could have been obtained in

private sector financial markets. This made the achievement of its commercial objectives more difficult, particularly during times of increasing competition from alternative fuels.

3.2.5 1957-73

Inland coal consumption reached a post-war peak of 218 million tonnes in 1956 (Ashworth, 1986). In the three years to 1959, total consumption (including exports) declined by 33 million tonnes. More ominously, seven power stations had converted to oil. Nevertheless, 1956-59 was another peak capital investment period for the NCB (see Figure 3.1). By 1960 the NCB's view of the prospects for the coal industry had changed from over-optimism into despondency. E.F. Schumacher (1960), who was then the NCB's Chief Economist, began to warn against the closure of collieries with substantial reserves left in them, and against fuel policies over-reliant on what he termed the "fleeting convenience" of cheap imported oil and natural gas. Suddenly the NCB began abandoning projects in which it had sunk millions. As Conner (1962, p. 83) put it:

'It may be that the artificial market conditions which prevailed throughout the world in the immediate post-war years lulled those responsible for formulating and directing broad coal policy into a false sense of "demand security" and, in consequence, influenced developments in the obvious and orthodox direction almost to the exclusion of the new.'

The ambiguity underpinning policy decisions at this time is evident in fact that the State, having allowed the Coal Board to continue its massive investment projects, was nevertheless unwilling to intervene to restrict fuel imports. Wider political motives were suspected. At the 1960 Miner's Conference Will Paynter, the National Union of Mineworkers (NUM) Secretary, warned delegates that the Conservative Government was attempting to break up the nationalised industry. Firstly, he argued, through enforced competition with foreign oil, secondly by making the House of Commons annually responsible for how much money should be made available to the NCB, and finally by making individual pits compete

against each other for their survival. In response the NUM called for restrictions on oil, and for a merger of coal distribution into the nationalised industry framework (see Hall, 1981, pp. 78-82). This did not happen, and whether politically motivated or not government decisions began to impact on employment in the coal fields.

In spite of some limited government measures to slow down the rate of rationalisation, the early 1960's witnessed a substantial increase in pit closures. Between 1957 and 1969, 505 collieries were closed with a loss of 378,000 jobs. In 1967 alone, 34,000 miners were affected in some way by the pit closures. There were 12,000 redundancies in that year, six times higher than any previous year. Whilst there had been 174 pit closures in the first decade of state ownership, there was a qualitative difference with the subsequent closures. With earlier pit closures concentrated on pits nearing the end of their working lives or on low productivity pits where miners could be transferred easily to higher output pits in the same localities, from 1956 onwards this pattern changed with more and more pits closed deliberately to lower NCB operating costs and cut capacity. This included many pits which had received substantial investment in the first decade and had plenty of estimated working life left in them. Young men who had been encouraged to join the industry in the mid 1950's by NCB slogans such as "coal mining gives you a job for good" suddenly discovered how transient such promises were (Grundy-Warr, 1989, p.140).

Unfortunately the NCB had no freedom to reduce coal prices as it was limited in its ability to borrow from the government. In contrast, the multinational oil companies were able to transport oil in huge tankers and had the flexibility to offer discounted prices in order to get a share of the European energy markets (Grundy-Warr, 1989). Coal also lost traditional markets due to technical changes in the rail and steel industries. In the 1960's, British Rail's demand for coal fell from almost 10 million tonnes in 1960 to only 140,000 tonnes per annum by 1970 as a result of the switch from steam to diesel. Natural gas began to displace coal, and the State's commitment to a civil nuclear power programme meant that by 1970, nuclear

stations produced 22.8 million kilowatt hours of electricity. This was enough to support 9.4 million tonnes of coal per year or nearly 18,000 mining jobs (Robens, 1972, p. 179).

Most accounts of the post-war coal industry concentrate on an analysis of the changes in demand and supply, particularly as a result of oil's price advantage over coal (see Robinson, 1988). It is important to point out however, that market conditions were also contingent on the UK government which could have intervened in numerous ways. For example, the government could have adjusted tax policy, or attempted some measure of long-term fuel planning by making adjustments in the relations between nationalised fuel suppliers and fuel buyers (Grundy-Warr, 1989). Neither the Conservative nor the Labour Governments of the 1960's were interested in doing this. Official thinking in government, relevant government departments, in the Treasury, and amongst non-coal industry 'energy experts' was that oil was plentiful, prices would remain lower than coal well into the future, and oil supplies were secure (Schumacher, 1974). Government inaction can also be understood in terms of its growing commitment to nuclear energy.

The Fuel Policy White Paper of November 1967 reduced coal output further to 152 million tonnes, (Taylor, 1992) and projected that by 1975 there would be only 159,000 employees in the industry, which would be 221,000 fewer than in 1967. It also projected that employment would be down to 65,000 by 1980 if production was reduced to 80 million tonnes. The White Paper also envisaged an expansion in nuclear power, oil and a slight growth in gas consumption. In the case of nuclear energy, the policy was "pushed by politicians, who seemed to regard nuclear power as a bright new toy, and by the Atomic Energy Authority, whose interests and experiences were technological rather than commercial" (Hannah, 1982 in Ashworth, 1986, p. 51). Support for nuclear energy at this time is indicative of governments shifting energy priorities, but also demonstrates its neglect of the wider economic, social and environmental concerns (Fothergill, 1988). By the mid-seventies all the White Paper's assumptions and estimates had been proved wrong. Nevertheless, it

continued to be influential amongst decision-makers in Government and Whitehall, effectively locking-in policy thinking until oil prices rose during the early 1970's. There would therefore be no attempt by government to intervene in the fuel markets to prevent or even slow down widespread pit closures.

Successive governments during this period continued to be lured by the prospect of cheap and abundant oil supplies at the expense of a long term national energy policy. The dominant argument underpinning decision-making was that security of energy supply should be sought through flexibility via diversification rather than dependence on a high cost indigenous fuel. The result was that coal was treated as the 'residual legatee' after other fuels, which put pressure on the NCB to cut capacity in order to reduce supply to the level of demand. The way in which the NCB went about this task was heavily influenced by the tight financial parameters within which it had to operate.

The price of coal was pegged artificially low as a matter of government policy up to 1957. Applications made by the NCB for price rises were either delayed, ignored or only partially fulfilled. Lord Ezra (1987, p. 40) also noted that the NCB was required to import dearer, American coal and pay the price differential itself. This according to Ezra was a clear example of how the government imposed "social obligations on the coal industry much to the detriment of its commercial well-being". Another problem for the NCB was its dependence on the government for finance, and the Treasury's method of allocating resources to nationalised industries in the context of overall macro-economic policies and not on an appraisal of each industry's needs. Through the application of these wider economic and financial constraints the State was therefore central to the creation of production targets, financial plans and to the overall profitability of the nationalised industries (O'Donnell, 1985). It is in this light that the NCB's (1959) closure plan should be viewed.

The worst affected areas were the 'peripheral' coalfields of Scotland, Durham, Northumberland and South Wales (Waddington & Parry, 1995). Pit closures meant that

miners had little choice but to transfer to neighbouring pits or move to the 'central coalfields' under the NCB pit transfer schemes, or leave the industry altogether. This led to the break-up of numerous mining communities, social dislocation and pockets of unemployment in areas where closures were concentrated and few employment alternatives were available (House & Knight, 1967).

The scale of the closures also reveals an important aspect of state ownership in practice, and further illustrates the contingent nature of regional economic trajectories. Not only were UK governments unwilling to intervene in fuel markets to slow down the contraction of the deep mining industry, but there was also no effort to use the nationalised employers as instruments of regional policy to enable alternative economic trajectories to be developed. Two examples illustrate this point. Firstly, whilst government had shown itself keen to limit the NCB's agency in terms of wider macro-economic policy, there was little attempt by successive governments to influence the NCB's rationalization plans in a way that would reduce the intensity of cut-backs in particular localities. Rather there seemed to be a tacit acceptance in Parliament, except amongst a few MPs from mining constituencies, that pit closures were a price worth paying for cheaper fuel. The degree of tacit acceptance can be extended to include the leadership of the NUM at this time, with closures during the 1960's going largely uncontested. This 'logic of moderation' (Taylor, 1984) whilst partly based on an understanding that closures would be spread over time and space, and on the promise of alternative jobs in mining (Hudson & Sadler, 1995), was also a fatalistic acceptance that closure was inevitable, and an immutable fact of life: oil was cheaper than coal, therefore the demand for coal must fall (Allen, 1981).

Secondly, whilst Government policy remained very much wedded to the maintenance of the staple industries well into the post war era, this was at the expense of the longer term economic and social viability of the affected regions. As the White Paper on Employment Policy 1944 stated, the 'first line of attack on the problem of unemployment in these areas

must be to promote the prosperity of the basic industries on which they primarily depend e.g. coal, steel, engineering and shipbuilding' (p.11). This focus on basic industries however was clearly inconsistent with the account it offered as to why these areas had become depressed during the inter-war years - namely through their excessive 'dependence' on a few basic industries.¹² However, it followed that so long as these basic industries were profitable it would be difficult to imagine any change in the balance if other industries required workers (Hudson, 2000). The role that both government and industry played in determining the nature of regional economies can be clearly illustrated by the Hailsham Plan for the North East in the 1960's which called for the modernisation of the Teesside economy to be based around key national industries, especially chemicals. In order to meet this plan, severe labour shortages in the Teesside chemical industry led to deliberate planning embargoes on the development of alternative sources of employment for skilled manual workers in the locality (MacDonald & Coffield, 1991). Treasury officials at this time expressed concern that locating new industries in the Development areas might have negative economic effects, in that they competed with the staple industries for manpower. As one Treasury note stated, "one of the main troubles is that these basic and essential industries are to some extent being drained of manpower by lighter industries which offer more attractive conditions of employment" (in Scott, 1996, p. 51). Such a policy is also evident in the *National Coal Board North East Development Area (NEDA) Plan* in 1948. The NEDA Plan argued that:

'...from the national point of view, with coal the most precious and urgently needed of industrial raw materials, to introduce into mining areas, without surplus male labour, male employing industries housed in up-to-date factories and able to offer pleasant work at good wages, would inevitably attract men away from the mines with disastrous consequences for coal production.'

¹² Conversely, regions with a wide range of industrial skills, like Birmingham, had been able to see many of their old industries die away during the past half century without losing their general prosperity, because they had the resilience to develop new activities to replace those which became obsolete (Ministry of Reconstruction, 1944, p. 11)

Accordingly the Plan was based:

...on the assumption that no appreciable volume of alternative male employment should be deliberately introduced into stable long life mining districts which are unlikely to possess much surplus male labour. (in Hudson 2006, p. 112).

It is virtually certain that this assumption was adopted at the insistence of both the NCB and the Ministry of Fuel and Power (Hudson, 2006) and as early as 1946 prioritisation of coal production had been accepted by Durham County Council Planning Committee which reported that:

Government policy indicates that industries which are mainly male employing will be brought only into those areas with a definite need for immediate male employment as distinct from diversification only. (DCCPC, 29.10.46, item 7 in Hudson 2006, p.112)

The focus of regional policy during the 1950's and 60's demonstrates the extent of institutional or political lock-in, as policy was underpinned by a national economic consensus between the Labour and Conservative Parties, and one which led to modernisation, investment and expansion in a narrow industrial base (Foord et al, 1986), which produced very little in the way of spin-off employment in manufacturing industry (McDonald & Coffield, 1991). The State was therefore centrally involved both in the creation and in the reinforcing of lock-in to ensure path dependent development between the late 1920's and mid 1970's (Hudson, 2006). In this regard the NCB was also complicit.

As the mine owners prior to nationalisation had sought to restrict the mobility of labour (Benson, 2002), so too the NCB regarded the labour supply as its own (Salt, 1995, p. 70). Supported by successive governments the NCB had a clear policy of actively discouraging inward investors into mining areas. This power was frequently used and in the case of Durham was extended to the refusal to release vital information on the future of individual collieries necessary to allow the local Council to devise appropriate planning policies of its

own (Hudson, 2006). The dominance of the NCB only began to weaken as coal production began to decline during the 1950's, but it remained an influential institution, embedded in various regional and local networks in the region until the 1980's, often for example helping to determine local and regional skills policies.

From the late 1950's onwards therefore the NCB as an influential regional employer and as a proxy for the State came to be a major contributor to de-industrialisation of the coal regions and the resultant structure of employment. Within regional self-sustaining coalitions, these institutions constrained local autonomy and agency, and hampered the restructuring process, ensuring that coal regions remained locked into repetitive patterns of production, consumption and employment, ensuring that opportunities for the development of new products, skills and careers opportunities were limited. Where new investment was attracted, much of this would serve to perpetuate a low skills economy and determine ultimately an unsustainable development path. Many of the new jobs created by the branch plants attracted to the North East, whilst diversifying industries and sectors to a degree, also ensured homogenisation in terms of stage of production and location in value chains, with proliferation of low skill, low value-added activities (Hudson, 2005, p.585). Most of these new jobs were not for displaced males, but were mainly low paid, non-unionised jobs for women. The very scale of losses of predominately male jobs created a local economic imbalance within the coalfields that proved to be a problem.

3.2.6 Post 1974 - shift from social democratic to neo liberal

The 1973-74 oil crises ensured the *Plan for Coal* published in 1974 set a target of 135 million tonnes for 1985, of which 120 million tonnes was to come from deep-mined output. Increased capacity would require the extension of the life of existing pits, as well as opening up of new developments including the Selby 'super pit' complex near Doncaster (NCB, 1974).

For the Plan to work however there needed to be a degree of intervention in energy markets and coordination with other fuel industries. Again, this did not happen. The Labour Government in particular sought to expand North Sea oil production. The demand for coal would also be hit by the increasing trend towards energy conservation (Robinson, 1988) and by the rapid decline in Britain's heavy industries and manufacturing during the late 1970's and 1980's. However the second major period of pit closures was only partially due to changes in energy demand. Of more importance was the shifting political and financial constraints imposed on the coal industry and the energy sector by the Thatcher governments during the 1980's.

Never before has a government's broader political and economic priorities impinged so much on the running of a nationalised industry or on intra-public sector relations. As Grundy-Warr (1989, p. 150) states:

'Although successive Thatcher Governments have been dogmatic in their adherence to a 'free market' laissez-faire philosophy, they interfered more in the organisation, control and performance of the coal industry than any other governments'.

Whilst the Thatcher government had no stated national energy policy, its whole economic programme was based on indigenous North Sea oil revenues and nuclear power. The liberalisation of the oil tax regime in 1983 for example was a deliberate attempt to encourage oil companies to exploit oil fields in the North Sea. Government continued obsession with nuclear power meant that misleading documentation (Jeffrey, 1986) was used to hide true energy generation costs in comparison with coal (see *The Times*, 11/3/83; Ashworth, 1986) and to underpin the government's business case. There were also wider strategic considerations which overrode the economic case for nuclear power within government but which illustrate the contingent nature of the coal industry's development during this period. One of which was the development of weapons grade plutonium. A second strategic driver, especially on the part of the Conservative government, was to weaken the bargaining power

of the National Union of Mineworkers by providing a major alternative source of electricity generation to coal (Fothergill, 1988, p. 234). This 'anti-coal' policy was therefore bound to lead to a clash with a resurgent NUM.

Whereas a 'logic of moderation' had typified the NUM's leadership during the 1950's and 1960's, by 1967 the miners and their union, bolstered by the industrial leverage afforded them by the centralisation of the wage bargaining structures, adopted a more 'militant' demeanour which was reflected in two successful national strikes in 1972 and 1974. The unsuccessful national strike of 1984-5 however resulted in a return to pit closures, but this time on an unprecedented scale. At the time of the strike, British Coal employed 171,000 miners at 170 collieries, and had a total workforce (including white collar staff, workshops, opencast mines etc) of 221,000. Nearly 90% of this workforce was shed during the first ten years after the strike, and job losses continued thereafter on a smaller scale. Whilst economic arguments were put forward to justify the closure programme, subsequent studies have shown that wider political considerations were the key determining factor in the decision to close pits. They show that the closures were by no means exclusively concentrated on the worst performers, and many of the pits closed in the decade after the end of the national miner's strike had in fact achieved very large increases in productivity in the years preceding closure (Glyn & Machin, 1997).¹³ Studies also show that the wider social costs of closure were not considered as part of closure decisions (Glyn, 1988).

The swiftness with which the UK industry disappeared, coupled with the highly localised concentration of mining employment, resulted in severe deprivation and mass unemployment (DETR, 1998). This was especially the case in the Yorkshire coalfield which experienced the largest reduction in coal industry employment over this period, losing

¹³ Glyn & Machin (1997) find reasons other than economic factors played role in identifying pits for closure. These included pressure on BC to keep open a number of pits in the outlying area. However they also note that the 5 pits that were on Boyd's 'worst 31' were all in Yorkshire.

67,000 male jobs between 1981 and 2000. These jobs made up 95% of all male jobs in 1981 (Beatty et al, 2005).

Faced by the prospect of searching for work within an increasingly shrinking labour market, those fortunate enough to find work in the 1980's did so in relatively low paid jobs. For example 80% of redundant miners who had found work in other industries were earning less than they had in the coal industry (see e.g. Guy, 1994; Turner & Gregory, 1995). Faced by declining levels of affluence and few real job opportunities, many ex-miners were 'realistic' enough to recognise that their chances of securing employment were slim, and subsequently became 'discouraged' workers combining redundancy payments with social security payments to "ensure an adequate though not extravagant standard of living" (Beatty & Fothergill, 1996, p. 637). The phenomenon of 'hidden unemployment', although not unique to former mining communities,¹⁴ can be seen as a direct result of government policy towards the coal industry at this time and remains a serious problem in former coal areas (Beatty et al, 2005).

The extent to which government policy affected the nature of decline, and scale of the subsequent challenge to regenerate coal areas can be further illustrated in that the knock on 'multiplier-effect' of pit closure also ensured that jobs were lost elsewhere in the economy (Fothergill & Witt, 1990). In Wakefield for example, O'Donnell's (1988) analysis found that 7% of local mechanical engineering jobs were lost as a direct result of loss of sales to British Coal, a figure which he recognised greatly underestimated the actual numbers affected, with many small and medium sized secondary suppliers and sub-contractors not covered by his surveys. Table 3:2 shows the importance of the mining machinery industry to the wider region in terms of employment. It shows that whilst the numbers of managerial staff (column 1) grew over the decade, the greatest decline in employment was amongst craftsmen (column 7) and low skilled operators (column 8). The latter job categories are similar to the

¹⁴ See Beatty & Fothergill 2002, 2005b, 2007

skills profile of those made redundant from the local collieries, increasing the level of competition in the local labour market.

Table 3:2 - Employment by occupation in the UK mining machinery industry in Yorkshire and Humberside 1978-87

Year	Occupational category*									No. of establishments
	1	2	3	4	5	6	7	8	Total	
1978	237	36	419	185	664	208	1631	1310	4690	30
1979	237	31	430	190	685	222	1662	1274	4731	29
1980	226	19	510	193	657	242	1636	1301	4784	30
1981	231	26	552	262	632	234	1730	1230	4897	31
1982	244	15	549	312	509	243	1623	1228	4723	31
1983	256	15	530	264	486	203	1610	1056	4420	30
1984	283	38	457	233	485	212	1406	932	4046	27
1985	258	40	402	221	423	189	1349	822	3704	24
1986	262	35	397	263	387	195	1445	848	3832	25
1987	281	58	412	196	381	168	1294	760	3550	23

Source: Engineering Industry Training Board (EITB). 1988

*see appendix 3 for occupational category list

In addition to concentrations of mining manufacturing activity, especially in south and west Yorkshire, there was also close relationship between mining and manufacturing in the region as a whole. The links are many and varied. Mining machinery firms purchase of special metals and components from Sheffield steel based concerns. British Rail engineering workshops (pre-privatisation) in Doncaster carried out sub-contract work for the Coal Board. British Rail transported coal produced in the region. Many employees in private firms started

out as apprentices in the mining industry. There are also complex supply networks between monopoly buyer and supplier. One example became evident when British Coal announced its intention to look for overseas suppliers of cloth for donkey jackets having previously used 100% British-made cloth (Yorkshire Post, 30/03/1988).

The challenges for those made redundant, and for the local economy in general was also compounded by the wider multiplier effect, with many local businesses in the service industries also reliant on the purchasing power of miners and their families. Both Winterton (1993) commenting on Barnsley, and O'Donnell (1988) on Wakefield, found that this expenditure multiplier was even more damaging to the local economy than the employment multiplier. One local businessman who decided to move his business away from South Elmsall following the closure of nearby Frickley Colliery states:

'Times have been very difficult recently because of the recession and the fact that Frickley has been under a cloud for the past year. As far as business is concerned it closed a year ago – when people have a noose round their necks they're unlikely to spend any money' (Kitsen, 1993, p. 1).

This quote is representative of the experiences of countless businesses in the coalfield areas during the period of pit closures and highlights one of the paradoxical features of the Conservative government's policy objective to shift regional trajectories from a perceived dependency culture, in which an expectation of employment was endemic amongst the local population, to an enterprise culture based on increased levels of self employment and an indigenous small business economy. Namely that the very same Government policy which deliberately encouraged capacity cuts in British Coal to improve competitiveness, partly in preparation for its privatisation, would also contribute to the decline of private sector business through a lack of consideration for the various resultant income and linkage multiplier effects. This did not stop government from introducing a wide range of enterprise policy measures in promote self employment. Table 3:3 covering the entire post-war period

shows that the dramatic increase of policy measures introduced in support of this objective coincided with the pit closure programme. It shows that there was little government support for small businesses before the 1980's but that the number of policy measures increased dramatically from the election of the Thatcher government in 1979 as small businesses became part of a wider government policy objective to shift the country from a perceived dependency (reliance on the State) to an enterprise (self reliant) culture (Green et al, 2008). This policy trajectory continued with the election of New Labour in 1997, which broadly followed the Conservatives small business-led regional policy strategy.

Table 3:3 – UK policy measures to support small businesses 1946-2004

Years	Number of measures
1946-60	2
1961-70	13
1971-81	33
1982-89	103
1995-96	200
2003-04	267

Source: Greene (2002), Gavron et al. (2000), PACEC (2005) in Greene et al, 2008.

Subsequent impact analysis shows enterprise policies to have had little effect with levels of self employment in former coalfield areas remaining stubbornly low compared to other regions (Keeble & Walker, 1994; Van Stel & Storey, 2004; Johnson & Reed, 2008). In fact in many of these regions enterprise policies have proved to be counterproductive resulting in a reduction in overall employment (Van Stel & Storey, 2004). Broadly, two arguments have been put forward to explain the spatial differences in new business formation rates across the UK regions, but which are not necessarily mutually exclusive. The first argument tends implicitly if not explicitly to support the argument that low levels of new business start-up in mining areas can be explained in terms of a cultural flaw. That is ex- miners and their

communities were unable to escape a cognitive lock determined by generations of employment in the coal industry. The second explanation focuses on structural problems within the coalfields associated principally with transferable skills and levels of regional affluence. This explanation is supported by historical data on new firm formation rates from the inter-wars years. It shows that the least fertile regions during this period were the mining-dominated depressed areas in the North of England and South Wales, which had also been amongst the poorest of the regions (Foreman-Peck, 1985). Moreover, these regions were also typified by poor business survival rates as unemployment crowded workers into self-employment (Foreman-Peck, 1985), and into sectors closely related to their work experience (Hudson, 1987). The evidence from the more affluent regions during this time was markedly different, with more businesses starting up, in more diverse sectors and with a much higher chance of both survival and growth.

As with the inter-war period the most pressing motivation underpinning the enterprise policy was the chronic unemployment caused by de-industrialisation of which the pit closure programme was central. With coalfield areas witnessing high levels of unemployment, those who risked starting up in these localities, as had been the case during the 1930's, tended to be crowded into low value-added service sectors such as motor maintenance and hairdressing, which offered little scope for growth and employment, let alone local economic regeneration, and in sectors which were typified by high failure rates as one government subsidised start up was displaced by another (Greene et al, 2004). For these individuals (and regions) the reality of enterprise was a twilight world of hard work, low pay, casual labour and insecurity (Macdonald & Coffield, 1991). Spatial difference in UK start-up rates during the 1980's and 1990's is therefore best understood as it was during the 1930's as a factor of regional income disparities rather than any individual or regional cultural flaw. Rather than indicative of the cognitive lock-in associated with any reluctance to start a business, the inability of coal areas to develop an 'enterprise economy' is further evidence of more structural causes. The example of British Coal Enterprise illustrates this further.

Support for the government's 'enterprise crusade' came via a wide range of business support services but which had been established with minimum budgets to try and make job losses in the nationalised industries more palatable (Hudson, 2000). These agencies, embedded within local policy making networks offered what Macdonald and Coffield (1991, p. 80) describe as "implied regional policy written small." The principal support service in the wake of pit closures, and through which much of the governments regional funds were channelled was British Coal (Enterprise) Ltd (BCE). BCE was established in October 1984 and modelled on BSC (Industry) Ltd which had been set up by British Steel in 1979 to deal with a similar dislocation in the steel industry. The two main purposes of the schemes were to encourage the inward movement of firms, and to encourage redundant workers to set up in business on their own. BCE made some impressive claims with regard to job creation although subsequent analysis has tended to be more conservative (Fothergill & Guy, 1994).¹⁵ However in terms of supporting business start up the BCE scheme had several disadvantages over the much larger BSC scheme which in itself was indicative of a policy choice and the resultant evidence from the scheme is less unequivocal or impressive. The focus on supporting self employment as a key regional economic enabler itself also highlights the extent to which government thinking remained locked in to a narrow ideological space, and one which failed to take into account local and regional specific issues. Three points illustrate this and highlight how political lock-in best describes the experiences of coal areas during this period.

Firstly, the majority of small businesses created or supported by BCE were not actually 'new' and tended not to be run by former miners (Turner, 1992). The latter point should not be too surprising given that ex miners were not really the target audience for the scheme (BCE, 1986; Rees & Thomas, 1991; Pickering 1995), but it questions the scheme's rationale in the first place, and highlights the extent to which ex miners were effectively abandoned by the

¹⁵ Fothergill and Guy (1994) suggest that BCE created 16,000 *new* jobs at a cost of £4,300 for workspace and £16,600 for outplacement/retraining; costs which they suggest compare favourably with other job creation agencies.

State. Secondly whilst the qualifying criteria for loans was that the new business should not displace jobs in other local businesses, it is not apparent how such small businesses actually made a net contribution to local employment, or merely replaced or displaced existing firms (Waddington & Parry, 1995). The net effect on employment or other economic value added therefore was negligible. Finally, although, BCE stated a strong preference for encouraging and supporting manufacturing industries, it was estimated that 40% of businesses supported by BCE were in fact in the service sector where displacement is especially problematic with new firms subsidised by cheap loans, accommodation or government grants, able to undercut and put their competitors out of business (Edwards, 1991).

In sum, having determined the nature and scale of the challenge for mining areas, a self-sustaining coalition (which also at this time began to include, if often reluctantly, local authorities), continued to determine the measures by which affected communities should respond to the challenges of pit closure and unemployment. Just as branch plant syndrome is illustrative of a fundamental flaw in policy thinking associated with political lock-in, so too was the shift to the enterprise economy. In the case of enterprise policies, the flaw was based on its failure to understand the link between regional affluence and sustainable small business economies. Equally policy was largely imposed on localities with little account taken of local circumstances or wishes. The comparison below shows that alternative approaches to decline and regeneration were possible.

3.2.7 Comparing the British and West German Coal Industries

The contraction of the coal industry was not unique to the UK. Similar problems faced the coal industry in Germany. From the mid 1950's it too faced increasing competition from alternative energy sources such as oil and natural gas. Between 1958 and the early 1970's two thirds of employment in mining was lost, and as with Britain the ability to absorb displaced miners in new pits reached its natural limits. The German coal industry was also regionally concentrated, mainly in the Ruhr area, where it employed 15% of the total

workforce. Again, as with Britain, coal had come to occupy a special place in German economic and industrial history, rousing deep emotions in the affected regions. Faced by the same dilemma as their British counterparts, and confronting a dissolving energy consensus, West German policy makers adopted a policy in stark contrast to their British counterparts. Whereas in the UK, the NCB concluded from 1980 that an accelerated closure programme was necessary to meet the financial objectives set by government, and which resulted in the ending of government deficit grants from 1987/8, in West Germany policy makers resolved to “maintain its coal policy to secure supplies and in the interests of the people who work in coal mining areas” (BMW1 1986, p. 48 in Taylor, 1992). This entailed both social aid and a high (and increasing) level of production aid to bridge the gap between domestic and international coal prices. It also provided coal communities with time to develop more appropriate and socially acceptable alternatives to mining.

What follows further illustrates the contingent nature of the experiences of the UK coal industry and coalfield regions. It does so by demonstrating that there were a number of policy choices available to both the UK and German governments which were both faced by the same challenge. The comparison focuses on two alternative policy choices. These are government aid for the purpose of industry restructuring, and government aid for the purposes of production. The comparison shows that these choices shaped both the manner and ability of the respective coalfield regions to respond to the decline in their mining industries.

Table 3:4 – The British and West German coal industries: the cost of public policy (Nominal US \$ million)

	1982	1983	1984	1985	1986	1987
<i>Production Aid</i>						
West Germany						
Current output	794	598	787	639	1163	2157
Price support	962	1461	1617	1222	2401	3600
<i>Total PSE</i>	1703	2000	2346	1975	3463	5815
United Kingdom						
Current output	663	1326	2803	98	454	170
Price support	362	671	390	485	1180	Nd
<i>Total PSE</i>	1025	1997	3193	583	1643	Nd
<i>Restructuring Aid</i>						
West Germany	186	162	128	127	179	Nd
United Kingdom	343	673	479	1465	1770	Nd

PSE = Producer Subsidy Equivalent

Nd = no data available

Source: IEA 1988, table D-5 and D-13 in Taylor, 1992

The consequences of the policy choices can be seen in Table 3:4. In West Germany, restructuring aid at this time remained very low compared to production aid and price support, whereas in the UK although total aid increased, production aid (noticeably deficit grants) declined (except for 1985/6) and then disappeared, whilst restructuring aid rose dramatically. This analysis points to a fundamental difference between West German and British coal policymakers. In the former, policy was directed at *preserving* the industry's existing shape, in the latter it was directed at *restructuring* in the direction of the free market. Germany's decision to support its coal industry was based not only on ensuring a secure energy supply, but also because coal and its supply chain were viewed as essential factors in the development of new industries not only in the coal industry but also in other branches

of industry, such as electrical and mechanical engineering, and in the construction industry (Schubert & Brautigam, 1995).

Mining inter-linkages have been discussed above with a particular focus on the negative local and regional economic multiplier of pit closure. The German government's decision to invest in the preservation of the coal industry can therefore clearly be understood within this context. This can be illustrated by the decision that all German fossil-fuel electricity generating stations should be fitted with flue gas de-sulphurisation plants (FGD). Whilst reducing acid emissions from existing stations this policy would also have generated work for numerous local and regional companies, and provided work for the steel, construction and engineering sectors (Grundy-Warr, 1989). This action can be compared with the UK government which rejected calls to introduce tight regulations and inducements to encourage private sector electricity utilities to introduce similar energy conservation methods (Financial Times, 18-01-1989).

The fundamental rationale for Germany's approach to the challenges of their coal industry, and affected communities was that structural change could not be achieved through structural collapse, and policy measures ensured that although the future for coal was limited, nevertheless the industry would be gradually phased out over time,¹⁶ with policies promoting structural change introduced during this phase out to ensure mineworkers and mining communities could prepare for alternative careers, thus making structural change 'socially compatible' (Schafer, 1995).¹⁷

The German approach had a number of tangible and logical advantages over that adopted by the British government. Reviews of European coalfield regions identify that where the industry is still active, foreign investment helps to diversify the local economic fabric so as to

¹⁶ Subsidies finally come to an end in 2018 (Leunig & Swaffield, 2008).

¹⁷ See also German coal talks outcome: Socially tolerable restructuring. The International Federation of Chemical, Energy, Mine and General Workers' Union, *ICEM Update*, No. 15, 13 March 1997 accessed at <http://www.hartford-hwp.com/archives/61/216.html>, 1st March 2013

'anticipate' the impact of pit closure, whereas investment after closure is used to deal with the psychological and economic impact and effects of closure. A government commitment to managed decline also gives miners (as well as young people in the area) the opportunity to retrain or develop new skills whilst still in work. The German approach also has the significant advantage of maintaining a level of local affluence which gives SMEs the opportunity to establish themselves in the locality (Council for Europe, 2006).

The Ruhr coalfield continues to experience economic problems with unemployment rates marginally higher than national rates,¹⁸ however studies also highlight that regeneration is being developed in a more sensitive and sustainable way. For example, whilst the development of the service sector was important, the regeneration process in the Ruhr also targeted a specific settlement of industries in emerging sectors¹⁹, supporting the further qualification of workers and founding of universities (there was not a single university in the huge Ruhr area until 1965 whilst today there are five). These measures led to a significant improvement of the area during the 1980's, and today the region has become the centre for high tech industries in the chemicals, energy and healthcare sectors.²⁰

Much of this success can be related to the managed nature of decline. It can also be attributable to the local autonomy of the Lander in comparison to local authorities in the UK which had absolutely no influence over local and national economic policy making (Taylor, 1992). This local agency enabled the region to develop (often small scale) regenerative initiatives based on local solutions many of which emerged from the building upon and reinforcing of the cultural identity of the coalfield, and the re-use of old colliery sites. Evaluation studies all point to this as being a defining feature of the regeneration process in

¹⁸ In 2004 unemployment rates for the Ruhr area was 12.8% compared to 11.9%(Council for Europe, 2006).

¹⁹ The regeneration process was strongly influenced by the sustainable development agenda with the region focusing on developing the infrastructure to attract industry in this emerging sector. By the end of the century 22% of all enterprises in the region being located in the environmental sector (NRW State Government, 1998)

²⁰ Recent statistics also show that whilst the region has developed its service sector nevertheless in 2009 58% of employment was in the manufacturing sector. Source: *Official Employment Statistics of the Federal Government and State Government*. <http://business.metropoleruhr.de/en/location/data-facts-and-figures/the-job-market.html> Accessed on 30.4.2013

the Ruhr area. This is not to say that policy makers did not seek to change the image of the region, but that they sought to do so in ways which retained a link with the past and which promoted a strong regional identity (Shaw, 2002). Indeed the link between industrial heritage and regional regeneration was central to the 'entrepreneurial shift' of regional policy in the 1980's (Hotchkiss, 2000). One positive spill-over benefit of this being the adaption of the old Zollveriein site for needs of SMEs which has been central to encouraging people to stay (Leunig & Swaffield. 2008).

This limited comparison shows that whilst the result ultimately was to be the same, the less ideological approach adopted by the West German government recognised the wider and longer term dangers of destroying the complex web of local economic inter-linkages and interdependencies, whilst also providing the basis from which to reach a consensual solution (Taylor, 1992). The comparison with the UK experiences in this regard could not be starker. Regeneration studies undertaken in the UK during the pit closure programmes of the 1990's highlight a level of resentment and subsequent alienation amongst local people at (enterprise) policy measures which were often interpreted as 'alien imports' designed to slur the good name of the town (in this case Barnsley) and which failed to recognise and build on the positive aspect of local traditions (North et al, 2001).

3.2.8 Summary

The purpose of this section has been to provide a reassessment of the decline of the UK coal industry which illustrates why and how path contingency captures the character of the industry's development trajectory more adequately than does that of path dependency. The analysis was divided into four time periods covering the 20th century and the industry under private and public ownership. In each of these time periods it highlighted that opportunities existed to alter the trajectory of the coal industry to provide a more sustainable development path. That these opportunities were not taken has been identified with institutional inertia or political lock-in operating at both an industry (meso) and government (macro) level. This was

considered in terms of the implications for coal areas. Institutional inertia was shown to have had a negative impact on the competitiveness of the industry under private ownership, and continued to play a role in defining the development of the industry during public ownership. It was shown that the nationalised coal industry failed to protect jobs and the longer term viability of coal areas, but that this was largely contingent on the considerable political, financial and economic pressures acting upon it. Coal Board agency was restricted by tight pricing, and financial and external market conditions, all of which were controllable by the State. Similarly the lack of coordination between investment and production priorities of the NCB and its main customers had a significant impact on both the industry and coal regions. The NCB's failure can therefore be interpreted as largely the failure of consecutive governments to clearly define the industry's social obligations in particular in relation to supporting longer term employment within the coal communities, or at least supporting measures which would have provided breathing space until alternative employment opportunities could be developed. The issue of timing was considered in comparison to the German experience which highlighted a number of important qualitative if not quantitative differences when managing a declining industry, and which provide salient lessons for those looking to understand the nature of industrial and regional decline. In the UK, having failed to protect jobs in the industry, a self sustaining coalition dominated by the Coal Board but underpinned by the State constrained efforts to create new economic paths, as nationalisation was used as a strategy to underpin a regional development trajectory around the declining mining industry. In doing so it ensured that regional trajectories remained locked in to what was recognised to be a declining industry, and actively prevented diversification into newer or emergent sectors.

3.3 Mining and entrepreneurship

3.3.1 Introduction

The previous section explored macro-economic issues arguing that government policy could at the very least have altered the speed and timing of decline and therefore the context for local and regional regeneration. The fact that successive governments failed or chose not to do so illustrates their role in determining the nature and scale of regional economic dislocation. This section extends the assessment by exploring the extent to which (at the meso level) the coal industry failed to grasp opportunities to adapt to the changing nature of the external environment. Specifically it will address the questions: did coal provide the basis for product or market diversification? If so why were these opportunities not taken? Conclusions are considered in relation to any implications for the nature and impact of decline on coalmining regions. As with the earlier section an international comparison is provided to aid assessment. In this case a comparison is made with the experiences of the Dutch state-owned mining industry.

3.3.2 Pre-nationalisation

The case against the coal owners is well established. That on the whole they failed to invest in new machinery and the implications for the industry has been discussed above. Here the question of entrepreneurial failure is extended and related to wider institutional factors. It has been argued that the nature of decline can best be understood as contingent on structural and institutional factors associated most clearly with a self-sustaining coalition. What follows develops this point by highlighting the fact that wider institutional barriers to greater investment in machinery existed. Supple (1987) characterised these barriers as: pattern of control of collieries; pattern of mineral ownership; pattern of industrial relations and wage system; and government policy (Supple, 1987). These he argues had varying degrees of impact on the industry between the wars. Of these, the fragmented pattern of mineral

ownership, it has been argued, was the key impediment to reorganisation of the industry, with landlords holding the upper hand in relation to the operators (Fine, 1990). Fine's evidence therefore works to remove blame for lack of reorganisation from the coal owners (Wale, 2001). What follows maintains a focus on the coal owners but broadens it to highlight the role of landowners, whose rent-seeking activities ensured the structure of the industry remained fragmented, hampering its competitiveness, as well as that of the State, whose unwillingness to act throughout the inter-war period in support of a more efficient industry provides another example how political lock-in manifests itself.

Entrepreneurial failure is evident in the rent-seeking activities of land owners, whose role was based on a unique system of fragmented royalties which explained in part the slow diffusion of mechanisation during the inter-war years. In this regard British coalmining can be compared unfavourably with other European coal-producing countries whose royalty practices generally developed from a tradition of crown mineral ownership (Scott, 2006). Under the European system the crown owned the mineral royalties and granted concessions to mining concerns. This enabled mining firms to build straight underground roadways and utilise locomotives for faster means of transporting coal from the coal face to the pit bottom and which improved overall productivity. In Britain on the other hand, ownership rested with the landowners which meant roadways were often determined by owners and not always straight (Scott 2006). In fact the mineral rights laws meant that engineers developing mines had to observe underground boundaries that followed streams and hedges dividing property on the surface. One coal mine might have three or four land owners with the mineral rights to coal beneath their land, each entitled to a royalty. Coal extracted from under such a property could cost over a penny a tonne extra, so roadways were bent to avoid expensive properties. This resulted in complex, narrow, twisting passages unsuitable for locomotive haulage or long-distance conveyor belt systems.

Much of this has been discussed earlier with table 1 providing evidence of the speed of diffusion and levels of productivity during the inter-war years. In this section analysis is extended to re-focus on the question of entrepreneurship. Table 3:5 covers the period 1903-1938 and highlights the potential bottlenecks in production caused by the “bizarre illogicality of the mineral rights law” (Pagnamenta & Overy, 1984, p.179). It shows that whilst by 1938, 59% of coal was cut mechanically, by the same date only 38% of coal was transported to the pit bottom by mechanically-driven conveyor belts. Table 3:5 also shows that by this date virtually no locomotives were in use in British mines by 1938.

Table 3:5 – Percentage of coal mechanically cut and conveyed in British mines 1903-38

Year	Mechanically cut	Face conveyed	Gate conveyed	Locomotive conveyed on main/secondary haulage *
1903	2.3	N/A	N/A	0
1909	5.2	N/A	N/A	0
1913	8.5	N/A	N/A	0
1920	13.2	N/A	N/A	0
1924	18.7	N/A	N/A	0
1928	25.9	11.8	N/A	0
1930	27.9	14.4	5.8	0
1931	31.1	17.4	8.4	0
1932	35.0	21.6	10.5	0
1933	38.5	25.2	13.4	0
1934	42.4	30.0	19.1	0
1935	47.0	36.9	24.4	0
1936	51.0	43.0	29.5	0
1937	55.0	47.9	33.2	0
1938	59.5	54.1	36.2	0

Source: Annual Report of H.M Chief Inspector of Mines (1904-39);

N/A, COAL 22/174 paper T.A.C. 9, 3 Oct 1944

* Derived from data on the number of locomotives in use in British mines, which stood at 16 in 1939, implying a percentage contribution to aggregate tonnage hauled that was not significantly different to zero (in Scott, 2006)

The system of private ownership, which produced fragmented land and colliery holdings, and the preference of owners and shareholders for short term profits and dividends, provides an explanation for the relatively slow pace of mechanisation prior to World War II, and therefore the poor performance of the British coal industry during the inter-wars years. It highlights an example of entrepreneurial failure of both the landowners who maintained the tradition of rent-seeking activity, but also failure at a political level, as the system was contingent on institutional inertia.

Mine owners had complained that political interference (along with trade union power and unfair competition) had impeded investment and innovation, but with the single exception of the uncertainty caused by the heated nationalisation debates during 1919-20 there is little evidence to support such a claim. There was plenty of government sponsored interest in the coal industry during the inter-war years which identified the shortcomings of the industry under private ownership.²¹ Of these the Sankey Report which recommended nationalisation of the industry can best be described as representing a critical juncture for the industry. Nationalisation at this time could have addressed the growing industrial disharmony and social unrest whilst providing greater rationalisation of production, and much needed investment in modernisation. That Sankey was rejected by Lloyd George's Coalition government is representative of the broader political consensus at this time. It shows that

²¹ Interest in the industry began with the Coal Mining Organisation Committee (1915), Sankey Commission (1919), the Buckmaster, Macmillan and Samuel Inquiries of 1925-26, lots of official discussion during the late 1920's and 1930's, the investigations of wartime, and culminating with the Reid Committee of 1944-45.

even where it was clearly evident that the colliery owners were not prepared to invest in the industry in order to improve productivity and boost competitiveness, so too UK governments were not prepared to intervene to ensure modernisation.²² To a degree government inaction can be explained as being based on a fear of the social consequences of enforced amalgamation and rationalisation, from the lobbying power of the coal owners, represented by the secretive and hugely influential Mining Association of Great Britain (Bailey, 2007, p. 183), but a more convincing explanation is that inaction was a matter of political philosophy. In Germany during the 1920's a more proactive state and industrial class had acted decisively to concentrate mining production and increase industrial efficiency (Reid Report, 1945, p. 16). The Samuel Commission 1925-26 had provided evidence to support similar actions in the UK. However no UK government during the inter-war period was prepared to take action and enforce the powers necessary to coerce a reluctant industrial community (Supple, 1987).

In sum, owners and the State effectively collaborated in locking the industry into a particular trajectory which meant that by the late 1930's the British coal industry was generally in a poor shape and technically backward compared to other coal producing nations. Whilst there were widely differing levels of performance between mines and regions, Supple's overall assessment of the performance of the inter-war British coal industry was that as a whole it had been lamentably poor, and suggests significant failings on the part of coal owners. However rather than place the blame exclusively with the coal owners it is best understood as a shared endeavour between on the one hand private owners who failed to invest and on the other hand by political inertia, with government failing to act in the best interest of the industry and national economy. Rather than too much political interference as some coal owners claimed, it was the lack of intervention that was the problem. Arguably it was only through such intervention that the coal industry could receive the coordinated action and

²² It is also indicative of a failure of industrial leadership on the part of the Miners Federation of Great Britain whose campaign dissipated once wages had been increased and hours reduced.

levels of investment it needed. It was these years of neglect by private owners that was reflected in the Reid Report (1945), and which would help provide the rationale for the subsequent state ownership of the industry. It was anticipated that state ownership would learn from previous mistakes, take on a more pro-active role in helping to create a modern, competitive, dynamic and entrepreneurial industry which furthered the public interest and advanced the welfare of its workforce (Coal Nationalisation Bill in Supple 1987, p. 634).

3.3.3 Post nationalisation

As mentioned above, long before nationalization, colliery companies did things with coal beside mine it. They processed it in various ways, and sometimes used the by-products of those processes for further refinement or manufacture.²³ They transported and sold coal and its products, not just to wholesalers but sometimes as retailers to customers. Some coal owners tried to make a profit out of other products and assets of the collieries whether clay, shale or land. All these activities were pursued in order to make the mining business easier and more profitable to run, and to derive some extra revenue from assets. Many of these activities (and opportunities) transferred to the State under the 1946 Coal Act. Diversification was therefore not entirely ruled out by the Act, but the Act concentrated on the handing over of private collieries to the State and gave few operational guidelines outside the primary work of producing coal (Ezra, 1987). The industry was nationalised as a horizontally integrated monolith with set primary functions to perform, and a management structure designed to administer coal mining. Once the nationalised industry's boundaries were settled, and the bureaucratic structure in place, they were unable to diversify without Parliamentary approval (Grundy-Warr, 1989). Whilst the Act itself then allowed for some diversification, the development of profitable ancillaries was low on the NCB's priority list and

²³ By products recovered included: tar; sulphate; concentrated ammonia; benzol; tar products; ammonium chloride and town gas. These could be extensive undertakings. In 1913 for example, 332,600 tonnes of sulphate of ammonia were produced most of which (324,700) was exported. Sheffield Archives, Sulphate of ammonia production, exports etc, as ascertained from the British Sulphate Ammonia Federation report year ended 31st May 1921, SY187/B11/2. There were also 15,135 coke ovens in the UK in 1919. Sheffield Archives, Memoranda of certain statistics as to the production of coal, coke and by products in the coalfield of Yorkshire in relation to the coalfields of the UK, SY/186/B11/2.

was not given prominence in the Act. This strongly suggests that the State did not want to encourage the coal industry to venture into new markets or sub-markets. Indeed it was not until the 1960's that the NCB had its own Coal Products Division, separately managed, and concentrating on the development of the industry's products. This section examines why the State owned coal industry was confined mainly to the mining of coal, and why there was so little diversification. Inactivity in this regard needs to be understood not only in terms of the implications for the industry, but also in terms of any impact on communities that came to depend on mining and mining related employment.

Assets transferred to the NCB fell into four categories: coal products; merchanting; manufacture of goods from materials produced along with coal or used in the coal industry; and land and property (Ashworth, 1986, p. 474). The focus here is limited to the activities which were pursued in the business environment set by the outside world, which were genuinely supplementary or complementary rather than subordinate services, and which offered genuine opportunities to extend the lifecycle of the mining industry and /or diversify into new and emerging sectors. The rationale being that where an industry lifecycle can be extended it provides greater opportunities for regions that come to depend on it. Likewise where an industry provides the basis for diversification into newer sectors this too provides the basis for the development of newer regional economic trajectories. The following two sections therefore focus on ancillary activities and manufactures.

3.3.4 Ancillary activities

Whilst the act made provision for wider activities it was not until 1963 that the NCB set up its own Coal Products Division to concentrate on coal by-products. This was something which was in itself indicative of the priority given to such activities. During the 1960's however, the NCB was losing market share to oil and therefore it received government approval to engage in various activities related to mining. The logic behind this move was explained by Lord Robens, NCB chairman during the 1960's:

What we did was to utilise our resources, physical and human, our own particular expertise, which a shrinking mining industry had made available. The aim was to produce profits which we could use to stabilise the price of coal and thereby improve the financial position of our primary business (Robens, 1972, p. 320).

The Coal Products Division introduced new products, handled North Sea Gas activities and also took over smokeless plants. The NCB's coke ovens produced benzole as a by-product, which for many years was used as motor spirit. Eventually the NCB built a modern benzole distillation plant with a big steel company. Another by-products joint venture was with Dutch State Mines, which established a plant to make caprolactam, the raw material for Nylon 6. In the 1960's the NCB also extended its expertise to continental shelf exploration. The NCB also owned solid fuel appliance showrooms, although it could not sell the appliances. It therefore became the majority shareholder of a builder's merchant business, J.H. Sankey & Sons Ltd in order to distribute appliances. The NCB held 77% of Sankey which went on to become the third largest builder's merchants in the UK. These activities were profitable. From 1965/66 to 1969/70 profits increased from £9.3 to £20.6 million (after tax). This was followed by a Labour government White Paper *The Finances of the Coal Industry* (Nov, 1965) which gave the NCB permission to diversify into non-coal mining activities by investing up to £75 million. However the overall approach to diversification was piecemeal and ancillaries remained a peripheral concern.

In fact the NCB failed to capitalise on some crucial market opportunities. For example, whilst the NCB had expertise and facilities available to develop oil and gas from coal, it made no serious attempts during its first two decades to enter these markets. As early as the 1930's the Maclaurin Scheme had envisaged the development of (principally Scottish) oil as a pragmatic response to the economic problems of that decade (Maclaurin, 1945). At the time, oil imports into the UK were seven million tonnes per annum. By 1961, oil imports had reached fifty million tonnes and were increasing. The Maclaurin Report had stated that all

filling stations of the future would be at collieries and gas works, which would supply petrol, diesel oil, bottled gas and compressed gas for all purposes (Conner, 1962, p. 86). To implement such an ambitious scheme on a nationwide scale would have meant very large additional tonnages of coal for carbonisation. Although it was beyond the coal industry's capability to displace oil imports entirely, a share of the oil market could have rejuvenated mining. Perhaps more significantly it would also have helped create a more diversified national energy market based on indigenous, non-renewable resources, reducing the nation's oil import bill, and strengthening the long term security of energy supply (Grundy-Warr, 1989) whilst at same time going some way to supporting local economic resilience, encouraging for example the development of new skills.

During the early 1960s, the Gas Boards were importing natural gas from North Africa and establishing a Grid. Instead of cooperating with each other, the gas and coal industries were effectively at each other's throats. Greater coordination over energy policy at this time would have helped create a more diversified energy base without the massive run-down of the nation's coal industry due to fuel imports (see Schumacher, 1960). That the UK nationalised energy sector was allowed to continue along divergent paths was due to conflicting objectives and the lack of strong central direction from the State. Similar conclusions, with similar consequences can also be identified in the lack of coordination between the nationalised coal and steel industries which resulted in a run-down of Britain's coking coal capacity at a time of increasing coking coal imports (Hudson & Sadler, 1986).

The NCB's control over prices was limited by its lack of control over retail and distribution networks. Whilst it had a substantial share of the wholesale market, it only had 5% of the retail trade. The National Board for Prices and Incomes had in 1966 recommended amalgamations into larger coal distribution organisations, rationalisation of ordering, collection and delivery services, and an expansion of NCB retailing activity. Although the NCB acquired Amalgamated Anthracite Holdings Ltd covering south Wales and the west of

England, and the Lancashire Fuel Company, it was highly dependent on the activities of private middlemen. In 1976 the NCB was dealing with 280 wholesalers and 7,800 retailers involved in distribution which resulted in wide disparities between different types and quantities of coal, between and within regions, and between different retailers. This situation contrasted sharply with that of the oil industry, which was mainly controlled by multinationals, which tightly controlled their own retail outlets (Allen, 1981, pp.109-110).

Whereas the 1960's had seen some diversification into non-mining activities, the election of the Heath government of 1970-74 brought about a change of attitude. A strong body of political opinion emerged which believed that the NCB should be focusing on mining and ending any strategy of even limited diversification. This was made clear to the NCB Chairman Lord Robens during a meeting with Sir John Eden, Minister of State with responsibility for nationalised industries, in which the sale of some of the NCB's ancillaries was discussed. In preparation for privatisation of NCB's ancillaries the 1971 Coal Industry Act required the NCB to report to government on its ancillary activities and on those companies in which it had a share or interest. Clearly aggrieved Lord Robens subsequently resigned his chairmanship stating as his primary reason his reluctance to become "the instrument for "hiving off" profitable activities outside the main business of mining" (Robens, 1972, p. 323). The period 1974-79 was one of expansion of capital investment in new productive capacity and mining technology in coal mining, but there was to be no great change in attitude towards NCB ancillaries.

The election of the Conservatives in 1979 marked a fundamental shift in policy towards the mining industry and again could be said to mark a critical juncture with the priorities shifted towards preparing the industry for privatisation. The Government subsequently placed tight financial limits on the industry whilst encouraging the NCB to introduce measures to reduce its operating costs and overheads (see Monopolies and Mergers Commission, 1983). As part of this policy objective, subsidiaries and holdings began to be sold off. J.H. Sankey for

example, was sold off in 1984.²⁴ The Board also sold its 30% stake in Associated Heat Services (AHS), a company which designed, installed, and operated boiler and air-conditioning plant. AHS had been partly owned by the NCB since 1966. In 1983, AHS had pre-tax profits of some £3.3 million on a turnover of £35 million, but was sold for £7.5 million (Whitfield, 1985) and continues today as a private energy management contractor. The NCB also rationalised capacity in the Coal Products Group, which employed nearly 3,000 people in 1985-6 and some 1,732 people in 1986-7 (Grundy-Warr, 1989). In addition the Coal industry also divested itself of much of its land, property and housing stock during this period.

Overall the picture presented above is one of a failure to develop potential new areas of business which could have shifted the NCB from its narrow trajectory and potentially avoiding the worst excesses associated with regional lock-in. There was certainly a strong financial case to continue. Between 1947 and 1982 ancillary activity made a total profit of £247 million, which equated to roughly a third of operating profits for non-mining activity (Ashworth, 1986). The potential existed to extend this activity had the political will been there. However opposition to further development came not just from Heath's government and Tory backbenchers but also from the NUM which also opposed the initiatives out of the fear of a detrimental impact on union membership levels. This is illustrative not just of the contingent nature of economic trajectories but also a level of consensus amongst key mining stakeholders and decision-makers whose action or inaction on this and related issues would be a determining factor in future trajectories related to the coal industry. It could also be said to reflect a critical juncture as by 1979 developing coal board ancillaries was no longer an option and this and other potential opportunities to diversify were gone.

²⁴ Between 1970 and 1980, Sankey's sales had grown from £20 million to £163 million, the assets employed from £8.4 million to £58.9 million, the profits from £335,000 in 1971 to £4.7 million in 1979/80 (Hansard, 23 Nov 1981 accessed at <http://hansard.millbanksystems.com/commons/1981/nov/23/national-coal-board> on 29/7/2011).

3.3.5 In-house engineering

The NCB did not take over any mining machinery facilities from the old private companies (although some coal combines did own engineering subsidiaries). After nationalisation new central workshops were built, however with the single exception of a small factory in south Wales (Tredomen Engineering at Hengeld, acquired in the 1960's), the NCB did not manufacture mining plant and equipment (Grundy-Warr, 1989, p.91). This was despite the fact that the NCB during the 1970's and 1980's was at the forefront of the technological development of the mechanised Longwall System. In practice, the Coal Board passed on many of its innovations at no cost to private manufacturers who then profited by them (see Townsend, 1980). As mentioned earlier, in theory nothing prevented the NCB from developing this area of business. The 1946 Nationalisation Act 1946, Chapter 59, Section One, Part Two left this possibility open:

The function of the NCB shall include the carrying on of all such activities as it may appear to the Board to be requisite, advantageous or convenient for them to carry out in connection with the discharge of their duties...and in particular:

d) producing or manufacturing any goods or utilities which are of a kind required by the Board for or in connection with the working and getting of coal or any other of their activities or which can be advantageously produced or manufactured by the Board by reason of their having interests or manufacture thereof in connection with the working and getting of coal or any other utilities so produced or manufactured.

e) any activities which can be advantageously carried on by the Board with a view to making the best use of the assets vested in them by the Act.

Yet the NCB chose not to. Why was this? One reason was that Attlee's Labour government 1945-50 believed competition was vital for industries such as manufacturing, where the product changed rapidly, and that the related risks were therefore better taken by private

enterprise (Bowden, 1995). However, this was more a comment on the specifics of the car industry than industry more generally. In the case of mining machinery the risk was less evident and demand for intervention immediately apparent.

After nationalisation the NCB's demands for all kinds of plant and machinery increased. The mining machinery industry was unable to meet deadlines and there were serious bottlenecks in the supply of underground equipment. Whilst problems of supply were aggravated by shortages of both materials and labour there were also inadequacies in the size and structure of the machinery industry itself (Grundy-Warr, 1989). Attlee's government however made no moves to encourage equipment manufacture within the Coal Board. Wider studies have suggested that the Labour governments were ill-prepared ideologically to sustain a policy on efficiency and modernisation in the private industry and were divided on the benefits of the market as against planning. Consolidation set the seal on cooperation as the dominant mode of government's relation with private industry²⁵ (Mercer et al. 1992).

The resultant accommodation meant that despite the obvious demand for machinery after nationalisation, government made no attempt to encourage equipment manufacture within the Coal Board.²⁶ Rather, the recommendations of the Technical Advisory Committee (1945) were followed and instead the NCB sought close technical cooperation with its suppliers. Private manufacturers therefore benefited from what Townsend (1976) described as a "complimentary interactive process" of technical collaboration with the NCB. They benefited from the NCB's superior technical resources, and R&D facilities, as well as various technical innovations made by NCB personnel. Most of the initial innovations for the Anderson Shearer Loader originated in the NCB and were passed on to three major cutter loader suppliers. The same applied to microprocessor-based mining technology and the Coal Board's preferred automation system, MINOS, which was developed by staff in the Mining

²⁵ It was an outlook which completely accorded with the views of the civil service and the policy of 'Industrial Diplomacy' developed in the 1930's.

²⁶ This despite a commitment to remove restrictions preventing the NCB from diversifying into manufacturing contained in the Labour Party's 1964 election manifesto 'The New Britain'

Research and Development Establishment (MRDE) at Bretby (see Burns et al, 1983). Suppliers also benefited from the NCB's laboratory and underground mine equipment testing facilities, which proved to be an invaluable "shop window" to them by promoting their products to potential overseas customers (ABMEC, 1986). These products were then promoted by the Coal Board's consultancy services British Mining Consultants Ltd and Coal Processing Consultants Ltd.

The opportunity was always there to extend manufacturing capacity if it had been given the go-ahead by senior NCB management. But as Allen (1981, p. 115) observed, "the NCB had, it seems, an innate preference for encouraging the private exploitation of its activities." During the 1950's and 1960's there was plenty of scope for more internal contracts to be given to the NCB workshops at a time when the NCB was spending millions awarding private contracts, and also at a time when the NCB was threatening its own Cowdenbeath workshop with closure (Grundy-Warr 1989, p. 94). Whilst the NCB expressed concerns regarding the ability of private contractors to meet the needs of the industry (MMC, 1983), the contracting out of repair and maintenance to private firms would increase dramatically during the 1980's even where evidence was produced which showed this to be a more expensive process (MMC, 1983). In 1983 the NCB had 126 central workshops situated close to local pits, employing around 10,000 engineering and managers (Grundy-Warr, 1989). This number fell to 11 by 1985 and would fall further following the pit closure programme.

Historically, the NCB had not allowed its engineering workshops to tender for outside business. This was clearly a political decision. However, the failure to develop greater in-house manufacturing can also be viewed in terms of corporate failure which led to organisational and cultural rigidities. It is also indicative that managerial inadequacies were an inherited weakness of the industry not easily susceptible to reform by public ownership (Supple, 1987). Kerevan & Saville (1987) argue that the almost military lines of command within the top-down bureaucratic administrative structure of the NCB and its rigid rules and

regulations stifled imaginative initiatives in the workshops and prevented the utilisation of local engineering skills and resources. The increasing centralisation of purchasing and stores and management control, from the 1960's onwards, provided little freedom for workshop staff to run their operations as they saw fit. Tight budgetary constraints and a flawed accounting system meant that workshops were considered to be areas for economising, rather than increased capital investment, by NCB accountants and senior management.

In fact, the productionist mentality of senior NCB mining engineers meant that the workshops, rather than being seen as potential innovation or 'skunk works', became viewed as a troublesome subordinate element in the real business of digging coal. Therefore, they conclude that the NCB workshops commercial and technological potential was missed. Numerous examples of workshop innovation are available: Kerevan & Saville cite the examples of the Alloa Heading Machine, flameproof equipment, electrical panels, hydraulic props, and a range of other equipment. "Instead of developing these within the NCB, Headquarters merely amalgamated improvements and handed over details to private industry, representing a colossal public subsidy to the private sector" (Kerevan & Saville 1987, p. 57).

3.3.6 Summary

The case of the coal industry's engineering workshops highlights a lack of flexibility and entrepreneurial skills, which many right-wing critics have ascribed as an inherent weakness of nationalised industries, and which would provide political ammunition during the 1970s and 1980's. However in order to develop effective in-house manufacturing the NCB would have had to invest in their specialist workshops and allow them to compete to a degree with private sector firms. Whilst there was some limited outside tendering permitted, on the whole successive governments were reluctant to allow this. Consequently, over the years the central workshops suffered from a lack of investment and under-utilised resources.

Opportunities existed to develop new lines of business including into overseas markets but government preferred to support private sector expansion. Yet this strategy was also short-sighted and ultimately counterproductive as the close technical cooperation promoted by government failed to incentivise private manufacturers to invest in boundary-spanning functions (Hassink, 2010) most notably associated with internal investment in research and development. Therefore once NCB contracts began to dry up most of the mining manufacturing companies were unable to diversify into new markets. Given the clustering of private mining manufacturers (discussed earlier) around the coalfields this merely compounded the regional impact of pit closure. A similar conclusion can be drawn in the case of the NCB ancillaries. Whilst profitable they were not developed, but instead subsequently sold off cheaply. What this section shows therefore is that opportunities existed for the State to act in an entrepreneurial manner enabling the development of new economic and regional trajectories. However, what it also shows is that the NCB from its inception was constrained by the Nationalisation Act, ambiguous commercial functions and by the financial and product pricing constraints of successive governments. This was discussed in 3.2 but extended in 3.3. Allen (1981, p. 117) argues that state owned industries have suffered from their ambivalent 'hybrid' status, which has led to bad entrepreneurship. He argues that, "through ambivalence towards its purpose, through the advice given by governments and the controls they imposed, through its incompetence, the NCB was a bad entrepreneur." What follows suggests that this was not necessarily a feature of state owned industries per se but the reality of the British state owned industries and the coal industry in particular. Rather than a feature of nationalisation as critics of state ownership would suggest, the development trajectory of the UK coal industry was determined by key decisions within both government and industry.

3.3.7 Comparison with the Dutch mining industry

The earlier comparison with the German coal industry showed that the nature and speed of decline of the UK coal industry is best understood as being contingent on the policy choices of UK governments. It highlighted that alternative choices were available to government which at the least could have provided time for coal regions to adapt to decline. The comparison with Germany also shows another important contrast with the UK industry and again highlights the role of agency in the nature and timing of decline of the UK coal industry. German government support for its mining industry was also predicated on the understanding that it provided the basis for future innovation and enterprise, and therefore potential alternative paths. The following comparison develops this further. Whereas the UK coal industry was actively prevented from diversifying into activities such as the manufacture of mining machinery and equipment – activities that remained a source of profit for other private sector companies (Hudson, 2005), other coal producing nations adopted a different approach which had significantly more positive longer term implications for the industry and for those regions dependent upon it. The following comparison with the Dutch State Mines (DSM) therefore extends the assessment of corporate entrepreneurial failure, highlighting alternative paths in new technological sectors which were available to the NCB.

Dutch State Mines (DSM) was established in 1901, as a government owned but competitively operated company. The company was run by a politically independent managing board of directors and given full authority to create a company based on economic and competitive principles. Although the company was responsible to the Minister of Finance for its overall expenditures, its profits could be retained to invest in its own operations. This approach to state ownership enabled DSM to maintain an entrepreneurial approach to its business developing new products and overtime diversifying into new sectors. This ensured that as energy demands changed so too did DSM. For example when coke oven gas was no longer used exclusively for public gas supply DSM moved into other areas. In 1929 for

example the company's nitrogen works, utilising the coke oven gas was established to produce fertilizers. Gradually DSM began to produce other chemicals. This part of the company's portfolio was extended during the 1960's in response to the decline in coal demand. This shift in trajectory was supported by a major investment between 1965 and 1979 which had two objectives- continuation of the company and profitability.

In 1967 DSM became an unquoted public company no longer dependent upon the Minister of Finance and required to fund its operations through capital markets (Grant, 2004). By 1970 all coal mining operations had been phased out and DSM moved into the production of industrial chemicals, plastics and resins, and spun off its fertilizer business. During the 1980's DSM handled the States 40% interest in the distribution operations of the Dutch natural gas reserves through one of its subsidiaries nevertheless the national government still retained direct control over sale and pricing policy as well as final approval of export contracts. DSM was privatised in 1989, and since the 1990's has transformed itself again, selling almost all of its commodity chemicals activities and becoming a Life Sciences & Materials Sciences company (de Geus, 1997).

From its inception DSM developed internal business practices which ensured that it was able to overcome the challenges of cheap foreign coal and increased competition from oil by implementing proactive and innovative strategies (Davids & Tjon Tjin Tai, 2009). Wider strategies were developed based on long-term planning focusing on de-bottlenecking, research and development, and diversification. Central to the success of DSM was the establishment of an Experiment Station, which included a patents department and licensing company (Van Rooij, 2007). One particular early innovation to emerge from this innovation centre was the development of new coal cleaning installations needed to provide a higher quality of coal against lower coal processing cost. As mentioned above the NCB had its own innovation centres such as the Central Engineering Establishment at Bretby although its purpose was much more limited compared to that of DCM. At Bretby for example the

intention was not to manufacture specialised machines in quantities but merely to develop prototypes in order to help private manufacturers speed up their own development.

What the above comparison shows therefore is that mining as an industry is not intrinsically un-entrepreneurial, nor that the nature of its decline was in any way determined by the nature of its principal product – coal. But that the ability of the mining industry and coal regions in Britain to adjust to declining levels of coal consumption was constrained by a self-sustaining coalition most clearly evident in terms of political decisions and poor entrepreneurial leadership at the Coal Board. Not only could coal provide the basis for diversification into other new product markets, but the coal industry itself could also have developed internal capabilities which were not technologically dependent, but were transferable at a micro level. In the case of the NCB, internal capabilities were not developed nor any real attempts made at diversification. The State could have intervened to enable the development of these capabilities and encourage diversification in numerous ways. For example by allocating research and development funds towards the exploration of new markets and sub markets such as energy conservation, and renewable energy sources, or by building on the experience and expertise of Coal Board scientists and technicians in developing mechanised and automated mining systems to branch into new but technologically related industries. As mentioned above the NCB was at the forefront of numerous new technological developments but also extended to new coal use technologies. A major conclusion is therefore that external constraints imposed by government narrowly defined the objectives of NCB senior decision makers and ensured that the industry trajectory remained locked into existing markets at the expense of the longer term viability of regions and skills. Opportunities to develop new sustainable trajectories did exist through diversification and a measure of competition against private firms. Whilst this was a

possibility prior to 1979, this was no longer an option afterwards as activity shifted to preparing the industry for privatisation.²⁷

3.3.8 Conclusion

Without reverting to counterfactuals, this chapter has demonstrated that the UK coal industry although in decline, offered a number of alternative economic trajectories through diversification into new sub-markets. It also demonstrated that although in decline, alternative ways of managing the industry were available which could have mitigated some of the problems experienced in the coal areas during the 1980's and 1990's. One scenario was based on the experiences of the Ruhr coalfield during the 1980's and focuses on government agency. It highlights a policy choice to reduce the speed of decline so as to minimise potential multiplier impacts which have been shown to impact on wider opportunities for sustainable local economic development. Regional structural change cannot be achieved through structural collapse, a conclusion which has been shown to have contemporary as well as historical relevance. Another, perhaps more bold scenario would have been to break the coal mining trajectory before the collapse in mining employment, by for example using the technical expertise, skills and knowledge within the NCB to diversify the industry. This could have been achieved through integrating horizontally into submarkets by developing the NCB's manufacturing base, or more radically still by altering its core product as happened in the case of the DSM. Both would have required a different approach to organising and managing organisational resources. Both in short would have required a more entrepreneurial mindset. This broad conclusion supports the Chandler argument that industrial decline was associated with a corporate entrepreneurial failure but extends its central thesis to cover the period after nationalisation and includes the State as the key stakeholder largely determining the direction of the NCB. However the Chandler thesis is updated to cover the period under public ownership, and whilst broadly agreeing that the

²⁷ As part of the privatisation process for example BC rationalised workshop capacity and increased 'contracting out' of repair and maintenance work to private firms (Grundy-Warr, 1989)

Coal Board's trajectory was contingent on corporate failure, adds the caveat that under state ownership the industry often lacked the agency to determine its own priorities. Rather it was actively prevented from diversifying into activities such as the manufacture of mining machinery and equipment – activities that remained a source of profit for other private sector companies (Hudson, 2005). Spatially concentrated and largely dependent upon the Coal Board as both technical incubator and main customer, as it declined so did they, with obvious regional implications, both in the short term (jobs and spending) and longer term (skills).

By focusing on agency, either at a corporate or political level, the chapter has sought to highlight the extent to which contingency better describes the process of decline in the UK coal industry. The underpinning rationale for contingency theory is that alternative trajectories were available. Studies have shown that windows of opportunity for path creation, the purposeful breaking of a particular trajectory in favour of other more sustainable paths, are short and therefore require decisive, even unpopular action, at both a corporate and political level. Action taken within these windows may have short term regional drawbacks, but they may also have longer term benefits for the region. The case of Germany during the 1920's is a case in point, where strong leadership was combined with a clear national industrial strategy. It is for this reason that these windows of opportunity have been associated with critical junctures, branching points at which alternatives trajectories are available. Three potential critical junctures were highlighted. These were during the Sankey debates in 1919-20, at the point of nationalisation in 1947 following the landslide election of Attlee's Labour government, and again following the election of the Thatcher government in 1979. The first offered the opportunity for clear state leadership to address the systematic and institutional problems that existed within the industry. Whilst nationalisation was not a panacea in 1920 with wider structural and institutional factors affecting the performance of the coal industry, it did nevertheless provide the best opportunity for coordinated investment in technology and organisation of the industry. The evidence to support this assertion is in

the lamentable performance of the industry during the course of the following decade. That State intervention was rejected at this time was due to ideological rather than business or economic reasons, and serves to illustrate that the subsequent negative trajectory associated with under investment was determined by institutional inertia. The second critical juncture followed the landslide election of Attlee's Labour government. At this time coal held a monopoly position in the UK energy market and therefore the government and industry were able to take a long term view of capital investment which heralded much needed modernisation. However, the purpose and role of coal in the UK economy remained ambiguous and there was never a coherent national energy policy. The industry was nationalised as a horizontally integrated monolith with set primary functions to perform, and a management structure designed to administer coal mining, with a clear division between private and public sector, and an ambiguous attitude towards diversification. This set the tone for future government approach to the industry and meant that institutional inertia continued to affect the development path of the industry (and regions) especially once its monopoly ended. The State could have intervened to enable a different development path in numerous ways including limiting the amount of imported fuel, or adjusting taxation or regulatory policy, or by allocating research and development funds towards energy conservation, and renewable energy sources. Even within a declining industry what is wrong with a more imaginative approach to capital investment that actually maintains jobs (the approach adopted by Germany), or which generates new manufacturing jobs and opens up the possibility of new market opportunities (as had been the case in the Netherlands)? Both would have had a significantly different impact on the future development trajectories of coal areas.

As mentioned above entrepreneurial behaviour is socially as well as economically useful. The Coal Act placed clear social drivers on the NCB which extended to the interests of coal communities in the longer as well as shorter term. This required the NCB to exploit the resources of the industry to proactively enable change, in the interests of the coal

communities as well as to maximise coal production. This would have involved it in shaping and crafting the necessary infrastructure in order to capitalise on and exploit new opportunities, whether at corporate or at a regional level. Both the Ruhr and DSM case studies show that this could be done. Neither provides a blueprint nor a panacea, but both do provide clear illustration of how decisions can have a more beneficial effect on industrial and regional trajectories. In the UK, public ownership via nationalisation came to be used as a strategy to underpin a coal area's development trajectory around mining as the State sought to replace the private sector as proximate guarantor of regional paths. It did so however in ways that created a trajectory locked-in to existing industries. Largely the newly formed National Coal Board was confined to mining coal and was constrained from diversifying in any meaningful way. The subsequent path contingent development of the UK coal industry can therefore be understood in terms of notions of increasing returns with coal production often pursued to the longer term disadvantage of the coal areas.

The final critical juncture followed the election of the Thatcher government in 1979. It heralded the transition from a social democratic to a neo-liberal mode of state engagement with the economy and society. In terms of coal policy the shift was most evident in the privatisation and associated rationalisation of the formerly nationalised industry. This was particularly significant in revealing the contingent character of the trajectory of coal regions. In order to render the industry attractive to private interests, the formally close and politically mediated ties between the nationalised industries were broken as they were allowed to source and sell globally. For example the electricity supply and steel industries had formed markets for coal, which disappeared as these industries were allowed to buy coal on the international market. This led to an enforced pit closure programme which determined the nature, scale, and equally importantly the timing of decline, the speed of which did not help local communities in their efforts to diversify and in creating new sources of employment. The central government top-down approach to the subsequent problem of unemployment tended to by-pass local authorities, although many of these were subsequently co-opted via

regional policy funding parameters. Various enterprise agencies were also established but often with limited budgets. Their efforts, including those of British Coal Enterprise highlighted above, had a limited impact on job creation. Together the action of the various agencies represented an inadequate response to the scale of the problem created by the speed and timing of closure which in many regions coincided with wider de-industrialisation. Local authorities lacked resources to tackle the numbers of unemployed, and often had to compete against each other for national and European funds. This was especially true of government enterprise policy which focused largely on increasing the rate of self-employment in the same regions now experiencing dramatically declining levels of affluence. Even where regions did attract capital investment this was often in the shape of branch plants, which typically perpetuated the low skill trajectory of the area, and which were often the first to close at times of economic hardship or due to corporate strategies of parent companies.

The weakness of the critical juncture framework is said to be the tendency to understand their significance only with the benefit of hindsight. In the case of the long decline of the UK coal industry this chapter has provided sufficient evidence to draw the conclusion that the decline was foreseeable, even planned. The decline of the industry had certainly been anticipated long before the absolute decline of the 1980's and 1990's. Yet even at this late stage the government and Coal Board continued to promote mining careers and dominate regional policy making, imposing solutions, such as the enterprise policy, which had been shown to be flawed. Opportunities to break the narrow coalmining trajectory existed but were overlooked. When finally this trajectory was broken, it resulted in structural collapse. The result was that UK coalfields have experienced some of the most dramatic declines in prosperity levels of any equivalent Western European region. Many continue to struggle to reintegrate into the modern economy. What follows explores the impact on the town of Doncaster.

4 Doncaster

4.1 Introduction

Whilst Doncaster was never a mining town in the way for example Barnsley was, it was nevertheless the arrival of coal at the turn of the century and its subsequent development which has been associated with transforming the outlook and economic trajectory of the town. The town's first economic report published in 1922 suggested that the town had by this date been "subtly but surely changed from a large old-fashioned and prosperous market town, to the avowed metropolis of a new industrial district" (Abercrombie and Johnson, 1922, p. 8). That said, despite the town's market town status Doncaster was not new to industrial development, having developed tanning and woollen industries in ancient times and significant manufacturing occupations in leather and allied trades, food and drink processes, clothing and textile, and distribution and transport during the 17th and 18th centuries (Nash, 1983). It was however the arrival of the Great Northern Railway (GNR) in 1853 that shifted the town onto a more industrial trajectory. The arrival of the railway had an immediate effect ending the town's relative geographical isolation (Coates, 1976) whilst effectively destroying the town's local coaching and posting trade. However in destroying one of the town's traditional industries, the arrival of the railway works and its related engineering and draughtsman skills, created a new economic trajectory. The GNR engineering works expanded rapidly to become a major employer in the town, employing 3.500 men by 1913. Significantly, the engineering works (which came to be known locally as 'The Plant') also trained some of the leading engineers of the day.²⁸ The development of the Plant works was significant as it also attracted investment and provided the hub for subsequent engineering

²⁸ These included Oliver Bulleid (a premium apprentice, 1901-5), who went on to become prominent in railway engine design in England and Ireland, and W.O. Bentley (a premium apprentice, 1905-9), the creator of the Bentley motor car (Barber, 2007).

clustering, of which Peglars and British Ropes are perhaps the two most significant representatives.²⁹

This process of creative destruction (Schumpeter, 1942) has been identified as the entrepreneurial and necessary contribution innovation plays to the dynamic growth of economies. The arrival of the railways and related engineering skills arguably provides an example of this process, destroying the local coaching industry but developing new skills and knowledge which offered the prospects of regional cumulative innovation. The prospect of continued cumulative innovation is determined by institutional support at a range of policy making levels. In this regard the limited support provided by Doncaster's local corporation to attract the railways could be considered to be an early indication of institutional inertia, reflecting a complacent attitude to industrial development. This had been evident in previous corporation responses to possible developments of new industry, of which Edmund Cartwright's textile development and Benjamin Huntsman's experimentation in steel production are the most notable examples.³⁰ It has been argued that these missed opportunities were more by design than bad luck, and that Doncaster, unlike its West Riding neighbours, had no desire to become a manufacturing town and positively shunned attempts to develop new business (Wormald, 1973). The railways challenged this institutional inertia, but the development of the concealed coalfield around Doncaster had a more profound impact on the town.

²⁹ Peglars Brothers and Co. was established in 1899 and manufactured brass and gun metal for the plumbing trades. British Ropes Ltd was established in 1902. Originally established as Doncaster Wire Company it merged in 1925 to become British Ropes. Both companies were developed on the Carr site on the southern side of the London North East Railway and would become major employers in the area throughout the 20th century. Other notable examples of business established alongside the railways included the Doncaster Wagon Works, Stevens Wagon Company, and Burnett Wagon Company. The railways also led to the arrival of the Cooperative Society in 1867 as 2,500 people migrated to the town looking for jobs in the new industries and leading to the development of the surrounding villages of Balby and Hexthorpe (Holbrook, nd).

³⁰ Reverend Edmund Cartwright, the inventor of the power loom, opened a spinning and weaving factory in Hallgate in 1787. However, the smell from the buildings rendered the industry unpopular with the Corporation and townspeople (Wormald, 1973), and Cartwright, an ingenious inventor, but poor businessman went bankrupt in 1793. Cartwright subsequently left Doncaster and pursued a career in innovation in London and the Home Counties. Benjamin Huntsman, the inventor of the crucible process for manufacturing steel, lived in the town during the 1740's. A man of all round mechanical skills, Huntsman conducted much of his early experimental work in steel improvement whilst living in Doncaster. However he later moved to Hansworth, near Sheffield to continue his work.

Appendix 4 shows the town of Doncaster in relation to this coalfield. It shows the town and the surrounding (former) pit villages as located within the boundaries of what is today (2010) the Doncaster Coal Mining Referral Area. In focusing on the impact of the coal mining industry on the town of Doncaster over the course of the 20th century, this study draws a distinction between the central town of Doncaster and the wider Doncaster area which includes the (former) pit villages (Appendix 4). As with any historical study it is not always easy to ensure exact continuity as geographic areas including that of the boundary of a town, have been subject to change (Halsey & Webb, 2000). However, broadly the study focuses on the town's central wards which existed in 1900 (see map appendix 5), plus other wards drawn into the town as a result of the boundary changes in 1914, 1948 and 1983 and which today make up the Parliamentary seat of Central Doncaster: In 1914 the town map (see appendix 6) shows that with the addition of Wheatley, Balby and Hexthorpe the town became nine wards (Central, Balby, East, Hexthorpe, Hyde Park, St James, St Johns, St Georges and Wheatley). These wards continued until 1939 when a redistribution of wards took place. However the November 1939 elections were postponed because of the outbreak of the Second World War and elections did not take place until the 1st November 1945. In the subsequent reorganisation the East and St James wards disappeared and were replaced by new wards named Bessacarr, Intake, Town Field, Westfield and Woodfield. The mining village of Armthorpe was added in 1983 (Armthorpe, Balby, Bessacarr and Cantley, Central, Edenthorpe, Kirk Sandall and Barnby Dunn, Town Moor and Wheatley, see appendix 7). This study area is largely urban and includes Wheatley Hall, Marshgate and Kirk Sandall estates (see appendix 8) but not other industrial areas.

As stated above Doncaster was not a coal town in the way that Barnsley was. No mines were developed within the towns central wards (until Markham Main was drawn into the area in 1983) but coalfield definitions suggest that if not a coal town itself then Doncaster was

certainly the centre of a coalfield.³¹ Appendix 4 shows the area of the Doncaster coalfield and the location of (former) collieries. The development of the concealed coalfield in the early years of the 20th century meant that by the end of the First World War there were eight collieries developed within this area: Rossington; Markham Main; Askern; Hatfield; Yorkshire Main; Bentley; Bullcroft; Brodsworth. Two further collieries were in operation in the area: Denaby colliery which opened in 1867, and Cadeby colliery which opened in 1893. Along with Thorne colliery which began production in 1928, these 11 collieries are described as the Doncaster area collieries.³² Following nationalisation the newly formed NCB grouped the industry into eight divisions, each corresponding to a major coalfield (see appendix 9). Doncaster's collieries were organised into Division three or the North East Division. Each division had areas sub-divided into A and B sub areas (with the exception of number eight Castleford which was sub-divided into A, B and C). Doncaster was area number two. Doncaster had 11 pits on vesting day in 1947. These were: Sub Area A; Askern; Brodsworth; Bullcroft; Hickleton; Rossington; Yorkshire Main; and Sub Area B; Bentley; Goldthorpe; Hatfield; Highgate; Markham Main, and Thorne.³³ Following reorganisation in 1967, the Yorkshire Division ended and four new self contained areas were created: Barnsley; Doncaster; South Yorkshire and North Yorkshire (see appendix 10). Whilst the Doncaster area had the least number of producing collieries at this time (thirteen) they were acknowledged as having some of the richest coal-seams in the country and making a

³¹ There is no single definition of 'the coalfields'. Maps based on geology, historical connections or labour markets at different points in time would all generate subtly different definitions. The Centre for Regional Economic and Social Research (CRESR) define British coalfields based on resident employment in coalmining and associated industries at ward level. This definition was originally devised by Beatty and Fothergill (1996) and was based on ward level resident employment data taken from the 1981 Census of Population. The intention was to capture those areas still dominated by coal mining prior to the large scale pit closures of the 1980s and early 1990s. The criterion used to qualify a ward as being within a coalfield area was that 10% of employed residents be engaged in mining. The statistical threshold was interpreted flexibly, for example to include some wards that did not meet the 10% hurdle but which were largely or wholly surrounded by other coalfield wards. When applied to South Yorkshire this definition results in the majority of the county, with the exception of the city of Sheffield, being defined as a traditional coalfield. A subsidiary category, pit villages, was also defined for those wards where this figure exceeded 25 per cent. This definition has been used successfully in previous research studies (Beatty and Fothergill, 1996; Gore et al 2000; Gore et al, 2001), and was displayed in map form in an appendix to the CTF report (Coalfields Task Force, 1998).

³² Whilst the re-organisation of the coal industry under state ownership resulted in changes to coal area boundaries, these 11 collieries are consistently described as the Doncaster collieries as they are located in the Doncaster Coal Mining Referral Area as designated in 2010.

³³ Hickleton, Highgate and Goldthorpe were organised under the Doncaster area whilst Cadeby and Denaby collieries were organised under Number three Rotherham Area Sub- Area B

disproportionate contribution to coal production in the Yorkshire area (see e.g. appendix 11). In October 1985 following the national miners' strike, Doncaster's collieries were reorganised again with the creation of a new South Yorkshire area which comprised the amalgamation of the old South Yorkshire and the Doncaster area.

In its assessment of the impact of the coal industry on the town of Doncaster over the course of the 20th century, this chapter assesses in particular the extent to which coal came to dominate the town, and the extent to which this development can be understood in terms of path dependent processes which are inexorable, or conversely whether the nature of coal's impact on the town can be understood as contingent on human agency. Chapter 3 highlighted that the coal industry had potential for diversification and therefore regional development trajectories could have been changed. Even where no diversification took place chapter three also highlighted that policy choices at a meso but particularly at a macro level could have enabled coal dominated areas to develop alternative paths. However the coal industry's decline as a single product industry and the resultant dependence of coal dominated areas has been identified as a key inhibitor in economic regeneration. Coal legacy characteristics are considered in relation to wider indicators and determinants of regional competitiveness (see IFO, 1990). This list currently extends to 41 variables covering five categories: economic; infrastructural; social; educational; and political/institutional (Bowes, 2003). These variables are however not exhaustive nor equally weighted, nor can they be organised into an 'ideal' type or model. They do however provide a broad framework for analysis and demonstrate the importance of engaging with indicators wider than economics. For example a central focus of this study and this chapter is an assessment of the extent to which coal mining's legacy has inhibited the town's economic competitiveness in what is today called an enterprise economy. Specifically former coal dominated areas are said to lack an entrepreneurial spirit with lower than average levels of indigenous SMEs. Two indicators can be used to assess the value of this proposition, firstly local politics and secondly industrial structure. Where UK enterprise cultures have been empirically tested,

local political affiliation has formed the basis of a 'local enterprise' variable, based on the assumption that communities which traditionally elected a high proportion of Labour councillors exhibit relatively negative socio-cultural attitudes to self employment and entrepreneurship (Keeble & Walker, 1994). Given that coal dominated areas have typically been associated with Labour politics might this explain Doncaster's current business deprived status? Similarly, spatial differences in the rates of new firm formation have been identified as determined by the structural composition of an area. Empirical research shows that regions dominated by small and/or young firms have relatively high new firm formation rates (Audretsch & Fritsch, 1994; Mason, 1991; Mueller, 2006), whereas areas dominated by large plants would be expected to perform badly as incubators of new business founders (Johnson & Cathcart, 1979). This is based on the stylised fact that entrepreneurs are often organisational products, that is to say that they spin-off a firm from their previous employer or they at least start a business in an industry with which they are already familiar (Audia & Rider, 2006; Storey, 1982). Industries it has been shown differ in their degree of entry barriers and the extent to which entrepreneurial opportunities emerge (Stam, 2010). To what extent therefore did coalmining come to determine the low firm formation rates in the town by the end of the century?

Chapter three showed that the nature of the UK mining industry's trajectory rather than being inexorable was contingent on agency at a number of policy-making levels but particularly at a meso (NCB) and macro (State) level. Local (micro) agency was highlighted above as a possible determinant of Doncaster's early industrial development path. Doncaster's Local Corporation has been identified, with a particular policy focus which aimed to avoid industrialisation, preferring an economic trajectory which maintained the town's lethargic and comfortable way of life (Wormold, 1973). To what extent is the nature of Doncaster's economic development path over the course of the 20th century better understood as contingent on one or all of these policy-making levels?

The chapter is organised chronologically and its structure is based on sociological typologies associated with coal communities which identify three significant time periods: youth, maturity and old age (Taylor, 1979). The periods which follow are re-described to relate to major phases in the development of the Doncaster area coal industry. Briefly they are; early period dating from 1900 to 1945 which covers the period from the sinking of the first mine shafts around Doncaster to the end of the Second World War. The early years of the 20th century saw the first large scale development of the concealed coalfield of South Yorkshire with the sinking of collieries at Brodsworth and Bentley followed by an even greater expansion between 1911 and 1920.³⁴ Although the geology of the concealed coalfield meant that these collieries required significant investment, there was no shortage of interest for the development of large scale pits which could produce millions of tons of high quality ('Barnsley best') coal per year, a factor which provided greater certainty of market demand than in other coal areas of poorer quality.³⁵ This was also reflected in relative wages levels (Barber, 2007). During this period mining began to influence occupational patterns as well as range of socio-cultural factors, although its impact was neither universal nor linear. During the Edwardian period at least, the local coal industry also provided key locational advantages for new business development. That these advantages were not developed sufficiently could be seen to represent a critical juncture as local agency began to diminish with national policy makers growing in influence. To what extent was this the case?

The mature period covers the years 1946-1970 and reflects a period of increased investment and expansion in the local mining industry which now came under public ownership. Although the Doncaster area had the lowest number of productive collieries in the Yorkshire region these pits had some of the richest seams. This is reflected in the period being one of

³⁴ Most of the Collieries in the Doncaster coalfield were sunk between 1905-1916, with the exception of Cadeby and Denaby Mains, which were sunk earlier as they exploited a natural cutting through the magnesium limestone made by the Don Gorge (Gill, 2007).

³⁵ Doncaster area coal found markets in locomotives and domestic use. Doncaster also had good links to export markets.

relative affluence as wages and spending boosted the town's economy. However the period also shows that this trajectory came under threat as alternative energy sources were developed which threatened mining employment, and which came at a time when the town's other main employers were becoming increasingly exposed to global trends. To what extent was this understood at the time? Were alternative trajectories possible and if so why were they not taken?

The final section, decline considers the period 1971-2000 and covers the pit closure programme and economic decline of the town. Whilst the publication of the Energy White Paper in 1967 had planned for a decline in mining the sudden contraction of the mining industry following the 1984/5 miners strike was unforeseen. The privatisation of the industry in 1993-4 led to further closures. An industry that had employed 180,000 miners in 120 collieries in 1984, had by the mid 1990's been reduced to 16 collieries employing only 6,000 workers. The closure of the Doncaster area collieries would be dramatic in speed and scale and coincided with the decline in the town's other main employers. The result was a perfect storm for the local economy from which the town still struggles to recover. Decline may well be a fact of industrial life but should decline have happened at this pace and at this scale? Why was this and what were the implications for the town's economy and its subsequent development path?

4.2 The early period 1900-1945

4.2.1 Introduction

Despite 50 years of engineering, Doncaster's outlook and culture in 1900 was closer to the 19th than to the 20th century. 'Squires' and 'gentry' still occupied the numerous halls, and along with the clergy they continued to exercise influence over the surrounding countryside. So thoroughly was this culture embedded that "colliery companies were more than industrial intruders in a slightly old fashioned agrarian society, they were practically foreigners"

(Oakley, 2002, p.4). However between 1903 and 1914, large areas of land around Doncaster were acquired, and by mid-1912, over £6 million had been invested in the new coalfield (DG, 13/1/1911).³⁶ By the outbreak of the First World War with the national industry at the peak of its production levels, the Doncaster area collieries were employing approximately 20,000 people.³⁷ Mining also came to develop key inter-linkages with wider sectors and business as well as having wider socio-political impacts on the town. Many of these impacts divided public opinion at this time. Whilst none foresaw the subsequent impact of decline, the *Doncaster Gazette* would provide testimony to these ongoing debates which allows for an analysis of the extent to which mining during 1900 and 1945 established processes in Doncaster that were inexorable. In particular the pages of the *Gazette* provide evidence of early concerns regarding the potential impact of a dominant mining industry. It also highlights the failings of the town's corporation in this regard which it argued failed to act early and decisively enough to create the infrastructure for a modern industrial town which utilised rather than became dependent upon coal. Although this section explores impact over the period 1900 -1945, it is sub-divided in to the Edwardian period 1900-1914, and the inter-war years to allow greater focus on early transformative impact.

4.2.2 The Edwardian period

The first sods were cut in March 1905 at Bentley and in October of the same year at Brodsworth. Mines were opened at Brodsworth in 1907, and Bentley in 1908. Bullcroft and Yorkshire Main collieries opened in 1911, followed by Askern Colliery in 1913 whilst other pits were in the process of development at Rossington and Hatfield. As early as 1910 Table 4:1 shows that Doncaster's collieries employed 7,830 men. It also shows that figure rose to

³⁶ Several joint ventures were established to share the cost, and risk of sinking mines in what was an untried coalfield. Bentley Colliery for example was owned by Barber and Walker from Nottinghamshire. Brodsworth Colliery Company Ltd had strong Derbyshire connections, being half owned by Staveley Coal and Iron Company and Hickleton Colliery Company. Staveley went on to develop interests in three other local pits, Yorkshire Main Colliery near Edlington, Bullcroft and Markham Main (Oakley, 2002).

³⁷ In 1913 output from South Yorkshire was 27 million tons. Peak production in South Yorkshire was 1929 when it produced 33.5 million tons or 13% of national output.

over 25,000 by the end of World War Two. Doncaster's new, deeper pits, benefited from the use of modern technology, and often produced between 5-6000 tonnes of coal per day; ten times the output of the average coal mine thirty years earlier.³⁸ Local mines also reflected national trends in terms of size with three of the six pits open by 1910 employing over 1000 mineworkers. This number increased to eight by 1920 and by 1927 all eleven local pits employed over a 1000 mineworkers.³⁹

Table 4:1 – Employment in Doncaster collieries 1910-1945

Colliery	1910	1920 *	1927	1945
Bentley	1,200	2,565	3,129	2,932
Brodsworth	2,111	2,930	4,180	3,418
Cadeby	3,750	2,167	2,560	1,500
Denaby	n/a	1,943	2,410	1,850
Hatfield	n/a	n/a	2,150	2,523
Markham Main	n/a	n/a	2,189	2,632
Rossington	n/a	1,128	2,500	2,248
Yorkshire Main	257	2,694	3,500	2,592
Bullcroft	205	2,437	3,125	1,718
Askern	n/a	1,389	1,500	1,524
Thorne	307	n/a	1,200	2,460
Total	7,830	17,253	28,033	25,397

³⁸ Doncaster collieries were the first in many regards: For example Yorkshire Main was the deepest mine in the UK at 908 yards. It was also had practically the whole of the permanent surface plant laid out before sinking, with the whole of the prime movers including winding engines under one roof . This permitted the boilers to be situated next to the various engines saving considerably on steam. Hatfield Main was the first colliery in the UK to be sunk using the cementation process (in which cement was injected into strata to reduce water). Sheffield Archives, Memoranda and certain statistics as the production of coal, coke and bye products in the coalfield of Yorkshire in relation to the coalfields of the UK 25th November 1921, SY187/B11/2

³⁹ By 1920 there were 37 collieries in the south Yorkshire coalfield that employed more than 1000 persons out of a total of 80 collieries in the coalfield. These large collieries accounted for 97,128 of those employed with the other 43 collieries employing 7,686. Total employed in the south Yorkshire coalfield in 1920 was 104,814. By comparison, in the west Yorkshire coalfield only 20 of the total of 89 collieries employed over 1000 persons at this time representing 51,917 out of a total of 68,189 employed at this time. Sheffield Archives, North Country and Yorkshire Coal Annual 1921. Published by the British Statistics Co. Ltd, Cardiff, SY 187/B11/2

*Source: Taylor (2001) * Memoranda and certain statistics as to the production of coal, coke and bye products in the coalfield of Yorkshire in relation to the coalfields of the UK 25th November 1921, Sheffield Archives SY 187/B11/2*

The miners who developed the new coalfield were not indigenous but migrants from neighbouring counties or, in the case of Markham Main, from Germany (Hill, 2001). This was typical of the wider Yorkshire coalfield with coalminers being 'Yorkshire' because of the fact that they worked in Yorkshire pits rather than because of their place of birth (Macfarland, 1982). A study of nearby Denaby found that 'the new Denaby Main residents were all strangers ...of the 166 coalminers resident in Denaby only ten were of Yorkshire birth' (Hill, 1982). Whilst some came over from Ireland (Bailey, 2007) over one third of Denaby's mining workforce came from Derbyshire, Nottinghamshire, Staffordshire and Gloucestershire (Macfarland, 1982). During the development of the Doncaster coalfield at this time, the miners, like the money, came from towns such as Staveley in North Derbyshire, and from North Nottinghamshire. No miners came from the West Yorkshire coalfield however, as these men were considered by coal owners to be too militant.⁴⁰ Durham coal masters and men also played an important part in the development of the virgin coalfield. Lord Joicey, Chairman and Managing Director of Lambton, Hetton and Joicey Collieries, the largest in the Durham coalfield remarked upon the extensive transference of energies and capital of the Durham coal masters to the development of the vast resources of the South Yorkshire coalfield. It was estimated that the migration from these areas during the Edwardian period accounted for approximately 22,000 people (Blackledge, 1951).

Therefore the first and most obvious early impact of the development of the Doncaster coalfield was the district's population boom. Table 4:2 illustrates the extent of the increase, showing that the population of the local village of Bentley rose from 2,403 in 1901 to 6,487 by 1911. Even the smaller hamlet-style villages were affected by the development of the coal

⁴⁰ Oral evidence from Frank Beresford who began work at Bullcroft Colliery when it opened and remained there for fifty five years

industry. The parish populations of Carr House, and Elmfield for example rose from 149 in 1901 to 1426 in 1914. Edlington, site of Yorkshire Main, had a population of 158 in 1901, but this had risen to 5,298 by 1911. Adwick-le-Street's population rocketed from 436 to 6,973 between the same years. As these hamlets developed into mining villages, their populations would increase further. For example by 1921 Adwick-le-Street's population had risen to 11,838 and Bentley's to 12,941 (DMBC, 2002). It was suggested that whilst the transformation of small agricultural settlements on the western exposed coalfield had been slow and gradual, the scale of developments on the concealed Doncaster coalfield meant that the process has been intensive in both time and area (Blackledge,1951). In 1932 the Doncaster Official Guide described the former agricultural villages as having been 'thriven on the production of coal'.

Table 4:2 – Population increases in selected mining villages in the Doncaster coalfield

Year	Adwick le Street	Armthorpe	Bentley	Brodsworth	Edlington	Rossington	Doncaster Borough
1901	436	381	2,403	398	580	371	10,472
1911	6,973	625	6,487	301	5,298	3,029	48,472

Source: DMBC, 2002

With the exception of the railway-dominated wards of Balby and Hexthorpe whose population increased from 6,781 to 11,570 between 1901 and 1911, the town of Doncaster experienced a less dramatic population rise. The Borough of Doncaster at this time was comprised of six wards: North, St Georges, Central, East, West, and South (appendix 5) and the town showed little interest at this time in extending its boundaries further to accommodate the new mining population.

Miners looking for accommodation during the early years of mining in the area found few houses near the pits, and soon developed a fondness for the attractions of the town which by 1912 included three picture palaces, two music halls, three billiard halls and 135 places

(excluding clubs) licensed to sell alcohol.⁴¹ Despite these leisure amenities there was little accommodation available. All spare houses were quickly filled and sitting tenants working at the GNR Plant works, many of whom were on short time for much of the Edwardian period, would often find themselves displaced by the more affluent miner.⁴² That said, of the sixty three hotels and bed and breakfast lodgings in the town most of them were aimed at the more affluent market, probably associated with the races. The little affordable accommodation that existed in the town was therefore soon overwhelmed. The town's corporation showed little interest in resolving this problem. In fact quite the opposite was true with the corporation instead favouring an expansion of 'villadom' on Town Moor and Thorne Road (DG, 30/12/04). On the question of hosting the new mining population the corporation argued that it was not their responsibility to 'find dwellings for them. They have got here by stealth more than anything else. They can usually find accommodation elsewhere' (DG, 19/3/09). Whilst the housing problem eased somewhat after 1908 with the development of the new pit village at Brodsworth (DG, Jan, 1908), the attitude of the town's corporation ensured that housing Doncaster's new working classes remained the major social question of the Edwardian period.

4.2.3 Impact on business and trade

Despite the inertia of Doncaster's corporation the town itself began to reflect something of the character of its changing surroundings. For example, between 1908 and 1912 there was a 50% rise in the number of fish shops,⁴³ and whilst the town's public houses benefitted from the custom of miners, publicans as well as café owners soon became concerned by the

⁴¹ The Gazette Commercial and General Doncaster Directory, 1912

⁴² In 1913 up to 10/- or more was being offered for homes with a premium on top of that (DG, 1/8/03). Also in that year a correspondent to the Doncaster Gazette wrote that house buying was a 'ordeal at once patience exhausting, nerve wrecking, and temper trying' (DG, 24/10/13). In the Local Government Board Inquiry (Q/A 1606) the cause was put down to colliery developments in the district, and want of accommodation near these collieries.

⁴³ The Gazette Commercial and General Doncaster Directory, shows 57 fish and chip shops by 1912. This is higher than registered in Kelly's Business Directory which show 26 fish shops in 1900 and 48 in the 1936 directory. Both directories however indicate a substantial increase in number.

number of working men's clubs that were beginning to appear.⁴⁴ By 1912, thirteen Working Men's Clubs were registered in the local business directories. The town's social hierarchy were reported in the local press to be aghast as the Georgian respectability of Doncaster's Hallgate Road was penetrated by wealthier mining families and families profiting from mining. The *Doncaster Gazette* described 'how residential parts of the town swarm with strangers, who prove to be new residents brought here by their connection in some capacity or other with the various enterprises' (DG, 3/3/13).

Many of the local inhabitants would have seen this as a price worth paying, as mining brought with it a much needed increase in trade and employment, adding an element of permanency which the seasonal trade of village life often lacked. However, some members of the town's corporation believed that the mining population would merely represent a temporary boom for local trade, suggesting that when the pit villages were completed, so trade would disappear from central Doncaster. There is some evidence to support this prediction. For example, the Co-operative Society was the first enterprise to respond to the trading opportunities provided by the development of Doncaster coalfield, as it had been to the arrival of GNR 50 years earlier,⁴⁵ and opened its first mining branch at Woodlands in September 1908 where at this time it was guaranteed a monopoly of trade. By 1912, membership of the Co-op had risen from 7,158 in 1903 to 12,964: cash sales were reported to have risen by 87% during the same period (DG 11/9/08; 1/3/12). Nevertheless the wider impact on trade in the town was positive. In fact local reporters suggested of Edwardian Doncaster that there had never been a time when so many shops were being enlarged and private houses turned to businesses premises (DG 17/9/09).

It was therefore as a general shopping centre that Doncaster first benefited from the development of the local mining industry. One 'Special Commissioner' caught up in the spirit

⁴⁴ Doncaster Gazette Commercial and General Doncaster Directory, 1912

⁴⁵ In fact the Cooperative had shown itself to particularly enterprising in that it reacted to the potential business opportunity before the trading boom. The importance of the town was recognised in 1903 when the Cooperative Society held its Annual Congress in the town.

of the times wrote that the town was witnessing a 'revolution in Doncaster's life.' He noted that, 'the change that has come over Doncaster has not been one of numerical growth but of type' (SDT, Jan, 1913). The changes in the town were reported to have been 'more rapid than in any other part of England, resembling what had taken place in Western Canada' (DG, 1/8/13). The weekend scene in Doncaster's shopping centre was transformed, as comparatively well paid and traditionally high-spending miners browsed around the town's shops.⁴⁶ Visitors to the town were astonished at the transformation of Doncaster which they observed had been largely rebuilt by shopkeepers turning the town into a busy shopping centre (SDT, Jan 1913). The development of Trafford Street and the widening of St Sepulchre Gate, with the wider business opportunities for builders and decorators, provided further evidence of the town's growing prosperity, and from 1910 many of the towns engineering firms had to work overtime to meet the increasing demand (DG 30/12/10; 17/1/13). Increasing affluence brought about by the coalfield developments attracted new banks to the town. One local reporter observing that if a bank is the hallmark of industry, then the new found prosperity was further reflected in the number of bank branches opened in the towns High Street. Branches opened included the National and Provincial, Lloyds, and the Sheffield Banking Company (SDT, Jan 1913).

The level of commercial activity during the Edwardian period is reflected in the market for business capital and is evident in the advertising pages of the *Doncaster Gazette*. The sale of business property alone would support a small economy comprising of auctioneers, surveyors and solicitors who specialised in the conveyance of business assets from the distressed, destitute and dead to the energetic, enterprising, and entrepreneurial. Another indication of Doncaster's economic transformation is the number of businesses registered in

⁴⁶ Brodsworth Colliery opened in 1907 paying 7/6d per shift (41/3d per week). In 1913 Edlington Colliery was advertising 200 colliers jobs at 8/3d to 9/- for a shift on the face. Compared with Doncaster Corporation workmen from 21/- to 24/- a week (DG, 5/9/13); Railwaymen (on short time for much of the Edwardian period and excluding engine drivers on 6/- a day) on average 20/3d a week (DG, 20/9/07; 17/11/11). National average full time earnings for men in skilled and unskilled industrial occupations was 28/6 in 1906 and 30/- in 1914 according to Census of Production for these years. Comparative high wages continued with the modern pits around Doncaster said to have paid the highest wages in the country some earning as much as £4 per week – DMBC, '*Doncaster, a silver link with its commerce and industries, and its potential purchasing power*' (Doncaster, 1936). South Yorkshire District Board agreed minimum of 6s 9d compared with older West Yorkshire 5s 6d (Baylies, 1993).

local directories which increased from 936 in 1900 to 2,056 by 1936. By far the largest numbers of businesses registered were in the retail sector. As shown above, mining impact was not limited to retail with increasing levels of affluence and demand also boosting other sectors. Table 4:3 shows the dramatic increase in the number of professional businesses registered in the town's directory. Often seen as a key indicator of levels of regional affluence the table shows that the number of accountants registered in the town increased three-fold whilst a doubling of other professions registered is typical.

Table 4:3 - Professional and trade businesses registered in the local directories 1900-1936

<i>Profession</i>	<i>1900</i>	<i>1936</i>	<i>Trade</i>	<i>1900</i>	<i>1936</i>
Architect/surveyor	12	18	Decorators	12	25
Accountant	8	28	Plumbers	7	12
Auctioneer	11	20	Joiners	4	6
Solicitor	18	43	Slaters	3	5
Total	49	109	Total	26	48

Another sector boosted by the arrival of the local coal industry was the construction industry. Much of this activity involved the production of clay, brick and tiles as well as wider building trades and illustrates how some coal owners tried to make a profit out of other products and assets of the collieries. Between 1900 and 1936 the local directories show that the number of brickworks registered increased from three to five. One of which W J Hardy was leased from the Askern Coal and Iron Company Ltd in 1911.⁴⁷ One local brick works was developing a productive capacity for 240,000 bricks per week by 1922 (DG, 24/4/1922) with coal owners extracting both rent and royalties from leaseholders. Askern Coal and Iron

⁴⁷ Doncaster Archives, Agreement to lease a Brickworks, Askern. Askern Coal and Iron Company Ltd to W. J. Hardy on behalf of intended Company 7th January 1911, DY/YBO/8. Other brickworks included the Doncaster Brick Company; the Cocking and Company of Balby and David Sharrat and Sons Ltd of North Bridge.

Company Ltd charged a royalty of 1/16d per brick sold over 1000.⁴⁸ Other coal companies diversified into power supply to support tenants. Doncaster Collieries Association Ltd for example supplied electricity to Askern Brick and Tile Company Ltd which involved them in both the construction and maintenance of power lines.⁴⁹ The growth of the local construction sector is also reflected in the local business directories which show fifty-nine building contractors registered in 1936. Many of these businesses were indigenous such as Mr J.P. Crawley of Armthorpe, who leased North Field Sand and Gravel quarry from Earl Fitzwilliam in 1922.⁵⁰ However the development of the coal industry also attracted businesses from across the country. H. Marshall and Sons Ltd for example was established in 1900 in Derbyshire but moved to Toll Bar, Bentley in 1903 to be at the centre of the new coalfield. They would go on to build houses for let in both Bentley and Carcroft (Official Guide, 1951). Another, the Edlington (Yorks) Land and Development Company Ltd was originally established in Pontypridd but would be responsible for building large parts of the colliery village of New Edlington between 1910 and 1922 having acquired the land from the Staveley Coal and Iron Company.⁵¹ Table 4:4 also shows the range and number of related tradesmen registered in local directories in 1900 and 1936, all of which increased.

⁴⁸ This would have produced a handsome profit for landlords and coal owners. For example the terms of the agreement between Askern Coal and Iron Company Ltd and Askern Brick and Tile Company signed in 1931 stated that over the course of the 35 year leasehold a royalty of 1/16d per brick sold over 1000 (and the same for tiles) was payable. In addition for the first year there was a land rental cost of £18.19/4d (£1.10/- per acre) followed by £50.11/ 6d (£4 per acre). A royalty was also payable at 4 pence per ton for all clay or brick earth 'got but not made into bricks'. Doncaster Archives, Licence to work a Brickfield in Askern and Norton, The Askern Coal and Iron Company Ltd to Askern Brick Company 18th February 1931, DY. YBO/24

⁴⁹ Doncaster Collieries Association charged 1/5d per unit for the first 10,000 Board of Trade (BoT) units per annum and 1d per BoT unit after this. In Doncaster Archives Agreement for the supply of electricity. Doncaster Archives, Doncaster Collieries Association Ltd, and the Askern Brick and Tile Company Ltd, 1st May 1934, DY/YBO/34.

⁵⁰ Doncaster Archives, Agreement to lease a sand and gravel pit, Armthorpe. Rt. Hon W.C. de Meuron Earl Fitzwilliam with J.P. Crawley 1st March 1922, DY/YBO/14

⁵¹ The village of New Edlington was built to house workers at the Yorkshire Main colliery which was owned by the Staveley Coal and Iron Company which had earlier bought the land in Edlington and the lease rights to exploit the coal reserves within this and adjoining land of the Battie-Wrighton of Cusworth Estate. The land (approximately 20 acres) was originally sold on the 22nd December 1909 to Staveley of Derbyshire for £4,200. A few days later on the 31st December 1909, the Staveley Company sold 6 acres 2 roods and 23 perches of land to Arthur Thompson a Balby builder for housing development. Just over 6 weeks later, Thompson sold the land and the houses he had built on it to 4 Cardiff based parties for £4,763. On 16th December 1910 the Staveley Company sold for £2,928, 41 acres, 3 roods and 7 perches to these 4 parties, now operating as Edlington (Yorks) Land Development Company Ltd, part of the land which it had bought from Battie-Wrighton a year earlier. See Doncaster Archives, Edlington (Yorks) Land Development Company Ltd and its successors. Deeds and associated papers 1910-1966, DY/EDLO/1-54.

In other areas the development of ancillary activity was less obvious. For example although there were twenty seven coke ovens plants in south Yorkshire in 1919, none of these were in Doncaster.⁵² Business directories also show that although there was an increase in the number of engineering and manufacturing businesses registered in the town, this was less evident in the mining industry. Table 4:4 shows the number of mining related businesses registered in 1900 and 1936. It shows that whilst the number increased between these dates, there were fewer businesses of this type registered in local trade directories in comparison to all other sectors, and with other towns. Nevertheless there were exceptions, the most notable example of mining related business was Blandford Gee Cementation Co. Ltd, which was founded by two local mining engineers in 1922. The firm would go on to work with hundreds of pits (Official Guide, 1958). Table 4:4 also shows that only one mining manufacturing business was registered in the local directories by 1936. Given the modern nature of Doncaster's pits, and the range of contracts for machinery firms, this is somewhat surprising. However Doncaster was slow to develop indigenous mining machinery firms and contracts were often carried out by established firms outside of the town. For example during the 1920's, Rossington Colliery awarded contracts to Gullick Dobson of Wigan (Grundy-Warr, 1989). Local directories therefore provide early indication that whilst spin-out and start up opportunities in wider engineering and manufacturing were available (and that some of these would be related to mining) there were nevertheless few mining manufacturing firms in the town at this time. Directories do suggest however that service-sector business opportunities existed at this time, most notably amongst the coal merchants and distributors, which increased in number from nine in 1900 to twenty three in 1936.

⁵² Sheffield Archives, By-product coke oven plants in south Yorkshire 1919. Coke oven managers year book 1919, SY187/B11/2. This number did not change after nationalisation. The closest coke oven plant in 1947 being Bawtry Coke Oven and Bye-Products Plant at Bircotes owned by Barber and Walker and Co. Ltd

Table 4:4 - Mining related businesses registered in the Local Business Directories

Type of business	1900	1936
Mining engineer	2	5
Mining machinery	0	1
Colliery agent	2	3
Chimney sweep	4	8
Coal merchants/distributors	9	23
Coal Factors	0	3
Colliery furnishers	0	3
Total	17	46

Whilst increasing levels of affluence and business activity during the Edwardian period were welcomed by many, these did not prevent an influential section of the town's local traders and their representatives from complaining about the *Doncaster Gazette's* non-stop 'booming' of Doncaster. The 'anti-boomers', fearful of a challenge to the status quo, pointed out that Doncaster was no "El Dorado" and that the attraction of new businesses from outside the town had led to greater levels of competition, resulting in higher rents often driving out local businessmen (DG, 24/2/11).⁵³ This led to the formation of the Doncaster and District Tradesmen Association to protect local trades from the ill-effects of the boom (DG, 10/2/11). At its inaugural meeting in 1911, Councillor Balmforth, the owner of the local confectionery firm Parkinson and Son, reported that of the thirty-three places of business on one street in the town, only fourteen were held by local tradesmen (DG,24/2/11).⁵⁴ Whilst Balmforth was accurate in his analysis, the work of this Association of local business was at this time inconsistent with the wider interest of the town, and was more an indication of an institutionalised conservative mentality endemic within the local corporation.

⁵³ Many local businesses were squeezed out. Those that stayed found rents doubled (DG, 24/2/11).

⁵⁴ There was certainly a degree of inward migration of business with the *Doncaster Gazette* commenting on a 'large demand for shops from outside businesses' (DG, 24/2/1911).

Reflecting on the attitude and policy of the town's corporation, one 'Special Commissioner' for the *Doncaster Gazette* wrote that Doncaster may be reckoned 'amongst the most apathetic of places to have greatness thrust upon it', suggesting that many old Doncaster residents "would have preferred to be left alone in their handsome villas with their snug incomes". They were reported to have lived in Doncaster because it was quiet, clean and well-mannered, and the breath of industrialism was to them unpleasantly tainted (DG, 10/2/12). A *Doncaster Chronicle* reporter found "older members of the town who rued the arrival of coal predicting a 'black future.'" (DC, 18/2/1910). Such divergent perspectives reflected the fact that the development of the Doncaster coalfield brought two substantial forces into direct contact: on the one hand colliery development, which at this time represented modern, progressive business, employing industrial workers from outside the region who brought with them their own cultures; and on the other hand old slow agricultural communities, with a traditional way of life and long established customs led by a squirearchy with their estates, country houses and limited horizons (Oakley, 2002, p.263). On one side of the divide was the Trades Council which from 1903 pressed the town's corporation to grasp the opportunities offered by the arrival of coal and establish a clear industrialist policy (DG, 20/11/03). This shift in trajectory was also supported by the *Gazette*, which recognised that creating a flourishing industrial society would require greater levels of public investment (DG, 24/4/08). On the other side was the more conservative, traditional tradesmen and shop-keeping class (DG/10/03; 9/11/06) which dominated local politics and the town's corporation at the time. A culture had therefore developed within the local authority which was based on centuries of trading experience, and closely associated with Doncaster's status as an important racing and market town. One of the key legacies of this had been a conservative mentality with the town's corporation coming to see its principal role as one of guarding the town's wealth which, along with the September Race Week guaranteed the town's low rate status.⁵⁵ This issue was one of considerable political as well as social and economic

⁵⁵ In 1913 the corporation owned 2,548 acres of land inside and outside the Borough. Total capital value of property (excluding coal under 1,500 acres of corporation which was estimated to be worth £450,000) was £1,410,942. Of this £987,398 was

importance, with many of the towns electorate having been attracted to the town because of its low rates (DG, 10/2/12). The facts are however that for the early years of the Edwardian period the Plant Works was on short time and local businesses suffered as a result.⁵⁶ The arrival of relatively well paid and traditionally free spending miners not only led to greater levels of competition but it also broke the local trade's dependence on the fortunes of the GNR, enabling Doncaster to become "one of the busiest and most flourishing centres in South Yorkshire" (Phillips, 1977, p.62). The town's ancient motto 'Comfort and Ease' could well have been changed at this time to 'Commerce and Enterprise' such was the impact of mining on the town's economic fortunes.

4.2.4 Impact on industry and business

Doncaster had long been an important communications centre. Well served by road, rail and water, Doncaster in this regard is untypical of many other coal towns which tend to be characterised by their geographic isolation. The opening of the Doncaster area coalfield would provide further stimulation to the borough's communications and provide future development opportunities. The coalfield attracted vast amounts of capital for the railways, which was invested in a 'spread eagle' policy (DG, 9/1/1912). As a pit was sunk so a line was laid to link the colliery with its markets at home and abroad.⁵⁷ In January 1911, a contract was secured to open a new line connecting the Doncaster coalfield with the Barnsley to Hull line at Gowdall. One line entered the Doncaster area at Bramley Yard in the Parish of Micklebrins, disturbing Lord Fitzwilliam's Wentworth Hunt. With the expansion of the railways however, congestion became a serious problem. It was for this reason that the three mile Doncaster- avoiding line was built, running from Hexthorpe Junction to Bentley

owned in its capacity as a municipal authority, and £423,544 as an Urban Sanitary Authority. After taking into account debts of £606,738, this left a surplus of property over loans of £808,204. (Local Government Board Inquiry, 1914; DG, 24/4/08)

⁵⁶ 'Trade had not been so bad for many a year' (13/12/03). By 1904 the town had £300 less retail business per week (DG, 1/1/04).

⁵⁷ South Yorkshire coal trade was initially dependent upon local markets notably the Sheffield metal trades, and supplying household coal. However railway lines to Hull opened up a global market for local coal. The proximity of the South Yorkshire coalfield, and later the Doncaster coalfield meant that new collieries were able to take advantage of these international markets (Oakley, 2002)

Junction. This line was opened in July 1910, and was described by the Great Central Railway as being essential for the transport of coal. However, the Great North Road, which was the main access to the north of the town, ran across the main railway lines at Marshgate. As the volume of rail traffic increased, so road transport suffered from congestion at the level crossing. To ease this problem, powers were applied for to construct a bridge over the railway lines. The question of bridge building and the resultant effects on the rates split the town almost in half. Nevertheless, the anti-bridge campaign was defeated, and in 1910 the Marshgate road-widening bridge was completed. 'For the first time local residents were forced to come to terms with the consequences of their industrial future' (Steward, 1972, p.27). Other areas of Doncaster's transport were also boosted by the arrival of the coal industry to the district. The canal and river system linking Doncaster with the Humber was boosted by the construction of a new junction canal in 1905 (Duckham, 1964).

It was hoped that the arrival of the coal industry would give a similar boost to other local industries. By 1914 there is some evidence that the prospect of an abundant supply of cheap fuel was attracting new business to the area. The Yorkshire Patent Fuel Company, for example, opened at Bentley in 1912. This factory used small coals (smudge), compressing them into small oval blocks (briquettes) for commercial and domestic use. This development, according to the *Gazette* was the natural outcome of the coalfield development in the neighbourhood of the town (DG, 16/2/1912). In the same year H. Mitchell and Sons (Doncaster) Ltd was established in the town. The firm specialised in tubular construction and structural steel works and provided chain annealing services as well as producing lifting gear and colliery haulage rope. Another, P. A. Mudd and Co, had originally established a branch works at the aerodrome near the racecourse but increasing demand led to it setting up a works in the town's Intake ward, specialising in repairing heavy castings for collieries and steelworks. Whilst these represent examples of firms whose sole customer was the coal industry, other local businesses arrived which had a more diverse customer base. Examples of these included E W Jackson and Sons Ltd which established a car manufacturing firm at

Greyfriars in 1904. Jackson was not a mass production enterprise in scale or methods, but one that relied on the traditional skills of local coach makers, and in the four years up to 1914 only one hundred 'Cheswold' cars were produced (Barber, 2007), Nevertheless it was a significant development introducing a small motor manufacturing industry to Doncaster and which in 1913 produced the first motor ambulance for the local collieries.⁵⁸ Another, Wild and Sykes, Ironmongers of Doncaster was founded in 1913 and was a wholesale and retail ironmonger supplying materials to a range of local manufacturers and domestic customers, but developed much of its business originally through sales to local collieries.⁵⁹

Despite the arrival of new industry, a labour market was developing which provided few employment opportunities for women. The arrival of the new mining population had presented local officials with the challenge of an under-employed female population. By 1911 the census shows that only 937 women were in work out of a female population of 12,042. Most of those employed (882) worked in domestic service.⁶⁰ The town's established confectionery manufacturing cluster which included Parkinson's and Nuttalls would provide further employment opportunities,⁶¹ as would the arrival of light industry such as the Cleckheaton firm George Anderton and Sons which opened Victoria Mills at Strawberry Island, and Wallpaper Manufacturers Co (later Roxeth Wallpapers Ltd). However employment opportunities for women would remain limited in the inter-war period (Abercromie & Johnson, 1922).

⁵⁸ Jackson abandoned vehicle manufacture in 1914 when it began to undertake aeronautical and engineering work for the government. After the First World War it became a distributor to a major motor manufacturer. The firm closed in 1983. Doncaster Archives, E.W. Jackson and Sons Ltd, DY/JACK

⁵⁹ Wild and Sykes originally operated from 7 Market Road. In the early days William Wild travelled by bicycle around local collieries to do business. The firm became a Limited company in 1961 but closed in 1999. Doncaster Archives, Wild and Sykes Ironmongers of Doncaster, DY/WILD/3/1/2

⁶⁰ Census 1911 (Vol. X, table 15b, p.456)

⁶¹ The oldest of Doncaster's confectionary manufacturers was Parkinson and Co. which had its origins in the family grocer and tea dealing shop in the High Street that opened its door in 1817. Samuel Parkinson diversified into making baking powder and then butterscotch, and gained royal patronage after the visit of Queen Victoria in 1851. Under new ownership after the family died out in 1893, the firm began to make boiled sweets and in 1905 moved to successively larger premises opening new works in Wheatley in June 1914. After Parkinson's chief rival, Killingrey, went out of business in 1901, William Nuttall, who began by making boiled sweets for market sale, progressed to his own shop and acquired a small factory in Wheatley in 1903. Here he invented a mint-flavoured sweet, marked as 'Nuttall's Mintoes.' By 1914 Nuttall's was employing 250 people (22/5/1914).

The failure to attract light industry for the town's increasing female population, and more broadly the town's inability to attract sufficient industries from emergent sectors remained a focus of attention for the *Doncaster Gazette*. Whilst the Doncaster coalfield expanded, the newspaper argued that the conservative forces on the town's corporation consistently retarded the potential of using the local coal industry as the Plant Works had done earlier in the century to attract a 'busy hive of industries' (DG, 19/12/05). To this end the paper argued that the town's corporation must act quickly and decisively by offering cheap sites to potential industry as opposed to what they saw as the more traditional corporation policy of making quick profits from exorbitant rents. It was clear that this would require a fundamental change of attitude on behalf of local decision makers.⁶²

There is some limited evidence of a shift in attitude in the later Edwardian period with the establishment of the town corporations Industry Propagation Committee (IPC), which under the chairmanship of the Labour Councillor Mr Kay aimed to attract engineering firms to build on the town's growing reputation in this sector. Kay, having worked in the cotton mills of Halifax as a boy, also hoped that Doncaster would be able to diversify its economic base further and become 'as much a proved textile field as a proved new coalfield' (DG, 3/1/13). The IPC met just three times between 1907 and 1911⁶³ and any hopes it had proved to be forlorn as it had to refer to the powerful Estates Committee, whose apathy according to Kay had already resulted in one potential motor business in the town going instead to Coventry (DG, 3/12/09).

Concern that Doncaster's political leadership was failing to grasp the opportunities to use coal to develop new economic opportunities for the town, was not limited to the local townspeople. The extension of the Yorkshire Coalfield to Doncaster had been the subject of discussion at the 1910 British Association conference. One speaker, a Mr H. Culpin, spoke

⁶² "Through past neglect on the part of our rulers, improvements involving considerable expenditure press almost in battalions for a settlement at one and the same time" (DG, 21/1/13)

⁶³ Doncaster Archives DMBC Special Committee Minutes Industrial Propagation Committee 1907-1911, AB 2/5/3

of how he looked forward to the day when Doncaster would take over many of Sheffield's manufactures. The *Sheffield Independent* noted in this regard however that were this to happen the Doncaster Corporation would have to show a more practical sympathy to industrial developers, who it argued had received no real incentive to locate in the town. In fact until this point Doncaster's Corporation had pursued a policy totally at variance with any real and strategic desire to develop and diversify the town's industrial base. For example, where it came to attracting new industry, Doncaster's policy-makers preferred policy was to offer land for sale rather than offer it as leasehold which was the preferred option of business (DG, 1/8/13; 13/1/11). It also dampened demand from prospective business by valuing land at excessive levels based on house building prices which were at a premium in Doncaster at this time. By 1913 all potential building land in the area had risen to a minimum value of £250 per acre, where previously its agricultural value had been £35 per acre (Local Government Board Inquiry, 1914 Q/A pp. 256-264). These points were highlighted during the 1914 inquiry into the town's application to extend its boundaries. The West Riding County Council representative on the inquiry summed up his case by declaring that in ten years Doncaster had undergone radical change as a result of colliery development, yet the Corporation had maintained an attitude of lethargy and indifference. The inquiry's conclusion pulled no punches stating that "never had it heard before of a case where a Corporation demonstrated such a total failure to disclose the duties of their existing area" (Local Government Board of Inquiry, March 1914, pp 183-4).

Steward in his study of Edwardian Doncaster suggested that the building of the Marshgate bridge represented a critical juncture in Doncaster's modern history reflecting a grudging acceptance of its industrial future. The issue certainly provided a clear branching point (Mahoney, 2000) in terms of the town's development path. The decision to extend the town's boundaries perhaps is a better example of a fundamental cognitive shift. The town's corporation had been forced, albeit in a piecemeal fashion, by the momentum of coal developments to build bridges, widen roads, improve transport, improve sanitation, and

extend gas, electricity and water supplies to the surrounding mining villages. Having been forced to build outside the town's boundaries, the new mining population and industry used the town's amenities yet paid rates to the urban authorities. The Doncaster ratepayers up until this time were, in fact, subsidising these areas.⁶⁴ Forced by the logic of this momentum the town expanded its boundaries on the 1st of November 1914 and Doncaster became a Municipal Borough. This extended the town's boundaries to include Wheatley Urban District Council, Balby with Hexthorpe Urban District and Carr House with Elmfield Parish. Doncaster's boundaries were thus extended beyond 1,695 acres to cover 4,831 acres. As a result of this change its population rose from 30,918 to 50,860 and its rateable value rose from £186,671 to £283,583. Grandiose plans were drawn up to develop twelve 'self contained and well defined towns' within the orbit of Doncaster which would then act as the capital of the region (Steward, 1972).⁶⁵

4.2.5 Changing image

The decision to extend the town's boundaries represents a critical juncture in the town's history. It represents one significant example of how the momentum of mining was beginning to impact on the town's economic development. Coal effects were however complex and often paradoxical and highlight more worrying trends which would subsequently be associated with industrial lock-in. Two examples illustrate how mining began at this early juncture to affect the town's subsequent economic trajectory. The first highlights how coal came to affect the town's external image, this example focusing on its impact on the local landed classes. The second example focuses on how coal began to determine local skill profiles and employment aspirations.

⁶⁴ Local Councillors were faced with the dilemma of keeping the rates down for property owners, whilst providing the services and utilities needed. Colliery development enhanced the rateable value of the district adding extra financial burden whilst at the same time increasing the income of any parish within which the pit was located (Oakley, 2002)

⁶⁵ The town's population continued to rise and by 1939 the County Borough of Doncaster's population had reached almost 65,000 with a contiguous urban area around the town of 47,000. The Census returns show that, with the exception of Coventry, the population of Doncaster was increasing at a faster rate than any other town in the country outside of Greater London (DMBC, 1936). The town's rateable value also continued to rise from £384,590 in 1926 to £504,320 in 1936, whilst Doncaster's Rural District Council remained the richest rural area in the West Riding.

Whilst paradoxically mining began to replace agriculture in the immediate area around the town, the subsequent rise in population from mining developments also resulted in a larger market for farm produce.⁶⁶ The increased profits accruing from market tolls also swelled town corporation coffers. Between the years 1906/7 and 1911/12 market profits increased from £1,464 to £2,264 (Borough Accounts). Such was Doncaster's reputation as a major regional market that the Royal Agricultural Society held its Annual Show at the town's racecourse in July 1912.⁶⁷ It was expected that the new mining population would provide financial support for the show. The *Doncaster Gazette* stated that the show demonstrated that the 'district still retained its former agricultural characteristics'. However, the Great Show was poorly attended, and much of the blame for this was reported as being due to the town's mining image (DG, 14/7/1911).⁶⁸

The town's changing image was also both a cause and an effect in the shifting social character of the town, and was particularly discernible in the demise of the local landed gentry. The British landed class had come under increasing pressure from the end of the 19th century as agricultural prices in general fell and duties increased. Some local landowners, such as Mr Walter Long, despite the growing market for agricultural produce, saw these longer term factors as the beginning of the end for his class and sold up and left the area. For other prominent families however coal represented a financial bonanza (Elliot, 1997), providing a variety of ways to make money. Long, for example, profited through selling or renting land. Another local landowner, Sir William Cooke, sold his land at Bentley to Barber and Walker and Co, a Nottingham based colliery company. It was also the Cooke family who in 1913 sold land in Wheatley to a syndicate of financiers and industrialists to

⁶⁶ For example the cattle market moved from the market site to the Docking Hill Fairground site to allow for expansion in the retail market.

⁶⁷ Doncaster markets are amongst the best for the size of the town to be found in the country (Souvenir of the Coop Congress, 1903). They covered over 3 acres and their capital value (1913) was £59,698; the Corn Market was seen as one of the 'most commodious and best frequented in the north of England. In 1913 over 100,000 livestock were sold in the market (Local Government Board Inquiry, 1914)

⁶⁸ Yet entries for the Show increased. In 1909 these were a record 2,000 entries with miners contribution e.g. pigeon and garden produce being evident (DG, 2/7/09)

build Doncaster's first industrial estate (DG, 17/1/13). Mining royalties also became a substantial part of the gentry's income. By 1909 for example Charles Thelluson was earning nearly £20,000 a year in royalties from Brodsworth Colliery.⁶⁹

Paradoxically, the money received from coal royalties was itself seemingly indicative of the increasing 'unattractiveness' of the area as a place to live. Sir William Cooke, a member of the oldest Doncaster family, was said to have 'happily boarded up the ancestral home of Wheatley Hall and headed south when Bentley Colliery provided enhanced income but spoilt the view, and probably the hunting' (Oakley, 2005). Others however remained and took an active interest. Thelluson helped to develop Woodlands Model Mining Village, whilst the Fitzwilliams of Wentworth Woodhouse, owners of the neighbouring Denaby and Cadeby pits, acted as speculators, buying mineral rights for the Sandall Estate from the town's corporation to add to their Cantley mining interest, as well as leasing land in Armthorpe for quarrying purposes.

4.2.6 Skills

The town's Technical School was established during the Edwardian period and developed a strong focus on scientific rather than an artistic education (DG, 18/9/03). In doing so it in many ways pre-empted the recommendations of the *Spence Report* published in 1938 which would recommend a greater focus on technical education. Previous courses offered in the town had been dominated by the GNR, and although the technical school continued to cater for the full range of local industry (Dept of Education, 1927)⁷⁰ the introduction of the first mining test course in 1911 (DG, 1/12/11) was a clear reflection of the shifting trajectory of the local economy. Whilst this vocational shift did not affect all of Doncaster's children, with the

⁶⁹ This figure was used as part of a speech by Lloyd George in Newcastle on 9th October 1909 and not directly attributed to any particular Landlord. However the *Sheffield Daily Telegraph* subsequently identified Thelluson as the landlord in question. See Oakley (2005)

⁷⁰ The Technical School continued to provide training for the engineering and building trades, as well as commercial courses (Dept of Education, 1927).

town's Grammar School for example maintaining a focus on character building 'not churning out mechanics and clerks' (DG. 3/8/06),⁷¹ it was a significant indicator of the relationship between local industry, education and skills, and aspiration. One former pupil of Doncaster's Beechfield School reflecting on his experience as a school child in 1909, stated that aspiration was a luxury, with teachers at Beechfield focused on preparing pupils for the local industry (DS, 26/7/2001).

A greater focus on the development of skills for employment in local industry had initially been noted approvingly in the *Gazette*,⁷² and the town's Technical Schools' focus on skills for mining in particular would subsequently be commended by HM Inspectors in their 1926 report on Further Education in Yorkshire (HMSO, 1927).⁷³ This report identified positive signs of student demand, finding that whilst there had been problems of attendance, particularly to evening classes, due to shift work, nevertheless of the 560 students enrolled, 250 of these came from the villages around the town. However the report also provides an early warning of a narrowing curricular, finding that student demand at the school was focused almost exclusively on the provision of mining and engineering courses with very little provision evident in commercial subjects. What is also noteworthy is the early signs of an emergent basic skill trajectory with few students progressing beyond the first year. The HM inspectors report found that in Doncaster only 0.42% of students progressed onto senior courses (Dept of Education, 1927, p. 30).

⁷¹ However, between 1901-11, 42% of boys (especially scholarship boys) became clerks of one sort or another (DG,3/8/06; Doncaster Grammar School Register). Of Doncaster High School girls between the same years, 1/3rd became Elementary School teachers and 1/3rd stayed at home (DG,6/10/11; 25/7/13).

⁷² One report in the *Gazette* commented on the work of Mr Grace the Principal of the town's Technical School, who through his championing of vocational education 'had made it a most enterprising and go ahead educational body (DG, 30/8/07).

⁷³ Department of Education. General report of HM Inspectors on provision of Further Education in the geographical County of Yorkshire for the period ending on 31st July 1926 (HMSO, 1927).

4.2.7 Summary

By the end of the Edwardian period coal mining whilst not dominant had a clear impact on the town across a range of socio-economic variables. However it has also been shown that the nature of the local coal industry's development was not inexorable and that the local authority played a role in constraining further development which might have built on what was at this time a vital industry to the British economy. This section's focus on local agency has been used to highlight the wider self-sustaining coalition which at this time was locked into a mindset that preferred cheap rates to the provision of incentives to new factory development. This is indicative of an embedded institutional lock which can be seen in the local corporation's attitude to earlier attempts at industrial development rather than any foresight as to any debilitating effect on the town's future economic fortunes. The national mining industry reached its peak production during the Edwardian period and at this time provided key locational advantages, which the *Gazette* argued were not developed, and was boosting local business through a range of inter-linkages and multipliers. That said there is evidence that mining's influence was beginning to affect the town's image and skills base both of which would come to be viewed as determinants of industrial lock-in.

4.2.8 Inter war years

The development of the coal field continued to affect the development path of the town during the inter-war years although there was little effort in the early post-war years to extend the town's boundaries further, and it wasn't until 1927 that Doncaster became a County Borough. There is however evidence of a more active industrial policy amongst the local council from the early post-war years. In May 1920 Doncaster's first Town Planning Committee was inaugurated, and in 1922 the town's first economic planning report was published. The report highlighted the shift in culture that the coal industry had brought about stating that, "up till quite recently the county ...was but remotely connected with any ideas of industrial development" (Abercromie & Johnson, 1922, p.6). Of greater relevance however

was the report's clear warning to local decision makers to act to prevent the town becoming locked in to a narrow dependence of a few large employers, one of which was coal. Whilst welcoming the positive contribution made by the town's industry both directly through jobs and indirectly as a magnet for other industry, the report warned against complacency and of replicating the experience of neighbouring Sheffield whose dependence on steel resulted in high levels of unemployment during the early 1920's. Instead it argued that the town should act decisively and invest in the development of appropriate infrastructure. In this regard the report suggested that the local authority needed to act to grant access to large areas of land zoned for industrial development, but in particular it needed to act to further extend the town's road and rail network which it argued was needed for the development of a diverse and modern economy community. Inaction amongst the town's elected officials, and diversity of industry, were also the central themes of the *Gazette's* editorial entitled "*Towards Industrial Greatness*" which looked back on the year 1925. In it the paper drew a comparison with less successful towns such as Barrow and Middlesbrough whose economies were stagnating at this time. The article again stressed the need for the town to use the coalfield as a catalyst for wider industrial development. This view was echoed in the same year at the 5th Annual Dinner of the Doncaster Chamber of Trade. In calling for more local industries, the Chamber also joined the *Gazette* in pointing an accusatory finger at the Corporation's poor record of attracting and developing new industries, particularly in emerging industries such as car manufacturing. Within a year the *Gazette* highlighted another missed opportunity to diversify the town's economic base in this direction when the Michelin Tyre Company decided to locate in Stoke on Trent rather than Doncaster (DG, 5/3/1926).

It would be wrong to suggest that the town's leadership was totally inactive, nor that the town was completely unsuccessful in its efforts to attract new business, as the decade saw a number of notable industries established in the town. The most important examples being the St Helen's based glass manufacturers Pilkingtons which set up in Kirk Sandall in 1920, and the electrical manufacturer Crompton Parkinson which was established on the Wheatley

estate.⁷⁴ Both firms would go on to be major employers throughout the century. The decision by Radiance toffee makers to move from Scunthorpe to Doncaster also provided further evidence of the significance of the town's confectionery manufacturing cluster. Local trade directories provide further evidence of the growing significance of local food and confectionery manufacture. They show that in 1900 there were 86 businesses registered in this category, but that this number rose to 217 by 1936. However on the whole the scale and type of industry attracted to the town remained an issue of considerable concern. This concern led to the publication of the *North West Development Scheme* in September 1929, and a more concerted effort on the part of the local authority is evident between 1928 and 1936 during which time the council purchased land, built roads, organised a rail link, and improved the canal, with the aim of making some five hundred acres of Wheatley Hall estate more attractive to industry. The largest of the new plants to arrive at Wheatley Hall was British Bemberg, an English subsidiary of a German company that had developed a process for making artificial silk. It opened in 1931 and quickly employed a workforce of almost a thousand including German managers. War led to their repatriation and the expropriated premises passed into the hands of British Nylon Spinners, later becoming ICI Fibres. Other significant industry which located in the town during the inter-war years included Cementation, which developed as mining engineers and specialist ground engineers, and Coalite and Chemical Product Ltd which was established at Askern in 1929.⁷⁵ Also established were branch plants of the paper manufacturer Eburite Corrugated Industries and T.B. Morley and Co. Ltd, a Leeds based manufacturer of electrical light fittings.⁷⁶ However of most significance was the establishment of International Harvesters which set up in 1938 manufacturing tractors on in its plant on Wheatley Hall Road (Teanby, 2004). During the

⁷⁴ Other industries established during the inter war years included Darlington Fence Company (1925), Higgins and Parkes Ltd (1921), Stavely and Spink Ltd (1925) although reformed as A.E. Spink Ltd in 1929, selling sinks and bathrooms, the tool seller David W. New Ltd (1925) and Fields Radio and Co. Ltd (1933)

⁷⁵ Coalite and Chemical Product Ltd was originally formed in Barnsley in 1917. It would also set up another site at Rossington in 1971 (Doncaster Official Guide, 1970).

⁷⁶ Other firms established during the 1930's included Nevin and Stovin Ltd (1935) a plumbing retailer, and Fox and Co (Insurance) Ltd (1931).

inter-war period therefore the economic structure of the town appeared to be relatively diverse and not dominated by coal. This impression was broadly maintained in census evidence.

4.2.9 Industrial structure and dominance

By 1927 the local mining industry was employing over 20,000. Mining employment density was however unevenly spread in the area. The 1921 census shows that the South Yorkshire coalfield had thirty six areas with over 10% male employment in mining. The town of Doncaster was one of these with a score of 10.3%. This percentage remained the same in 1931 and represented some 2,169 miners. This figure had risen dramatically from the thirteen miners registered in the 1901 census, and the 417 registered in 1911.⁷⁷ However this was still considerably less than neighbouring areas such as Barnsley which had a proportion of 33%, and was also well below the aggregate for the rural districts which was 28%. In mining wards on the outskirts of the town greater concentrations of proportional male employment in mining is evident. For example in Adwick le Street it was 68% and in Bentley 56%. Census returns also highlight other industrial and occupational concentrations. The 1921 census for example recorded particular employment concentrations in metal (17%). The census noted in this regard that Doncaster resembled Sheffield in having a high proportion of blacksmiths (12.4%). By contrast with Sheffield however Doncaster also had one of the highest proportions of fitters (22.6%) in the West Riding of Yorkshire. There was also a high proportion of employment in the railways, with 729 drivers recorded as living in the area, and a high proportion of builders (56) (National Census, 1921).

Evidence from census returns therefore suggest that by 1931 the coal industry's numerical dominance in the town itself was still not clear with census returns showing that the majority of the town's male residents remained employed in the manufacturing and transport sectors,

⁷⁷ Census of 1901 County of York, table 35a, p.258; Census 1911, Vol. X. Occupation and Industries, table 15a, p.418. This was not unique to mining as many other Doncaster employees lived outside the town at this time. For example 40% of corporation workers lived outside the borough boundaries, with this proportion being even higher for railway and Plant workers (Local Government Board Inquiry, 1914).

particularly the railways, whilst domestic service remained the dominant activity for the town's female residents.⁷⁸ However, whilst numeric dominance is not evident at this time the impact of coal was beginning to manifest itself through spending multipliers as well as through its various supply chain relationships with many of the town's local businesses supplying the local collieries with goods and materials (e.g. ICI supplied the coal industry with explosives and Crompton Parkinson's supplied it with cables and other electrical equipment), all of which suggests a growing level of local dependence on the economic fortunes of the coal industry. The extent to which the town was dependent upon coal at this time can be gauged on the occasions when there was a break in mining employment. Two examples are used to explore this. Firstly the impact of the Great Depression on local employment but also business activity, and perhaps more clearly through wider impacts during times of mining industrial disputes.

4.2.10 Dominance, depression and vulnerability

Along with iron and steel and heavy engineering, coal was one of the key Yorkshire industries which were relatively depressed during much of the inter-war period. This was reflected in unemployment levels in the West Riding of Yorkshire which were worse than the UK average. Unemployment here averaged 20.1% or 1.7% above the national average of 18.4% (Fogerty, 1945).⁷⁹ The impact of unemployment in the local coal industry on Doncaster can be gauged through the 1931 census, which records that just 295 miners were out of work within the town, compared with 2,080 in neighbouring Barnsley. The low levels of mining unemployment in the town can be explained by the fact that most miners lived in the surrounding pit villages and not the town at this time. However, it may also be an indication

⁷⁸ Between 1901-11 census shows GNR employed nearly 6,000, who mostly lived in Hexthorpe. Between these dates census shows a slight decline in male railway staff (exc. Plant workers) in the Borough, from 1,440 in 1901 to 1,428 in 1911.

⁷⁹ Doncaster was located in the southern industrial district of the West Riding, considered in the broadest application of the term, extended northward from Sheffield to Skipton and eastward from Sheffield to Doncaster.

of the Doncaster coalfield's relatively early stage of development which insulated the town from the worst excesses of the depression. Barnsley, by comparison, continued to experience particularly high levels of unemployment, fluctuating between 45% and 60% during the period 1932-35, whilst both Rotherham and Sheffield experienced similar levels of unemployment. Doncaster, on the other hand was the net recipient of unemployed migrants from the wider Yorkshire area (Bailey, 2007) during the 1930's, and would only reach national levels of unemployment over the course of the decade (Fogerty, 1945). In fact unemployment in the town fell in 1936 to 4,185 from 4,751 in 1935 (DG 12/11/36). This fall was partly due to increased levels of employment in public works, and also the increased employment in the construction sector brought about by the building of RAF Finningley which began in 1935. The relative boom in the local building trade convinced the Yorkshire Federation of Building Trades' Employers to hold their annual dinner in Doncaster for the first time in February 1936. Further good news was reported by the Juvenile Advisory Committee which reported an increasing number of young people placed in jobs in 1935. However whilst the Committee reported that young people were finding employment in engineering, building, clerical, and shop work, it also noted that the town was faced with a growing surplus of unemployed boys and especially girls, many of whom chose to look for employment elsewhere (DG, 27/2/36).

Levels of business activity provides further evidence of the impact of Depression on the local economy. The trade sales pages in the *Doncaster Gazette* between 1931 and 1936 for example indicate that whilst business remained busy, sales were predominately made up of small shops changing hands, a process which adds little to the vitality of the local economy. More typically there was a general lack of business confidence in the opportunities in the town. This is indicated in the attendance figures at the town's annual trade exhibitions organised by the Doncaster and District Chamber of Trade. Whereas the 1935 event had attracted 21,805 attendees, only 18,446 people attended the 1936 event (DG. 13/10/36). Given that 1936 was the peak year for business start-ups in the UK during the entire inter-

war period (Hudson, 1987) the reduction is a significant indicator of the declining levels of confidence amongst existing and prospective businesses and entrepreneurs. Whilst declining levels of business activity cannot be directly related to the problems experienced by the mining industry at this time, it does support the analysis drawn from wider studies which show the localised effect that depression has on levels of business activity (Foreman-Peck, 1985; Hudson, 1987). Broadly it shows that small business activity is an indicator of regional levels of affluence not a creator of new employment opportunities during times of recession.

Faced by these and other negative indicators, the town's Mayor Councillor Watson nevertheless remained positive about the town's future economic outlook. In 1931 he suggested that Doncaster had 'reached rock bottom, ' and that he looked forward to a revival in trade including the development of new industries attracted by the town's relatively low rate status, and with the possible future development of the Doncaster airport (DG, 2/1/31). Although the airport was not developed, a similar level of optimism is evident five years later with the town's Mayor, Councillor T.H Johnson, keen to 'talk-up' the town through an unequivocal statement that the town should not be regarded as a distressed area, nor he stressed would it ever be (DG, 13/2/1936). However, in what was a significant observation on the challenges facing the local authority in attracting new industry to the town, he argued that efforts were becoming frustrated by what he described as an ill thought-out regional policy which was wrongly pushing industries towards distressed areas, when it should be encouraged to come to areas which were purely industrial areas (DG, 13/2/1936). The development of regional policy from the early 1930's marked a critical juncture for many regions not just Doncaster or the Doncaster area. There would be by necessity regional winners and losers, and at this time Doncaster would be a loser. As indicated in Johnson's statement regional policy would reduce local agency.

The *Doncaster Gazette* which had pressed the local authority for greater action throughout the century adopted a less sanguine tone than that of the town's Mayor, pouncing on one unsuspecting national newspaper reporter who had the temerity to describe Doncaster as a 'bright spot' in industry in the North of England. The newspaper rejected this reporter's 'false optimism' arguing instead that much more work was needed to attract new industry in the face of increasing competition from other towns (6/2/1931). In the same article the paper raised two key and related issues which are significant in understanding Doncaster's relationship with mining and the nature of the town's subsequent economic decline.

Firstly, throughout the inter-war years the *Gazette* expressed a concern that the town's economy was becoming imbalanced in favour of a growing dependence on the fortunes of what can be shown at this time to have been a small number of relatively diverse employers, but which operated in traditional industrial sectors. The *Gazette* focused its concerns in particular on the potentially damaging impact of any growing dependence on the local coal industry. Throughout the period the newspaper remained of the view that the town's principal industry was the Plant Works. In this regard investment in a new Plant assembly line during the 1920's was seen as 'heaven sent' compensation for the dislocation in employment in the surrounding coalfields (DG. 1/1/26). An article published in the *Gazette* in 1936 and reflecting on the dislocation in the mining industry speculated on the dangers of the town locked-in to a mining trajectory. Submitted by local born novelist Seamus Fraser, the letter reflected on his childhood in the town, pondering on, 'what will happen to Doncaster and its district when the coal seams are exhausted.' Each colliery village he noted has its 'tragic ominous knot of white muffled unemployed spitting at street corners' (DG.10/9/36).

Secondly, having previously viewed the local mining industry as providing locational advantages for greater economic diversification, the *Gazette* came over the course of the inter-war period to adopt a more negative perspective. The newspaper's position shifted over this time to one which viewed the mining industry as a barrier to the creation of new

economic trajectories. This issue was discussed in Chapter 3 and dispelled through the example of the Dutch State Mining company, but like many other subsequent commentators on the coal industry the *Gazette* argued that 'where there is coal it might truly be said that there are peculiar problems which make the attracting of new industries especially difficult' (DG, 6/2/1931). The newspaper did not specify what these 'peculiar problems' were but previous and subsequent articles would focus on wider socio-political issues which down the years became associated with a specific image. Part of this image 'problem' would be associated with concerns that the town might become engulfed by the politics of the coalfield which often manifested itself through industrial relations.⁸⁰

4.2.11 Industrial relations

Although industrial relations in the mining industry were low key for much of the early part of the century, the national miner's strike which broke out on March 1st 1912 was to bring local miners to the forefront of attention in the town. As the country's newest coalfield, the conditions of labour question did not arise in Doncaster; the men's interests in this respect had been covered by the price lists that the area's miners had recently obtained. A factor reflected in that late into the strike the *Gazette* felt able to write that, 'in the Doncaster neighbourhood, the past strike week has been extremely devoid of incident' (DG. 22/3/12). Rumours of the military stationed in Wheatley, whilst unfounded, would therefore have been unnecessary. The town's miners were said in fact to be in holiday mood, playing a football match against mine officials watched by 1000 spectators. Whilst the strike did not greatly affect the majority of the town's miners, nevertheless relief funds and distress committees had to be set up in some areas. The impact of the strike was felt beyond those employed in the industry with many of the town's industries intrinsically linked to mining, and would suffer accordingly. Doncaster Glassworks was the first victim, closing through a lack of coal for the

⁸⁰One of the of the reasons why the Progressive majority on the town's corporation made no move to incorporate Bentley into the Borough, despite the fact it was almost physically merged with Doncaster and used many local government services was that they wished to avoid being engulfed by the politics of the coalfield (Barber, 2007).

furnaces. The closure of the Balby Wire Works would follow. The Plant Works returned to short time working as a result of the lack of rolling stock to repair. As transportation of coal diminished, locomotive drivers began work-sharing. Many local tradesmen also suffered through the lack of work. As a result of the unemployment caused by the strike, the Doncaster Board of Guardians set up a labour yard for those thrown out of work. As the strike dragged on, coal became a rare household commodity and bags of coal reached the price of two shillings on the black market. A shortage of gas at the Carcroft gas works led to dark nights at Woodlands, as night lights remained off. Nevertheless, the strike remained solid in Doncaster.

Whilst this particular strike appeared devoid of incident and was reported in a largely positive manner, by 1921 the *Gazette's* tone began to shift. It commented in relation to the national strike that broke out that year that 'one strike is very much like another, and Doncaster, is unhappily now so frequently involved in these industrial disputes that we find ourselves writing very much the same story over and over again as they occur' (DG. 6/4/21). The strike lasted for 94 days and was quick to have an impact on the town as restrictions on fuel forced many local firms to close for the duration of the dispute or shift to short time working (Elsley, 1997). Notable examples of closures included Doncaster Wire Works which shut down in April of that year, followed by Balby Wire Works, Kilner Brother's Glass Works, Baker's Steel Works, and Stanley Oil Works. Barnett's Wagon Builders was also forced onto short time (DG. 8 & 29/4/21). The General strike which broke out in 1926 also highlighted the growing interrelationship between mining and the fortunes of the wider economy, for example leading to the closure of watchmakers Robert Farr & Sons and resulting in the Cooperative Society selling off two of its branches (Hill, 1989).

The strike was also notable for highlighting the divisions within the local Labour Party. The *Gazette* reported signs of serious differences between the general body of labour supporters in the Doncaster district and the extreme element, including members of the Trades and

Labour Council of which Mr Edgar Davies, an avowed Communist, was head (DG, 23/7/1926). The difference was most clearly articulated between the Communist-dominated Council for Action which coordinated local strike activities, and the Doncaster Labour Party (DLP). Whilst the former saw the strike in terms of socialist revolution, the DLP maintained a moderate tone throughout, even to the extent that its own Executive Committee minutes make no reference to the militant activity undertaken in the district during the last stages of the dispute.⁸¹ To what extent did the arrival of mining impact on local politics?

4.2.12 Local politics

Doncaster's political history during the early part of the century could be said to be more a reflection of the changing circumstances of the town and district rather than an instrument of its change. Before the town became associated with mining, Doncaster was like a political barometer, reflecting national trends. The political balance being held between the town's agricultural and railway interests, with a virtual monopoly of the direction and leadership of working class politics held by the town's railwaymen.⁸² However with the arrival of the mining industry, the railways' political dominance ended.

During the early part of the century, the GNR's dominance of Doncaster's industrial workforce was seen by the town's Trades' Council as a disadvantage for the newly formed Labour Party, and they hoped that the influx of organised miners would give local trade unionism a boost and rouse the town's largely apathetic workforce.⁸³ The arrival of the miners did not however seem to have had the politicising effect many hoped it would. Many of the town's local elections remained uncontested, and the town's miners remained largely independent of other trade unionists.⁸⁴ There was also a distinct lack of fraternity amongst the industrial working classes. In 1905 for example, the Yorkshire Miners

⁸¹ Yet this resulted in the conviction of 94 men for offences such as intimidation, blocking roads (Teanby, 1983)

⁸² The dominance of rail would extend beyond working class politics. From 1895 -1906, Mr Fison, a GNR Director, held the seat for Doncaster

⁸³ In 1905, the York Factory Times reported on the town's 'sleepy county apathy', and Margaret Bondfield criticised 'sleepy Doncaster', in her frustrated attempts to unionise the town's shop assistants (DG, 11/8/05; 25?10/07)

⁸⁴ Even as late as 1912 only one seat out of six was contested.

Association (YMA) did not invite the Doncaster Trades Council to their first demonstration (DG, 23/7/05). This lack of working-class cohesion within the town was again evident several years later when attempts to maximise the working class vote, and increase representation in the town received a blow with the railwaymen and Goole dockyard workers refusing to support a miner's nominee. Gradually however the effects of an organised workforce, affiliated to the Labour Party in 1909, manifested itself in the spread of confidence at grass roots level. The Trades Council felt confident enough to unveil ambitious plans to build a new trade's union club to rival the town's Mansion House (Steward, 1972).

The town's population and mining vote was growing faster than anywhere in the country.⁸⁵ This was at a time when the mining vote was becoming increasingly important in the country accounting for approximately seven out of every one hundred votes cast (Gregory, 1968). The effect the local mining vote was having on the two other major parties however provides a direct comparison of their electoral fortunes. The Liberal Party had long since benefited from mining support. In 1900 for example, the Yorkshire Miners Association (YMA) had supported Mr A. Black the defeated Liberal candidate, in direct opposition to the wishes of the Trades Council and Doncaster Labour Representative Committee. In 1906 the victorious Liberals gained over 62% of the votes cast with the mining vote again a contributory factor (Teanby, 1983). This support continued, and undoubtedly helped the Liberals to win the seat during the elections of 1910, during which the town's miners were singled out for special electioneering. The Liberals, confident of future mining patronage, subsequently unveiled plans to erect a new Liberal club in the town. For the Conservative Party however, events took a different turn. Having lost the election in 1910, the Tory candidate Mr Whitworth, blamed the mining vote for his party's failure. He announced in January's *Doncaster Gazette* that, 'the dog was wagged by the tail, for the mining vote was practically solid against us' (DG, 18/1/10). The *Yorkshire Post* also blamed the Tory defeat on 'The miners' vote, which now absolutely settles what Doncaster's representation shall be' (DG 23/12/1910). By 1912

⁸⁵ Having increased from 30% to 50% of the electorate in eight years, Gregory (1968, p118)

the President of the Conservative Association found great difficulty in finding anyone to stand for the Doncaster seat. The task for the Tories was made even more difficult by the 1918 Representation of the People Act which not only enfranchised all men and all women over thirty, but also reduced the area and changed the nature of the constituency. The question was now becoming not whether the seat was safe from the Conservative Party, but whether Labour could attract a sufficient number of votes from the Liberals (Teanby1983).

For twenty years after the Reform Act of 1885 the loyalty of the Yorkshire miners to the Liberal Party had remained unshakable. However from 1900 this mood began to change. Whilst supporting Liberal candidates in the 1900 and 1906 elections, older Liberal voting miners were gradually replaced by younger socialist orientated miners attracted by the ideas of the Independent Labour Party (ILP). By 1908 the president of the YMA broke with the union's traditional support for the Liberals stating that a miner should stand as Labour candidate at the next general election (DG, 27/11/08). Whilst it is wrong to suggest that miners represent a 'monolithic bloc', whose support for the Labour Party is unconditional and guaranteed (Harrison, 1978; Taylor,1984; Richards, 1986; Supple, 1987), nevertheless in Doncaster the potential political muscle of the miners was making the town a favourable constituency for future Labour candidates. The local trade directories reflect this change, with the 1910 Doncaster Directory for example, not only giving notice of a Division League of Young Liberals, but also of a Doncaster and District Independent Labour Party which held branch meetings twice a month and 'Labour Church Services' every Sunday (Teanby,1983). In 1912 the Doncaster branch of the British Socialist Party was inaugurated by Ben Tillet and Lady Warwick. The increasing importance of the town's new mining vote can be further demonstrated by the fact that, of the seven divisions in Yorkshire proposed for sponsorship by the YMA, only two were actually sponsored. The Doncaster division was one of them. In 1914 Mr Roebuck, a YMA man, was selected as the Labour candidate.

Before the First World War the county of Yorkshire had only six Labour MPs and few seats on local councils. However during the 1919 local elections Labour made large gains in Leeds, Sheffield, and other industrial towns. The number of Labour MPs in Yorkshire rose to twenty one by 1922, and in this year Doncaster also elected its first Labour MP. Mr. W. Paling, a miner from Bentley Colliery who having cut his political teeth on Bentley Urban District Council UDC, would represent the constituency until 1931.⁸⁶ The *Doncaster Gazette* nevertheless felt able to reflect that just as Doncaster twenty years ago could be regarded as a safe seat for liberalism, it had subsequently turned into a collection of seats at least equally safe for a Labour candidate who has the backing of the miners union (DG. 9/1/31).

Table 4:5 - General election results 1918-1938

Election	Electors	Turnout	Candidate	Party	Votes	%
1918	35,1 14	58.6	R. Nicholson	Lib	15,431	75.0
			R. Morley	Co	5,153	25.0
			Majority	Lab	10,278	
1922	37,3 10	77.4	W. Paling	Lab	13,437	46.5
			Sir R. Berwicke-Copley	Con	8,279	28.7
			R. Nicholson	Nat Lib	7,161	24.8
			Majority		5,158	
1923	39,0 27	68.4	W. Palling	Lab	16,198	60.6
			W. St. A. Warde-Aldam	Con	10,514	39.4
			Majority		5,684	
1924	40,6 33	77.0	W. Palling	Lab	16,198	52.7
			A.S Matthews	Con	14,800	47.3
			Majority		1,696	
1929	58,2 13	77.6	W. Palling	Lab	25,295	56.0
			E.A. Phillips	Con	11,016	24.4
			J. T. Clarke	Lib	8,842	19.6

⁸⁶ When the number of Labour MPs fell from forty to nine.

			Majority		14,279	
1931	61,444	80.7	A.H.E. Molson W. Palling Majority	Con Lab	27,205 22,363 4,842	54.9 45.1
1935	66,925	77.7	A. Short A.H.E. Molson Majority	Lab Con	29,963 22,363 7,952	57.6 42.4
1938	68,632	75.4	J. Morgan A. Monteith Majority	Lab Nataln.Lib	31,735 20,027 11,708	61.3 38.7

Source: Craig (1974) & Craig (1977)

Table 4:5 shows how the political affiliation of the Doncaster constituency shifted over the period. In 1918 the Liberal Party took 75% of the votes in the constituency. This however would represent a high point for the Liberals. Their position was squeezed by the rise of the Labour Party and the dominant two party system in the UK. The Labour Party's rise is clearly evident in the table. In 1922 it accounted for almost 47% of the constituency vote. With the exception of the 1931 election, this dominance would continue. Whilst the Labour Party quickly established its dominance in the parliamentary constituency, it struggled to maintain a minority presence on the town council in the 1920's, and although more successful than before, remained a minority party in the next decade. The town and parliamentary constituencies had significantly different boundaries before 1948 and so crucially different electorates.

Whilst the town elected its first Labour Councillor in 1902, a John H Kay who went on to become the town's first Labour Mayor in 1913,⁸⁷ an analysis of local politics and local election results in Doncaster during this period suggests that local politics during this period reflected, to a large degree, the interests represented within the town. Table 4:6 is indicative

⁸⁷ Kay won the town's North ward in 1902 with a majority of 106 over his Conservative opponent (DG, 7/11/1902). In the following year the constitution of the Doncaster Labour Representative Committee was published and the town also elected its second councillor, Thomas R Steels. (DG 31/7/1903). It wasn't until 1911 however that the town elected a third councillor, W.E. Crawford in South Ward (Teanby, 1983)

of the fact that throughout the inter-war years the council was controlled by a Conservative-Liberal coalition that in 1934 became a formal union of the two parties, the Municipal Progressive Association (MPA). Together they campaigned for 'progress with prudence' and against the perceived rise of municipal socialism. Where mining issues figured on the hustings there is some evidence of a sympathetic local council which in the mid 1930's for example supported local miner's claims for a two shilling per days rise, whilst condemning coal-owners demands for an increase in the price of coal. Compared to the parliamentary constituency there was a far greater diversity of employment among the town's electorate, many of whom were self employed. This diversity was reflected in the town's candidates and councillors. In terms of the Labour vote, whereas miners dominated parliamentary politics, railway workers dominated them in the town. Where local politics is indicative of the nature of the local economy they reflect a town with a broad and diverse economic base. In the 1936 local election for example candidates included a Friendly Society agent, a baker, and a printer/stationer. Mr Tom Lindley, the Independent councillor was a licensed victualler. The town's Mayor, T.H. Johnson was an architect.

Table 4:6 - Local election results, 1928-36 (selected Wards)

Ward	1928	1931	1933	1936
St Georges	Con	Ind	Con	Independent Conservative
Hexthorpe	Lib	Lib	Lib	Progressive Association
St James's	Con	Con	Con	Progressives Association
Balby	Lib	Lib	Lab	Labour (unopposed)

Source: Developed from results published in the Doncaster Gazette

With the shift from the relative prosperity of the 1920's to the economic crisis of the 1930's, the electoral fortunes of Labour in Doncaster enjoyed a revival. Its share of 29% of the vote

in 1931 grew to almost 45% in the next year. Further gains meant that by 1934 Labour had nine councillors, more than a third of the total, and overall managed to retain this number until normal political life was resumed in 1945. 1936 however recorded a 2:1 vote against Labour. Mrs Law, the Labour candidate for the St George's ward blamed the result on a poor voter turnout, which in St Georges had been as low as 39%,⁸⁸ and expressed her hope that after a few years the workers would get over their apathy.⁸⁹ However, according to Sir Ronald Mathews, the Chairman of the Don Valley Conservative and Unionist Party, the results had in fact demonstrated that workers were realising where their interest lay, and not merely voting in accordance with their trade union leaders (DG.12/11/36).

A wider analysis of the impact of coal mining on Doncaster would therefore suggest something of a cultural shift, as miners and mining began to influence the socio-political life of the town and thus affect its external image. Whilst this is clear from the changing physical appearance of the town centre and immediate area, it is also evident in the town's changing political complexion, with the local miners beginning to flex their political muscle in a variety of areas. This is particularly evident in parliamentary elections when the town's first Labour MP Mr Paling was the 'miners candidate'. It is however less evident in the town elections where Labour politics continued to be dominated by the railways. Local elections in Doncaster across the early period show that the town continued to reflect the diversity of business and economic interests in the town and dominated by the Progressive Alliance. Where mining representation is less evident in local politics it is more clearly observable in other local institutions. This has been considered in terms of local skills and training organisations but is also apparent in the provision of healthcare in the town. The Doncaster Royal Infirmary (DRI) had a system of management which recognised the financial assistance of its service users. In the early 1920's first mineworkers and then other

⁸⁸ Mean turnout for English Municipal elections that year was 45% (Davies & Morley, 2006, p.168).

⁸⁹ Ironically an Editorial in the *Gazette* two years earlier had bemoaned the fact that ten thousand electors had not bothered to vote while the 'Socialist electors' had 'turned out to the last man', and 'the day was not far distant from when Socialists would control the Council' (Teanby, 1983, p. 74)

businesses set up hospital contribution associations and workmen's contributions made up half of DRI ordinary income by 1927/8. A new constitution in 1923 recognised the financial contribution of the miners to the hospital and entitled mineworkers to 11 of the 16 seats on the newly created board. The struggle to maintain this level of influence was evident in 1931 when any increase in miners levies for the development of the town infirmary were said to be conditional on greater mining representation on the infirmary management board.

4.2.13 Conclusion

The impact of coal mining on Doncaster by the end of the early period was neither universal nor linear. Even where change was discernible such as through colliery development in the area this did not proceed in a uniform manner nor did it result in identical outcomes. There remained for example differences between colliery companies, between miners, and between mining villages which would only begin to be diluted over time (Oakley, 2002). There were also clear differences between mining related activities in the surrounding area and the town of Doncaster itself. This could be most easily observed in the physical landscape as once quiet hamlets became pit villages. The town's first Economic Planning Report was nevertheless unequivocal in its assessment of the impact of mining, stating that the miners had brought with them new occupations, and in doing so had altered the balance of the town's occupational structure (Abercombe & Johnson, 1922). Whilst railways continued to be viewed as the town's principal industry (DG. 1/1/26), mining had by 1914 replaced it as the area's largest industrial employer, employing 9,600 workers compared to the Plant works 4,600, and rising to 23,000 by 1927. The coal industry also began to impact on wider socio-political activities which extended to its political complexion although at this time local politics reflected the diversity of interests represented in the town. It also impacted on the nature of industrial politics. Both of which overtime came to be reported as indicative of a shifting culture in the town. Other impacts were also evident. For example in the growing influence that mining began to play within local institutions such as health, but of more

significance education, and in particular the industry's role in affecting local skills and employment aspirations. Although both of these factors would subsequently be identified as indicators of lock-in, the development path of the town was not inexorable at this time but better understood in relation to an embedded institutional inertia within the local authority - the local educational system was at this time representative rather than a driver of skills policy.

The *Gazette* argued that the town's leaders failed to act quickly or decisively enough in response to the challenges and opportunities afforded by the arrival of the coal industry. Windows of locational opportunities are narrow and whilst the arrival of mining had provided the town's railways with a welcome boost the town's competitive advantage as a communications nodal point was not developed significantly. In many regards the town's failure to build on the arrival of coal at this early juncture was critical as local agency would be limited from the early 1930's as regional policy began to determine the spatial distribution of industries. The town did develop new industry although a number of the more significant examples were branch plants which would also subsequently be associated with path dependent developments. However, where local newspapers are an indicator of key local debates then there is sufficient evidence from the pages of the *Doncaster Gazette* to suggest that the processes leading to a narrowing local development trajectory were also contingent on the lethargy and complacency of the local corporation (which for much of the period was dominated by the local Conservative Party) and from entrenched interest groups such as local tradesmen fearful of greater levels of competition, and from the racing press who saw the 'financial benefits accruing from the black flag of commerce', as detrimental to attracting racing visitors (DG, 3/10/09). Together this self-sustaining coalition opposed attempts at greater industrial development in the town. Gradually, this position changed, something perhaps reflected in the civic banquet toast which changed in 1913 from "municipality and trade" to "industries of Doncaster and neighbourhood" (DG, 25/4/13). However the *Gazette* remained unconvinced as to the extent of the transformation and

continued to press the town's corporation for greater levels of activity to attract new industry, whilst at the same time warning of the potential consequences should coal be allowed to dominate the local economy. There was a more proactive industrial policy during the inter-war years but the businesses that were established in the town were not on the scale or of the quality of those attracted in the wake of the railways. The local business directories also tell us something of the impact of mining on Doncaster. The relationships between industries and regional economies are complex, often developing various interdependencies. Some of these are evident in local directories which provide a record of the positive boost given to the town through supply chain linkages and spending multipliers. However these interrelationships are fine whilst the industry is growing, but less so when it is in decline, even during periods of industrial action when cessation is only temporarily. The extent to which mining had positive impacts on the town's trades and businesses is evident in both local business directories and in the pages of the *Gazette*. What is less evident is the extent to which mining provided the basis for direct spin-out or self employment opportunities. Business directories during this period highlight the limited number of opportunities offered by mining compared with all other sectors. This could have been one of the peculiarities associated with mining that the *Gazette* referred to. However, this too was not inexorable but also a factor contingent on entrepreneurial failure with the industry in general failing to invest in more innovative and emergent markets which was shown through the experiences of the Dutch mining industry to have been possible. So by 1945, Doncaster was no coal town, but there is sufficient evidence to suggest that the impact of the coal industry was growing and becoming increasingly dominant in the town. But there is also sufficient evidence to conclude that the nature of its dominance was largely contingent on wider institutional factors.

4.3 Mature period 1946-1970

4.3.1 Introduction

De-requisitioning and the return to peacetime production saw all local firms expand in the immediate post war years and by 1950 Doncaster was able to maintain the appearance of a successful and relatively diverse economy. Local town guides could legitimately report that local employment in the town was distributed across the production of a diverse range of goods, which in this particular periodical (1948) did not include coal.⁹⁰ Whilst missing from the *Annual Guide*, the newly nationalised coal industry continued to play a key role in the town's economic development throughout the period, both directly through employment and indirectly through increased purchasing power. However, whilst the local coal industry had been typified by employment growth, it began to decline from the 1960's. The resultant concerns within the town were compounded by the fact that decline in mining employment came at the same time as retrenchment by other key employers. By 1970 what had previously looked like a diverse economy was clearly exposed as an over reliance on the fortunes of a small number of large employers, including coal. The following assesses how this dominance manifested itself and explores the extent to which this was related to mining and inexorable. It argues that whilst the impact of mining was evident across a wide range of socio- economic and political factors, the nature of Doncaster's economic trajectory during this period was nevertheless largely contingent upon decisions made at all three levels of decision making. It shows that opportunities to alter the town's economic trajectory were available but were not taken, and this can be explained by recourse to the embedded nature of self-sustaining coalitions dominated by the National Coal Board (NCB) and the State. As with the earlier section it therefore highlights the diminishing level of local agency.

⁹⁰ Key local firms and sectors were listed as artificial silks (Bemberg); electrical equipment (Crompton Parkinsons), cinema seating (Gaumont Kalee Seating Ltd), wallpaper (Roxeth Wallpaper Ltd), electrical fittings (T S Morley and Co. Ltd), milk bottle (PCS Milk and Co), agricultural implements (International Harvesters), oil refineries (Kenneth Thelwall Ltd), tiled fireplace manufacture (R O Arnold Ltd). Others included, wire ropes (British ropes Ltd), brass (Peglers Ltd), iron works (Woodhouse and Sons Ltd), flour millers (T Hanley and Son Ltd), woollens (T Anderton and Son Ltd), wire fencing (Darlington Fencing Co), wagon builders (Thomas Burnett), and confectionary (S Parkinson and Son Ltd; W. Nuttall, and Radiance Ltd) (Official Guide, 1948).

4.3.2 Economic structure

Table 4:7 shows the distribution of employment in the Doncaster area by sector in 1951, 1961 and 1967. It shows that coal mining continued to be a dominant sector throughout the period. Table 4:7 shows however that mining employment had peaked and would decline throughout the period from 28% in 1951 to 23% in 1967. This resulted in the loss of 4,600 local miner's jobs between 1959 and 1967 (Table 4:8) which represented 18% of total local employment. Job losses came as part of a wider rationalisation in the UK coal industry, and although the numbers were less than the Yorkshire and Humberside regional reduction (25%) and much less than the national picture (35%), they came despite the change in the National Coal Board's retirement policy, which in 1960 resulted in compulsory retirement of all men over 65 years old.

Table 4:7 - Employment by sector 1951-67

Year	Primary (%)	Manufacturing	Construction	Distribution *	Services
1951	28	29	8	16	22
1961	27	30	6	*	33
1967	23	31	9		39

* Figure not available for 1961.

Figures for 1967 from DEA (1969)

Despite this decline in employment, coal mining would remain the Doncaster area largest single employer throughout the period. By 1967 the NCB employed 20,800 workers, whereas within the Yorkshire and Humberside region and nationally the primary industries represented 7% and 4% respectively of total employment (DEA, 1969). Although most employment in the local mining industry was at the local collieries in the surrounding villages, about 2,000 people were also employed in the town itself at the Doncaster Area Headquarters of the National Coal Board. The significance of the coal industry to the town at this time is perhaps best symbolised by the new multi-storey office block, Coal House, which the NCB built on College Road in 1966, and by the decision to locate sections of the national administrative organisation concerned with purchasing and stores, computer services, finance and production, to Consort House. Many of these new posts were filled by women, itself indicative of a gradual labour market trend towards female employment in the town.

Table 4:8 - Decline in employment in coalmining 1959-1967

Industry	1959	1963	1967	1959-63	1963-67	1959-67
Coalmining	25,400	22,300	20,800	-3,200	-1,400	-4,600

Source DEA, 1969. Figures rounded up

Table 4:9 - Employment changes 1959-1967: Summary

Industrial category	Total Employees 1959 (%)		Total Employees 1967 (%)		Changes 1959-67 (%)		
	Males	Females	Males	Females	Males	Females	Total
Primary	26.5	0.9	21.3	1.2	- 5.2	+ 0.3	- 4.9
Manufacturing	22.8	7.5	22.2	8.4	- 0.6	+ 0.9	+ 0.3
Construction	5.1	0.5	8.2	0.5	+ 3.1	-	+ 3.1
Services	16.8	15.8	17.7	21.1	+ 0.9	+ 5.3	+ 6.2
TOTAL	71.3	24.6	69.6	31.3	- 1.7	+ 6.7	+ 5.0

Note: Due to rounding individual components do not necessarily add up to the total (DEA, 1969)

Table 4:7 shows that the largest sector by employment in 1951 remained manufacturing representing 29% of all employees and that employment in this sector would grow marginally throughout the period, representing some 30,500 people by 1967 (DEA, 1967). However, table 4:9 shows that all of this growth was accounted for by female employment, with male employment in manufacturing actually declining between 1959 and 1967. Although the largest individual industry sector, vehicle manufacture (6,800), had a predominately male workforce, there was also strong sectoral employment evident in engineering and electrical goods (4,400), and in the manufacture of electric motors and electrical components. Table 4:10 shows that female employment tended to be clustered in this sub sector. Crompton Parkinson Ltd and GEC Machines Ltd are two examples of female dominated engineering companies in the town. By 1976 Cromptons employed 1500 people, 2/3rds of whom were female and GEC employed 640 of whom 421 were female (Official Guide, 1976).

Table 4:10 - Employment and gender, 1976

Company	Employment in 1976	Male	Female	% of females in workforce
BREL	3250	3050	20	0.6
British Ropes/Bridon	1778	1436	342	19
Cementation	500	420	80	16
ICI	2400	2300	10	0.4
GEC Machine Ltd	640	219	421	66
International Harvesters	4000	3760	24	0.6
Mining Supplies	1000	950	50	5
Peglers	1905	1306	59	3
Pilkingtons	420	370	50	12
Rockware	1100	970	130	12

Source: Based on figures in Doncaster Town Guide (1976).

The manufacturing sector employment was relatively widely spread over a range of other activities and firms, including tool-making, and also the manufacture of mining machinery and equipment. Whilst no mining machinery firms had been established in Doncaster before the war, greater levels of activity are evident following nationalisation of the industry. Seven mining manufacturers were registered in the local business directories in 1967. Two of which were Don Valley Engineering Co. Ltd (which was established in 1947, and specialised in the design of coal preparation plant) and Mineral Wealth and Co Ltd (which was established in Askern in 1967, manufacturing underground cutting equipment). Employment in the remaining metal-using industry (4,300) was, as with vehicles, substantially dependent on two firms, Peglers and British Ropes.

The textile industry provided 4% (3,700) of the Doncaster area's total employment. The most significant firm was British Nylon Spinners which had been established in the town in 1955 on the former site of Bemberg Ltd. Three firms in the glass industry making plate glass,

glass bulbs and containers accounted for 80% of the 4,200 employees in the bricks, pottery, glass and cement industry. The remainder were in smaller firms, mainly employed in brick, tiled fireplace and concrete manufacturing. The 7,200 employees in the remaining manufacturing industries covered a wide range of industries and small to medium sized firms. These included lubricants specialists such as Kenneth Threwell Ltd of Churchill Road Doncaster, which produced specialist oils for the coal industry, but did not include any coke plants.⁹¹

Over a quarter of the 7,200 employees were in the food, drink and tobacco industries, baking and sugar confectionery being the major activities with smaller numbers in flour milling, brewing, milk products, poultry processing, preserves and soft drinks manufacture. Much of this is reflected in the local trade directories of the time. Table 4:11 for example shows the numbers of food and confectionery manufacturers registered in the Local Business Directory in 1967. It shows that Doncaster continued to have a significant cluster in this sector, with the numbers of businesses registered in the local trade directories rising from 217 in 1936 to 378 by 1967.

Table 4:11 - Food and confectionery manufacturers registered in the local business directory 1967

Bakers	17
Confectionery	16
Brewers	4
Ice cream	6
Milk products	1
Mineral water	4
Total	48

⁹¹ Whilst the NCB took over most of the colliery based coke plants after nationalisation none were developed in the Doncaster area, and of those remaining in private hands the closest was the Bawtry Coke Oven and By-Products Plant, owned by the Barber and Walker Company Limited.

A rather smaller proportion of local people were employed in clothing and footwear, although many of these were women, many of whom were employed at SR Gents, a multiple tailoring firm, and at Montague Burton, a men's clothing manufacturer which had moved into the town in 1950. Other manufacturing industries included wood machining and sawmilling, newspaper printing and publishing, iron founding, smokeless fuel manufacture.

The local construction industry grew from 5.1% in 1959 to represent 8.2% of total employment by 1967. This significant increase in employment followed a slump in the immediate post war years, with local firms especially small firms suffering from a shortage of materials (DG, 25/10/45). The sector began to recover from the early 1950's due to significant investment in new building projects such as the Doncaster Bypass Station and Thorpe Marsh Power Station. Whilst employment levels fell back, particularly in 1956 with the local industry affected by the worse gales to hit the town since 1936, employment levels recovered and grew over the course of the 1960's. Much of this employment growth was associated with access to local authority building contracts related to the re-development of the town centre, particularly the construction of the Arndale (1964) and Waterdale (1965) Centres, as well through large school contracts and the continued investment in roads. Whilst this level of investment did not appease all local business interests it was a significant factor in the buoyancy of the construction sector during this period, and is reflected in the increased number of construction businesses registered in the local directories which reached 487 in 1967.

The service sector witnessed the greatest increase in employment during the mature period increasing from 22% in 1951 to 39% by 1967 although this proportion was still lower than that for the Yorkshire and Humberside region (43%) and the national economy (51%). Much of this growth was in female employment and reflected the increasing importance of the public sector to local employment, particularly in education and health care. There was also a rise in services more broadly for example in catering and motor repairing services, and

within the professional and scientific and miscellaneous services groups (DEA, 1969). The rate of growth in the distributive trades group in the area was higher than that recorded nationally and contrasted with a small decline regionally, with retail distribution accounting for four fifths of employees in distributive trades. This increase is reflected in the increase in the number of businesses registered in the local business directories which in 1967 reached 2,357.

Despite Doncaster's acknowledged status as a communications nodal point, transport and communications was the only sector to contract during this period falling 28%, losing employees at a faster rate than regionally or nationally due to the importance locally of railway employment. Again this decline is evident in the local directories which although indicating 110 businesses registered, an increase of five from the 1936 entry, it nevertheless reflects a significant reduction in proportion with the numbers of businesses registered in directories in 1936 and 1967.

4.3.3 A rich town

For much of the period the local newspapers were openly promoting Doncaster as a 'rich town' (DG, 3/2/55). The Macmillan boom of the later 1950's had helped ensure that the local building trades had full order books. When combined with new motorways being built and industrial estates planned at Kirk Sandall and Marshgate, the economic future of the town looked promising (see appendix 8). Rising levels of affluence were reflected in an entrepreneurial spirit evident in the reports of new businesses started or bought, many of which involved former employees. A.E Spink Ltd for example was bought by a number of former employees upon being demobilised from the army in 1945 (OG, 1956), J.A Gaunt, an instrument manufacturer was started by the town corporation's ex-clock repairer, and the former sales department chief of Bemberg Ltd also set up in business making rayon and nylon for women's underwear, and employing many of the women who used to work with him at Bemberg. Established businesses also benefitted and the town's shops remained

busy throughout the decade. One returning visitor from Australia was reported as being amazed at the quantity and variety of goods to be bought in the shops in the town compared with five years previously (DG, 15/12/55). The overall level of business confidence extended to the surrounding pit villages with the Rossington Chamber of Commerce being revived in 1956 (DG, 19/1/56).

Much of this relative affluence was underpinned by the mining industry, either directly through employment or indirectly through supply chain contracts or consumer spending power, with output at Doncaster's pits reaching record levels in 1954 leading to higher bonuses and more money spent in the town's shops (DG, 5/1/55). One happy car salesman stated that the best customer for cars were the miners, who he suggested, are happy to pay high prices (DG, 26/5/55). Doncaster's relative affluence was also identified by one government survey which compared retail turnover in 1950 and 1961. It found that the figure per head of population in Doncaster as £157 in 1950 and £299 in 1961. The average for a dozen similar towns in Yorkshire, Lancashire, Lincolnshire, Nottinghamshire and Derbyshire was significantly lower, at £123 and £213 for these two years (Barber, 2007). If Doncaster had come to occupy the humble role of shopkeeper to the colliery population, as the *Gazette* had warned half a century earlier, it certainly seemed to have benefited from it. Table 4:12 shows production at local collieries continued to improve and in 1967/68, Doncaster's collieries produced over nine million tonnes of coal, with the main customer, the electricity generating board taking about a third of output. 'Bull week' at Christmas 1967 saw productivity increase by 25% on the same week the previous year, rising from 38 cwt per man to 48.6 cwt and with three of Doncaster's pits: Brodsworth, Rossington, and Markham breaking production records (DG, 21/12/67).

Table 4:12 - Coal productivity at Doncaster area collieries 1963-68

	Year	Tonnage	% of GB total
Output of saleable coal ('000 tonnes)	1963/64	9,848	5.2%
	1964/65	10,272	5.6%
	1965/66	9,750	5.6%
	1966/67	8,601	5.2%
	1967/68	9,349	5.7%

Source: *Ministry of Power Statistical Digest, 1967*

4.3.4 Earnings

The extent to which Doncaster maintained its level of affluence can be gauged from an analysis of local earnings. Although statistical information about earnings is not available for areas as small as Doncaster, nevertheless regional data of the earnings of male manual workers in different manufacturing industries are available and can be used to provide some estimate of earnings levels in the study area. This of course involves assuming that the local level of earnings in each industry was the same as the regional level. Table 4:13 shows the proportions of males employed in the Doncaster area in those manufacturing industries in which regional average earnings in 1968 were respectively above and below the regional average for all manufacturing industries. 57% of males in manufacturing in the study area were in industries with earnings above the regional average of 425s. 8d compared with only 41% regionally. Moreover 35% of the town's male workers were in industries receiving 30s. or more above the regional average, whereas the corresponding regional proportion was only 20%. The composition of the lower half of the table also reveals a relatively favourable position for the town's inhabitants. Only 1% of the town's workers were in industries receiving 30s. or more below the regional average compared with 16% regionally. It seems reasonable, therefore, to draw the broad conclusion that the earnings of adult male employees in manufacturing were significantly higher in Doncaster than in the wider region, and thus nearer to, but still below, the U.K. average, which in April 1968 was 456s. 6d.

Table 4:13 - Average weekly earnings of adult manual workers April 1969

Males employed in those manufacturing industries in which the regional average weekly earnings for male manual workers were:	Percentage	
	Doncaster	Yorkshire and Humberside
(a) above the overall regional average (425s. 8d.)		
40 /- or more above	26	16
30/- or more above but less than 40/-	9	4
20/- or more above but less than 30/-	2	5
10/- or more above but less than 20/-	13	8
Less than 10/- above	7	8
TOTAL	57	41
(b) below the overall regional average (425s. 8d.)		
Less than 10/- below	22	20
10/- or more below but less than 20/-	9	12
20 /- or more below but less than 30 /-	11	11
30/- or more below but less than 40/-	-	12
40/- or more below	1	4
TOTAL	43	59

Note: The employment statistics on which this table is based relate to mid-1967 (DEA, 1969)

Although there are no equivalent regional statistics of earnings in coalmining, the national average weekly earnings of males twenty one years and over (all classes of mineworkers) employed in the industry, including allowances in kind, was 513s. 3d. in April 1968. This was a substantially higher figure than the regional average for adult manual workers in all manufacturing sectors, and maintained the broad trend previously identified during the 1950's (Barrett Brown, 1967).⁹² Although these two rates are not strictly comparable,

⁹² This appears to be a continuation of the situation during 1950s when miners were found to be the amongst the most highly paid manual workers, with weekly wages (excluding allowances) 29%, and hourly wages 49%, above the averages for industry as a whole (Barrett Brown, 1967, p. 141).

particularly since coalmining earnings fluctuate from area to area and from colliery to colliery, nevertheless the generally productive and viable nature of the town's collieries suggest a level of earnings at least not below the national level and probably above, a conclusion supported by information available in the National Coal Board's *Annual Report and Statement of Accounts*, 1967/8. The *Doncaster Area study* (1969) shows average weekly earnings of wage-earners (all ages) in the Board's Doncaster Area to be 462s.2d, including allowances in kind, compared with the corresponding Great Britain average at the time of 450s.

4.3.5 Housing

Average earnings are only one way of assessing the wealth of a particular area. The rateable value of a house is a general indicator of its size, condition and environment (although rates tend to vary in different parts of the country) and is often used as a proxy for a locality's wealth, with houses over £100 at the time tending to be associated with professional occupations. Table 4:14 shows that whilst Doncaster had a lower percentage of cheap houses than both the Yorkshire and Humberside region and England and Wales as a whole, it also had a lower stock of the more expensive housing.⁹³ It is also perhaps indicative of the fact that between 1946 and 1966 whilst private enterprise constructed slightly more than 2,000 houses, the local authority had committed to clearing poor quality working class housing and over 6,000 council houses were built (Barber, 2007).

⁹³ Various Yorkshire area studies show something of a variety. In Halifax and Calder Valley for example houses with a rateable value less than £30 accounted for 57%. In Huddersfield and Colne Valley this figure was 48%. Sources: Halifax and Calder Valley, *An Area Study*, HMSO, 1968. Huddersfield and Colne Valley, *An Area Study*, HMSO, 1969. Joint Doncaster Area Study, HMSO, 1969.

Table 4:14 - Housing (rateable value) 1968

	Under £30	£30-55	£56-100	Over £100
Doncaster	11.1	53.4	31.2	2.6
Yorks & Humber	28.5	41.0	22.6	3.7
England & Wales	14.2	27.3	38.8	17.1

Source: Dept of Economic Affairs, 1969

4.3.6 Politics

Local affluence could also be reflected in the changing political complexion of the town. Having developed into a relatively safe Labour seat before the outbreak of the Second World War, Doncaster became a marginal Parliamentary seat for much of this period, with the town's electorate shifting from Labour to the Conservatives during the relative affluence of the 1950's. Table 4:15 shows that during two successive elections (1951 and 1955) the ex-railway worker Ray Gunter was defeated by the Marlborough and Cambridge educated Conservative Minister Anthony Barber. This was a result of some significance as it represented one of only two seats that the Labour party lost in the Yorkshire area between 1944 and 1974.⁹⁴ Gunter's immediate replacement, W.E Garratt, a nominee of the Amalgamated Engineering Union (AEU) was also defeated in 1959. Garrett and Gunter's candidature also illustrates the limited relationship between the parliamentary constituency and the mining industry at this time. Only Harold Walker, who would go on to represent the town for over thirty years from 1964, had any real connection with the mining industry, his father having been a Lancashire miner. However Walker, was a toolmaker, and like all other candidates whilst emerging from active trade union roles, this was more typically associated with the transport and manufacturing industries. A similar picture emerges from an analysis of local politics.

⁹⁴ The *Doncaster Gazette* in reporting on the forthcoming elections could not however fail to show its political colours noting that during the town's mock election held some days prior to the General Election, the youngsters of the town had voted overwhelmingly for the Liberal party, which the paper suggested promised a different political future for the town.

Table 4:15 - General election results 1950 - 1970

Election	Electors	Turnout	Candidate	Party	Votes	%
1950	56,081	85.6	R. J. Gunter	Lab	24,449	50.9
			A.P.L Barber	Con	23,571	49.1
					878	1.8
1951	57,581	86.2	A.P.L Barber	Con	25,005	50.4
			R.J. Gunter	Lab	24,621	49.6
					384	0.8
1955	58,117	81.8	A.P.L. Barber	Con	24,598	51.7
			R.J. Gunter	Lab	22,938	48.3
					1,660	3.4
1959	58,505	84.5	A.P.L. Barber	Con	26,521	53.6
			W.E. Garrett	Lab	22,935	46.4
					3,586	7.2
1964	57,746	82.7	H. Walker	Lab	23,845	49.9
			Rt. Hon. A.P.L Barber	Con	22,732	47.6
			G.P. Broadhead	Ind	1,201	2.5
					1,113	2.3
1966	56,013	81.2	H. Walker	Lab	25,777	56.7
			J.M. Whittaker	Con	19,689	43.3
					6,088	13.4
1970	59,755	74.9	H. Walker	Lab	22,658	50.7
			P.Davies	Con	19,431	43.3
			W.T.W. Blades	Lib	2,648	5.9
					3,227	7.3

Source: Craig, F.W.S (1971) *British Parliamentary Election Results 1950-1970*.

The enlargement of the council, planned but not put into effect before the war, meant that there were now twelve wards returning 36 councillors. Table 4:16 shows local election results for the period 1945-1972. It shows that the Labour Party won control of the Council in

1945 for the first time, winning twenty six seats.⁹⁵ It also shows that Labour would remain the dominant party in the town throughout the period holding clear majorities other than in 1951 and 1969. However, table 21 shows that of the twelve wards which now made up the town⁹⁶ only half could be considered to be 'Labour wards'. These wards tended to be in the central or railway dominated wards of Hexthorpe and Balby, with the more affluent areas such as Town Fields, St Georges and Bessacarr consistently returning Progressive, Independent and/or Conservative councillors. As with the earlier period, local election results show that they continued to reflect the diversity of the local economic base, and where labour politics was concerned the railway industry tended to provide the largest number of candidates. A number of reasons can be put forward to explain the paucity of mining candidates. They include a general reluctance of Yorkshire miners to join the Labour Party as individual members, and a more systemic failure by miners to organise and mobilise their full delegate entitlement (Oakley, 2002). However the continued dominance of the railway industry in Doncaster local elections at this time was perhaps more a practical reflection of the reality that the majority of local miners at this time preferred to live close to their places of work and stand as candidates in Rural Council elections.

Thus despite almost half a century of mining involvement in the area only two of the twenty two Labour Councillors elected to the Doncaster Council in 1945 were associated with mining. One of these, a Mr Herbert Martin, was a Publican who had previously worked as a Deputy at Bullcroft Colliery (DG, 15/11/45). Six Labour Councillors were associated with the railways, and six with the town's manufacturing industry. Of the six candidates for the Bye Election in 1945, six were railwaymen and none were miners (DG, 27/9/45; 18/10/45; 15/11/45). There is no evidence that this changed over the course of this period. For example, of the twenty seven candidates standing in the 1955 local election only one was a miner although a local coal merchant also stood. The railways again provided the highest

⁹⁵ Labour won 26 seats, Progressive 8, Independent 2 (DG, 8/11/45)

⁹⁶ includes Cantley from 1951

number of candidates, and in the same year the position of town Alderman was won by a Mr. Ogden who was an engine driver. Table 4:16 also shows the continued success of the Progressive Party and reaffirms that local politics during this period remained representative of a wide range of local interests, with no one sector or interest dominating. Overall diversity is best reflected in the Progressive Party candidates who tended to be drawn from small businessmen. During the 1945 election for example candidates included builders, auctioneers, surveyors, butchers, and other businessmen.⁹⁷

⁹⁷ See candidate biographical details in DG, 27/9/45; 18/10/45

Table 4:16 - Local election results. Doncaster wards, 1945-1972

Ward	45	46	47	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
Balby	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	Nd	Nd	Nd	L	L	L	L	C	L	L	L
Bessacarr	I	I	P	I	I	P	I	I	P	I	I	P	I	I	P	I	C	C	C	C	C	C	C	C	C	C	C
Central	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
Hexthorpe	L	L	L	L	L	P	L	L	L	P	L	L	P	L	L	L	L	L	L	C	L	L	C	C	C	L	L
Hyde Park	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	C	L	L
Intake	L	P	P	P	P	P	L	L	L	C	L	C	C	C	C	C	L	L	L	L	L	L	C	C	C	L	L
St Georges	L	P	P	P	P	P	P	P	L	P	P	L	P	P	P	P	P	L	P	P	P	P	P	C	L	L	L
St Johns	L	I	I	I	I	I	L	I	I	I	I	I	I	I	I	L	L	L	L	I	L	L	I	I	L	L	L
Town Fields	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	C	P	C	C	C	C	C	C	C	C	C
Westfield	L	L	L	L	L	L	L	L	L	L	L	L	LL	L	L	L	L	L	L	L	L	L	C	C	L	L	L
Wheatley	L	P	P	P	P	P	P	L	L	P	L	L	L	C	C	C	L	L	L	C	C	C	C	C	C	L	L
Woodfield	L	L	L	L	L	L	L	L	L	P	L	L	L	L	C	L	L	L	L	L	L	L	C	C	L	L	L

Source: British Local Election Results 1889-2003

nd no data

Key

L = Labour C = Conservative P = Progressive I = Independent

4.3.7 The contingent nature of vulnerability

Political issues remained focused on the town's economic fortunes, principally the attraction of new industry. The Progressive Alliance Councillor Mayor E.H. Shaw, fought the 1945 local elections on a platform of 'cheap land, education, housing and the attraction of new industry' (DG, 18/10/45), although her campaign like other Progressive candidates before her also stressed the caveat of a need for prudence. This caveat clashed with the more pro-investment policy urged by the *Gazette* which campaigned on the need for the local authority to prioritise investment in a modern economic infrastructure it was argued was needed to attract and retain new businesses and their families. In more enterprising boroughs, the paper suggested 'commodious community centres had been provided, whereas in Doncaster there had been no town planning', which it argued had resulted in overcrowding and an overall shortage of housing (DG, 1/11/45). Greater levels of planning and investment followed the election of a Labour council in 1945. However the council's prioritisation of investment in affordable housing was at the expense of larger dwellings and led to clashes with the Doncaster and District Federation of Building Trade as well as the Progressives.⁹⁸ Moreover, Samuel Smiths (Tadcaster) Brewery Ltd argued that this policy was at the expense of wider business opportunities with the council switching the use of land from warehouse and light industry to residential purposes (DG,19/1/56), and indicative of an anti-business policy, with the Council accused of rating businesses and shopkeepers on current day (1955) values rather than the 1939 values that it had used to assess householders (DG, 28/1/56). It is certainly true that the council's prioritization of social housing led to an imbalance in the housing mix which would subsequently have negative consequences in terms of attracting professional and managerial staff, but underestimates efforts to attract new business. In fact the Council's efforts to attract new business were often blocked by local people in Progressive dominated wards. For example, the Council felt obliged to refuse

⁹⁸ Mr W. Lister, President of the Doncaster and District Federation of Building Trade questioning the rate of house building in the town. He suggested that eighty-two private houses had been built in 1953, 104 in 1954, and 135 in 1955. Only two schools were built during this period, one of which was built by a member of the Federation (DG,16/2/56).

planning permission for Ruddick Meishaw Ltd, a civil engineering company from Wealdstone to build a new factory in Bessacarr due to complaints from local residents (DG,16/2/56). Local opposition to the factory remained despite plans to build on an ex-quarry site. Problems with planning permission would continue to hamper efforts to attract new business. Don Valley MP Richard Kelly's promises to fight red tape to help a London firm set up a new factory in Armthorpe, came to nought as the Rural Development Council refused to extend the leasehold beyond ten years. Ford Motor Company was refused planning permission to develop an old sports ground at Sprotborough for light industry and warehouse use (DG, 21/12/67).

4.3.8 Contingent nature of locational advantages

Whilst local agency remained a factor in determining the town's economic development path, wider external factors were also prominent at this time. The extent to which the town's development path was contingent on factors outside of the town's control can be considered via an analysis of survey data from new and prospective business which focus on the town's locational advantages.

Between 1945 and 1968 53 manufacturing firms located in the town. Table 4:17 shows that in terms of employment the most significant businesses were established in the immediate post war period and included ICI Fibres which manufactured nylon fibre⁹⁹ and Crompton Parkinson (1946), which produced motors and light fittings. Both firms expanded to become major employers within the town. ICI Fibres employed 500 workers in 1955, but grew to employ seven times as many by 1971, with Crompton Parkinson's employing 1,500 by this date (Barber, 2007). Other significant firms to set up in the area during this period included Bartol Plastics (1960) and Mining Supplies (1969). Smaller manufacturing businesses included Doncaster Engineering Co Ltd founded by Frank A. Stanbridge in 1947. However, many of the new businesses started in premises vacated by other firms, suggesting that the

⁹⁹ Closed in 1996

net impact was not always optimal. The best example of these was British Nylon Spinners (BNS) which effectively replaced Bemberg Ltd. BNS was typical of many of the town's manufacturers producing products and materials for a range of local industries. The nylon produced by BNS for example was used for carpets and car tyres, but also for colliery conveyor belts (OG,1976).

Table 4:17 - Analysis of fifty three manufacturing units established between 1946-68

Periods in which units were established	Number of cases	Total Employed at:		
		Mid-1960	Mid-1967	Mid-1968
1946-1953	28	3,797	4,630	4,819
1954-1959	9	4,334	4,194	3,957
1960-1968	16	60*	1,000	989
1946-1968	53	8,191	9,824	9,765

Source: *Department of Economic Affairs (1969)*

*Two units established in early 1960 account for this figure.

Table 4:18 shows that of the new businesses to locate in Doncaster between 1945 and 1968 a high percentage identified the town's status as a communication centre as the key locational factor. Although this percentage was slightly lower than in the period before 1945 it shows nevertheless that communications remained the basis of local competitive advantage. This advantage could have been extended further had the town Corporation Airport Committee pushed forward with its plans to develop the local airport. The development of Doncaster airport had been the subject of discussion for some time although the war had given the initiative a much needed boost with the airport playing an important role in the repair of bombers. Subsequently development plans were submitted, which attracted private sector interest, and which were based on extending the airport's connectivity within the region, especially in relation to Sheffield. However, the City of Sheffield's opposition to the initiative ended the development (DG, 2/8/45). When the airport

returned to commercial use in 1953, the estimated cost of competing with other municipal airports was judged to be too great (Barber, 2007) and Doncaster would have to wait another half a century before it would have its own airport.

Table 4:18 - Advantages of location pre and post 1945

Groups of Advantages	Number of firms quoting each advantage		
	Pre-1945	Post-1945	Total
Labour	9	19	28
Of which availability of female labour	3	9	12
Communications	17	12	29
of which road	7	9	16
of which rail	6	5	11
of which air and canal	4	3	7
Proximity to Markets	1	9	10
Links with the Coal Industry	5	6	11
Of which supplies of materials and power	4	3	7
Proximity to Supplies (other than coal)	6	2	8
Other miscellaneous factors	8	16	24
Total firms responding	24	27	51

Source: Department of Economic Affairs (1969)

Doncaster could also offer access to cheaper strategic resources such as gas and electricity, low cost of water, and important local resources such as sand, gravel and limestone. Table 4:18 shows however, that coal remained an important source of energy during this period. Prospective industry also identified positive environmental factors. These included a good supply of affordable housing, the facilities of a well developed service centre in the modernised central area of Doncaster, and a good supply of land for industry. Available land included large areas, well located in relation to the motorway pattern planned for the mid-1970s, and included a wide range of industrial premises especially on the Wheatley Hall

industrial estate (Appendix 8).¹⁰⁰ Notably however, whilst the stock of factories was said to be of good quality, its quantity was seen as comparatively restricted as much of the available industrial land was owned by the National Coal Board. Although the local Coal Board was prepared to sell land for factory development this was not without conditions. For example, in the case of possible factory development on the Broomhouse Lane site at Edlington (Yorkshire Main), the Coal Board took active steps to prevent any new potential industries recruiting miners from the local colliery. Whilst the Board expressed a willingness to consider the sale of land, this would be based on the explicit understanding that any agreement must be based on two conditions. Firstly, and in order to retain its own workforce, any new industry must prioritize female employment. This condition followed an enthusiastic response in 1966 to the Coal Board's call for voluntary redundancy which resulted in local pits reporting a shortage of labour. Whilst this might be interpreted as a reflection of wider disillusionment amongst local miners it was also seen as an indicator that miners could only be attracted and retained in local collieries if their wives and children also had appropriate job opportunities (DG, 17/11/66). The second condition effectively gave the Coal Board veto powers over use of land and is illustrative of how dominant industries and employers are able to influence the nature of local economic trajectories. In a letter dated 13th June 1967 and discussed at the Light Industry Committee of Doncaster's Rural District Council, the Coal Board stated with regard the potential use of the Broomhouse Lane site, that the Council should keep the Coal Board informed so that they might 'have the opportunity of making observations on any specific developments'.¹⁰¹ As the Coal Board Area Director, Peter Treselles stated, 'Yorkshire Main makes a great deal of money and obviously we have to protect our resources' (DG, 14/12/67). Negotiations between the Board, the Rural District Council and a number of prospective firms dragged on for over a year but would prove to be fruitless. The Area Estate Manager of the Board subsequently accepting that 'the difficulty

¹⁰⁰ The A1(M) Doncaster By-Pass was opened in 1961. Work on the M18 began in 1967 and was completed in 1979.

¹⁰¹ Doncaster Archives, RD/DON/ 2/171/ Minute book: 687.

was probably the clause designed to ensure that the Board's capacity to recruit labour, was not seriously impaired.¹⁰²

The influence of the Coal Board in this case is clear but its demands were never seriously challenged within the local council which tended to be dominated by mining interests. Committee minutes from the Rural District Council Light Industry Committee and subsequently the town's Industrial Development Committee show that between April 1967 and April 1969 the issue of Broomhouse Lane site was a standing item on the agenda. They show that during this time the Coal Board's clauses were never challenged by the Council representatives with decisions deferred on more than one occasion. They also show that the Council could have exercised an option to purchase the land outright from the Coal Board thereby removing any restrictions on land usage but this option was only recommended in April 1969 by which time much of the interest in the site had gone.¹⁰³

That this particular opportunity came at the time of the publication of the *White Paper on Fuel Policy* in 1967 is significant. The White Paper identified that the declining share of the energy market held by coal and the increasing need for mechanisation to reduce costs and increase productivity would result in a continuing and permanent decline in employment in the industry. In this regard it represents a critical juncture in Doncaster's subsequent economic trajectory. Whilst senior members from the Coal Board, such as Mr William Crookes, Director of the Purchasing and Stores Division acted as an unofficial ambassador for the town in its efforts to attract new industry (DG, 7/12/67), this clearly must not be at the expense of the interests of the Coal Board. In this regard its attitude seemed to be at variance with the attitude of other large employers, a tangible illustration that as long as the Coal Board remained a dominant player in local decision making, and irrespective of the longer term needs of the community, mining would remain a constant in any envisioned

¹⁰² Doncaster Archives, DRDC Industrial Development Committee 9 April 1969, DRDC RD/DON/2/171/

¹⁰³ Doncaster Archives, DRDC RD/DON/171/1

economic future.¹⁰⁴ The prosperity of the town (and wider area), it continued to be argued, 'had been built on coal and it can confidently continue to depend on coal' (Doncaster Official Guide, 1967/8, p. 45).

Consideration of any genuinely alternative scenarios which for example included a post coal future for the town was left to the *Gazette*, which suggested that it was not 'too early to think about such a thing.' The newspapers support for the local mining industry had always been qualified by an overriding concern that coal might come to dominate the town rather than act as a magnet for newer industry, and/or as the basis for related business opportunities through diversification. Diversification opportunities extended to coal's legacy as well as to its principal product. The *Gazette* argued:

Surface buildings would be fine for other use. Every pit is linked to a railway. Pits have more sidings than other industry. Every pit has an in-built power supply. In fact they could own a natural gas supply. The gas from several local pits has been drained off already and piped to Manvers Main carbonisation plant. In other pits it is piped to the surface and dispelled. This is a major selling factor (DG, 14/12/67).

Unsurprisingly this particular campaign did not go without criticism particularly within the mining unions and mining-dominated Rural District Councils, whose gate keeping role cannot be underestimated when assessing the nature of economic decline. However the *Gazette's* campaign by highlighting the need for longer term local economic planning was as relevant to those immediately involved in the industry as it was to all other stakeholders. In planning for the demise of the coal industry the paper highlighted the possibility of diversification into alternative and emerging energy sectors. Crucially it also recognised the need for local authorities to be given early warning of planned closure so as to give them

¹⁰⁴ Minutes from the DRDC Light Industry Committee show that access to land owned by British Rail for example, whilst often the subject of protracted negotiation did not include the 'red lines' introduced by the Coal Board in the Broomfield House Lane site example. There were other similar cases at this time, for example access to land and building owned by Pilkington Brother Limited, were offered up willingly in support of the local council efforts to attract new industry. 15th November 1967. Doncaster Archives, RD/DON/ Minute book: 694

time to attract and establish new business, and that any pit closure should guarantee work for redundant miners both in decommissioning, and also in the new factories.

Image

The town's *Annual Guides* provide an alternative, if not always objective perspective on the contingent nature of the town's locational advantages. Produced essentially as glossy marketing literature to promote a certain image of the town, the guides paint a picture of a modern town within a rural and historical setting. References to industry, and certainly coal mining, are more implicit than explicit with coalmining not included as a Doncaster industry until the 1967/8 Guide, and this inclusion the result of the Coal House development in the town centre. However a careful reading of these documents provides insight into the town's sense of identity. The 1951 Guide introduces the town thus:

'From certain aspects, Doncaster would barely appear to be a thriving centre of a large industrial area. So pleasant it seems with its tree lined roads and open spaces – Its industries are mainly placed on the Western fringes of town, away from its residential areas'

This image is maintained throughout the decade as the Guide's author continues his journey into the town from the north, down the Great North Road, past the racecourse and Bessacarr, entering the town through Bennetthorpe. By avoiding other routes in to the town, the guides were able to carefully avert the reader's eye from what was clearly perceived to be the less attractive aspects of the town. Some of these aspects, particularly the numerous mining spoil tips and derelict sites were identified as inhibitors to the town's policy of attracting new business (DEA, 1969). The changing physical environment also became an issue of some concern to the town's residents. A survey of the local population in 1972 found that 79% of respondents were in favour of doing more to improve the appearance of spoil tips. Efforts were made by the local council to address this problem but their endeavours were often contingent on the support of the Coal Board whose action was also contingent to a degree on wider institutional considerations. For example, Doncaster council offered to

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move waste from Cadeby Colliery to use as in-fill at Doncaster Carr, but this suggestion was blocked by the Coal Board which was concerned that independent action on behalf of the local council would hinder their efforts to access government subsidies to deal with spoil tips (Doncaster Civic Trust Newsletter, June, 1972).¹⁰⁵ The town's inability to address the more observable aspects of its mining image had a direct effect on its success in attracting new business and employees, as well as preventing migration. The *Doncaster Gazette* reported on a John Moorhouse, a linotype operator who having recently returned from Australia said he would not be staying in 'dirty Doncaster' (DG, 14/12/67). A negative attitude towards the coal industry might be expected within the town, but it was also not unheard of in the surrounding mining villages. A representative of a group of Haworth residents who campaigned to change the name of their street from Colliery Street told the *Doncaster Gazette* 'we are not rough miners' (DG,7/12/67). 'Rough miners' might have been extended as a metaphor for the growing militancy associated with local NUM officials in the Doncaster coalfield and which would become a key factor in the town's external image. However for much of the period Doncaster miners were considered to be moderate. At one meeting at Thorne Colliery in February 1955, Aneurin Bevan 'chided the local miners for their right wing conservatism' (DG, 10/2./55).¹⁰⁶

Skills and employment

Table 4:18 shows that a significant advantage of the town as a location was the availability of labour. It had been noted that young workers in particular had a fine reputation with incoming industries particularly due to their adaptability (DEP, 6/1/1969).¹⁰⁷ However, two related trends threatened to undermine this advantage. Firstly, employment opportunities for

¹⁰⁵ Additional money was subsequently found for reclamation schemes for disused collieries and spoil heaps (Official Guide,1976) c

¹⁰⁶ Although Bevan's comment was more broadly addressed to young miners in general and the issue raised in particular within the context of miners implicit support for the introduction of charges in the NHS (DG, 10/2/55). At the same meeting in Thorne, Alf Cox the Thorne Colliery Branch Secretary reminded Bevan that he was amongst some of the 'most militant miners in the country'

¹⁰⁷ Doncaster between the years 1951-66, was identified has having a young population with 62% under the age of 40, compared with the GB average of 57.5% (DEA, 1969).

Doncaster's school-leavers were limited both in quantity and variety, and secondly a low skill trajectory was developing. Both trends had been evident in pre-war Doncaster but became marked during the post-war era. As the discussion above shows, coal was clearly not embedded at this time in all aspects of local life, nor was mining the career choice of Doncaster's youth. Whilst mining had become increasingly mechanised offering a higher proportion of jobs of an electrical or mechanical type, and promised potentially higher earnings, nevertheless Doncaster school leavers preferred a career in engineering. The 1955 *Doncaster Youth Employment Sub Committee Report* for example showed that of the 651 boys placed in jobs in that year, 111 boys were going into this trade. Whilst the service sector provided two-thirds of all jobs for women in the area by 1967, the *Doncaster Youth Employment Sub Committee* report also found that the preferred career option for local girls in 1955 was also manufacturing, with 431 out of 1,041 going into that sector.¹⁰⁸ However, the high demand for jobs in engineering could not be met, a fact also evident in the number of applicants for places as electricians, plumbers and other trades which were also found to be oversubscribed.

Whilst Doncaster's youth had been identified as an advantage, there was evidence at this time that the town's skill base was not matching the wider economic realities of the time, but instead it was becoming locked in to a low skill trajectory threatening future economic competitiveness. As early as 1955 the *Doncaster Youth Employment Sub Committee Annual Report* identified a shortage of skilled workers in the town, particularly within emergent sectors. For example skill shortages were reported in the growing radio and TV industry (DG, 27/1/55), a factor which might help explain the decline in the numbers of related businesses registered in the town's Business Directories during this period. In 1936 there were thirteen radio and TV engineers registered, in 1957 this had risen to twenty three, but

¹⁰⁸ The report also identified significant numbers of girls going into distribution, especially into drapery.

the number registered had decreased to nineteen by 1967.¹⁰⁹ Skill shortages were particularly evident in managerial, professional and white collar jobs, a shortage earlier attributed in part to the town's poor housing mix. Table 4:19 shows the small proportions in the managerial and professional categories in comparison with the region, and particularly England and Wales.¹¹⁰

Table 4:19 - Employment by job category (males) 1966

1966	Numbers occupied in each category per 1000 occupied male population		
	Doncaster	Yorkshire and Humberside	England and Wales
Managerial, Professional	90	129	152
Skilled manual and own account workers	415	415	383
Non manual workers	123	142	170
Personal service, semi skilled and agricultural	265	205	178
Unskilled	70	89	83
Armed forces	37	21	36
Total	1,000	1,000	1,000

Based on the 1961 Census and published DEA, 1969

A low skill trajectory should not however be seen as an indicator of poor educational levels amongst Doncaster school leavers but more a reflection of the nature of the local economy. Studies show that central Doncaster maintained its position in the top ten County Boroughs with the highest proportion of young people staying on at school. A proportion found to be well above the national average (DEA, 1969). The contrast with the surrounding pit villages in this regard is stark. Where the area as a whole is considered, a higher proportion of children with an IQ of over 130 were admitted to Grammar schools in the Doncaster coalfield

¹⁰⁹ Doncaster Yearbook and Street Directory 1936, Doncaster Directory 1957, Blair's County Borough of Doncaster Directory 1967.

¹¹⁰ The town's record in attracting professional workers compared unfavourably with other regions. The West Midlands for example had been more successful than Yorkshire in attracting Finance and Banking, Professional and Scientific Services and Public Administration (DEA, 1969).

area than in the rest of the West Riding, but only 1% of these children went on to university. The overall percentage of pupils in the area staying at school beyond GCE's was also low compared with the national average. In the UK as a whole, 50.7% left school at age fifteen, whilst in the area the figure was 60.6%. Poor progression is also evident in Table 4:20 which shows the proportion of students completing further education. The number of Doncaster students completing study is considerably lower than both the region and the UK as a whole.

Table 4:20 - Students completing further education in 1961

Area	Male %	Female %
Doncaster	4.8	4.6
Yorks/Humber	6.2	5.6
England/Wales	9.2	8.8

Source: based on 1961 census

Low attainment and progression should not be seen as an indicator of declining investment levels in local education, again more a reflection on the nature of the local economy. By 1964, the local authority had spent slightly under half of its total capital expenditure since the war on schools (Barber, 2007). In 1971 Doncaster spent £121 per primary pupil (£5 above average), and £223 per secondary pupil (£12 above average). In terms of capitation (equipment) allowances were also high when compared with the West Riding (Pratt et al, 1973). One comparative study concluded that there was no lack of local talent, nor evidence of an anti-educational culture within the wider coalfield (Barrett Brown, 1967). Rather there was a 'big waste of pupil's ability' due to the yawning gap between educational achievement and job opportunities (YHS 1958-61).

Table 4:21 - Unemployment by age group, 1967 (%)

Area	Males			Females		
	Under 20	20 and under 40	40 and over	Under 20	20 and under 40	40 and over
Doncaster	13	44	43	35	37	28
Yorkshire and Humberside	10	40	50	28	35	37
Great Britain	10	40	50	24	41	35

Source: DEA (1969)

Unemployment in the town grew steadily during the 1960's. Table 4:21 shows that this was a particular problem amongst the young people who had previously been identified as one of the town's key assets. As the *Doncaster Evening Post* suggested, the central and immediate problem for the area, was at the same time viewed as its greatest opportunity – the growing pool of young labour (DEP,13/8/69). Table 4:21 shows unemployment amongst women under 20 to be particularly acute and reflects the dominance of large manufacturing firms and the coal industry. By 1967 there were on average three unemployed women for every vacancy in the Doncaster area whereas nationally there were generally more female vacancies than unemployed (DEA, 1969). The lack of local job opportunities forced women to look for work outside the area. It was estimated that four hundred women travelled out of the area every day to places as far away as York, Bradford and Halifax, to work in a variety of industries which included motor vehicles, food, and woollen and worsted (DEA, 1969).

4.3.9 Dominance and lock in

By 1967 the picture painted by indicators as diverse as census returns and annual guides remained one of a town with a diversified economic base. What is not immediately evident from these sources however, is the increasingly vulnerable nature of the local economy. In particular the extent to which the town had come to be dominated by a small number of large firms. By 1967, for example 60% of all manufacturing employment was provided by eight firms, and 83% was accounted for by twenty one establishments with 250 or more

employees. These firms were a key factor behind the wide fluctuations in employment in the manufacturing sector despite the diversity of industries represented locally. For example whilst employment in engineering and electrical goods increased by 91%, this expansion, the largest in the manufacturing sector, was due to increases in a number of small and medium sized establishments, a number of the more significant of which had established themselves in premises vacated by other firms. In comparison, vehicles, the area's largest manufacturing order, was the only order in this sector to show a substantial reduction, falling by 39%. This reduction was due to a decline in numbers employed by British Rail, and the closure of the Briggs Ford plant.

It was noted earlier that whilst local agency can be identified as a determinant factor in the nature of the town's economic development path before the 1930's, from this decade onwards a more active state role through formal regional planning began to reduce the significance of local agency. The loss of employment in the town's railway and car industry provides two examples of how government policy affected the development path of Doncaster during the 1960's. In the case of the railways, reduction in employment followed the publication of the two-part report *The Reshaping of the British Railways* (BRB, 1963). Known as the *Beeching Report* after its author it resulted in massive cuts in the country's railway network. In the case of the car industry Doncaster had initially benefited from the wartime dispersal of industry when one of the plants of Dagenham based Briggs Motor Bodies, now converted to wartime production, was relocated to part of the LNER wagon Works at Carr Hill in 1940. Production of military aircraft parts ceased in 1945, but the firm remained there, producing car components for the Ford Motor Company which took over the firm in 1953, and Carr Hill went on to become an assembly plant for the Ford Popular. However Briggs, which along with other local motoring and engineering firms had previously been hit by the impact of petrol rationing caused by the 1956 Suez crisis,¹¹¹ was closed

¹¹¹ During 1956 many of the problems within the local motor and engineering industries were due to petrol rationing which had been caused by the Suez crisis. The likely consequences of British intervention given the state of Arab nationalism at the time and the wider cold war context which meant that Britain (with France) would be isolated should not have come as a surprise to the British government were clearly foreseeable. Rationing subsequently led to a fall in demand at Briggs, the town's principal

down when production was transferred to Liverpool in 1960 following regional policy inducements to support the development of a new Ford Plant at Halewood. This choice of location was in itself sub-optimal but further serves to highlight the diminishing level of local agency as pressure from multinational companies such as Ford also came to affect the nature of local and regional development paths (see Scott, 2009). The significance of the reduction in local employment in vehicle manufacture can be seen when compared to a national reduction of 5%, and just 2% in the region. The level of local vulnerability is also apparent when various inter-linkages and multiplier factors are considered.

The extent to which existing, and in particular non indigenous businesses are embedded in the area, and make use of local suppliers has been identified as a key factor in reducing the negative effects associated with branch plant syndrome (Simmie et al, 2008; Scott, 2009). The *Doncaster Area Study* published in 1969 highlighted the vulnerability of the local economy in this regard. Key findings from the study identified that only 10.4% (by value) of the listed materials purchased by Doncaster's eight dominant firms came from within the area. Imports provided 5.2% of purchased materials with about 84% coming from home suppliers, but which were located outside the area. The level of dependence on local supplies however varied between industries. ICI for example obtained 88% of its supplies from the local collieries. Similarly Pilkington's Glass used locally produced dolomite. However on the whole local linkages were of comparatively little importance. Pilkington Glass began running down its Kirk Sandall factory in 1967, preferring to concentrate its activity on its Lancashire plant (DG, 7/12/67). Another local study based on data drawn from a sample of the largest firms in Doncaster which together employed 14,000 workers, found that 67% of sales were in the home market although only 2% of these were in Doncaster itself. The remaining 33% of sales was accounted for by exports including substantial

motor manufacturer, and resulted in the firm operating on a four day week from March 1956.¹¹ The outlook was sufficiently bleak that three hundred of the firm's employees were expected to be laid off during the following year. Many other local businesses were struggling as a result of petrol rationing. The lack of clarity from national government regarding the decision of supplementary applications was also harming local business, with on this occasion 400 workers at John Fowley's engineering works placed on a four day week (DG, 20/12/56).

numbers of tractors and agricultural machinery manufactured at International Harvesters. The lack of a local industrial market was identified as of considerable importance by Rockware as it resulted in high distributions costs (DG, 7/12/67). Of equal concern was the fact that whilst firms expressed their satisfaction with research and development facilities and with technical information services in Doncaster, few actually carried out research and development in the town, suggesting a degree of local vulnerability to rapid technological changes. The degree of vulnerability was not solely an issue for the town's main manufacturers but equally relevant to the wider service sector whose growth was largely dependent on serving the needs of local industry and population. Any reduction in demand for labour by any one of the town's main employers therefore was likely to have a pronounced effect on the local employment situation.

4.3.10 Conclusion

By the end of the 1960's Doncaster was described as a 'youthful, modern and dynamic area' (DEA, 1969, p.128). On the surface the economic infrastructure remained reasonably diverse, and certainly untypical of many coal dominated areas. Despite a gradual decline in the numbers employed in the local pits there appeared little sign of any major collapse in local employment. However, beneath the glossy rhetoric of the town's Official Guides, by 1969 warning signs were clearly evident. What in 1950 had on the surface looked like a fairly balanced and diverse economy was by this date shown to be a precarious dependence on the commitment and fortunes of a few dominant employers in shrinking industrial sectors, including coal. Whilst fluctuations in unemployment in the area during the period 1957-67 had broadly followed the regional and national pattern, there would be a marked deterioration from 1968 relative to both the regional and national economy. The deterioration was such that the Doncaster area had unemployment rates which were also slightly higher than the average for existing Development Areas. Despite this worrying economic outlook, the town was still found to have a competitive advantage in its geographic position, although

opportunities to utilise this advantage were not developed. The town was also found to have a young and adaptable workforce, although over time this advantage had become eroded and was by the end of the 1960's largely unskilled with many having been trained for employment in what was, even according to the National Coal Board, an industry in decline. This did not prevent the Coal Board from continuing to predict a 'very secure future' for mining in the area (Treselles in Doncaster Gazette looks at Doncaster, 1969). A number of options were considered to address the town's economic problems, one of which included encouraging travel to work outside of the town. However given the limited employment opportunities in the adjoining parts of the region this was not a viable option, raising fears of permanent migration particularly amongst the more highly skilled.

Doncaster by 1969 was showing typical symptoms of branch plant syndrome with the local economy becoming increasingly vulnerable to market fluctuations, with low levels of local embeddedness amongst key employers, high levels of dependence, low levels of white collar and professional job opportunities, and reduced and narrowing skills levels. This was evident at the time and supports a conclusion that Doncaster's development path was not inexorable but better understood in terms of policy failings at multiple levels of decision-making.

In the previous period the lethargy of the local corporation was highlighted as a key factor in determining the economic trajectory of the town. In particular it was noted that the early years provided a window of locational opportunity when a more active industrial policy could have built on the advantages of the coal industry. Whilst greater levels of investment are evident during the post-war years the role played by the local authority again highlights failings at a local level, but it also shows how policy decisions can have both intended and unintended consequences. For example the decision to prioritise social housing in the early post-war years at the expense of larger and more expensive houses policy addressed a pressing social need, and along with similar investments in wider local infrastructure underpinned the successes of the building trade during this period. However the resultant

local housing mix would subsequently provide a barrier to the attraction of white collar professionals. However as with the inter-war period the extent of local agency was often limited. In some cases agency was contingent on local factors such as was evident in local political debates, but more significantly limited by external factors associated with wider regional and national considerations. The loss of Ford to Liverpool for example highlights how regional policy produces both winners and losers. In this specific case, having previously been a winner in 1940 with the wartime dispersal of industry, Doncaster became a loser. The actions of the Coal Board are also illustrative of the contingent nature of the town's trajectory at this time. The Coal Board continued to be an influential voice in the town but especially within the surrounding mining areas. Its role in determining the town's development path is best illustrated by its actions to minimise competition for local male labour, the majority of whom did not see mining as their preferred career. Whilst the Coal Board's actions might be considered as logical given the Coal Board's investment in the area, its actions were not in the best interests of the town in the longer term. The timing of this intervention is crucial, coming as it did at the same time as the publication of the 1967 Energy White Paper. The White Paper planned for coal to have a declining share of the energy market, and was a policy supported by a broad political consensus all of which suggested an industry in decline. If this was the case, better to have acted at this juncture of the industry's development path in order to enable new skills and trajectories to be developed. Or alternatively act in a more entrepreneurial way and break the industry's narrow path by diversifying into other markets as was suggested by the *Doncaster Gazette*. The *Gazette's* proposal for pre-emptive action to create a new development path was not dissimilar to that contained in the *Maclaurin Scheme* published some thirty years earlier as it envisaged the utilisation of the 'unique' advantages that local colliery sites offered to diversify into new energy sources. Coming as it did after the publication of the *Energy White Paper* and linked to the town's strong communications base this could be considered as representing a critical juncture, providing an opportunity to review the town's economic

future, and where necessary realign local skills before the planned decline in the industry. However as was shown in Chapter 3 this was unlikely to be supported given that the State continued to view mining as a single product industry, which although in decline still offered profitable exploitation, and which was not encouraged to diversify in spite of any potential negative impacts on coal communities. The experiences of Doncaster during the period 1946-1970 therefore are consistent with many other coal areas in that local development paths were largely determined by self-sustaining coalitions which in the case of Doncaster between these years was increasingly dominated at a state and Coal Board level.

Two other significant developments should be mentioned as they highlight not only the changing nature of the town's economy but also suggest the possibility of a shift away from previous policy. Firstly, as local industry declined so the service sector grew in significance. This was particularly evident in public sector employment as government sought to intervene to mitigate the impact of retrenchment in traditional industry. However the wisdom of this policy has been challenged in terms of stage of production and was contingent on the existence of political consensus over the merits of a mixed economy. Growth in the wider service sector was also evident although much of this growth was dependent upon local wage levels, which had been bolstered for much of the period by increased productivity levels at the local collieries. Also options for future economic growth continued to be based principally on what had been the basis of regional policy throughout the century, that of attracting new industries to settle in the area's industrial locations. Nevertheless for the first time in local publications there was an additional reference to economic strategies based upon self help, on the need to build small industrial units at low rent, with a view to supporting the possibility of developing indigenous new local enterprises (DEA, 1969).

4.4 Decline 1971-2000

4.4.1 Introduction

The developing problems in the Doncaster area economy had been acknowledged outside of the town and in 1970 the area was granted Intermediate Development Area Status, which offered government grants for industry, training schemes and support for the clearance of areas of dereliction. However any competitive advantage offered by this status was diluted as the policy was subsequently extended to other neighbouring areas. The publication of the *Plan for Coal* in 1974 held out the prospect of a more secure future for the local mining industry, but this would prove to be a false dawn as the return of the Conservatives heralded a more radical shift in attitude to the industry and would result in the closure of the deep coal mining industry in the UK. The election of the Thatcher government in 1979 represented a critical juncture not just for the history of the UK coal industry but also for the economic development trajectory of Doncaster. The pit closure programme coincided with an equally dramatic decline in the town's other dominant industrial employers and provided a 'perfect storm' challenge for local policy-makers. Faced by declining levels of employment and local affluence Doncaster attempted to realign its development path towards an enterprise economy typified by sustainable small and medium sized businesses. By the end of the century there was little evidence that the town had been successful in this objective. Coal and the legacies of coal were subsequently identified as a key determinant in what has variously been described as a lack of local entrepreneurial spirit (Fothergill, 1992), or cognitive lock-in (Hudson, 2005) and has subsequently been used to explain in part the low new firm formation rates in coal areas. This section explores the impact of coal on the town between 1970 and 2000 and assesses the industry's role in the town's subsequent economic decline. In particular it assesses the extent to which the town's relationship with mining by this date had established processes which were inexorable or whether the town's subsequent development path was contingent upon ill thought-through policy measures.

4.4.2 Gathering storm

It had been a constant argument within the corridors of local government that firms were turning away from Doncaster because there were too few local inducements in comparison with other areas, and demands were made for an unequivocal council policy statement giving priority to industrial development. The town's Development Officer, Gilbert Johnson, faced by a mounting unemployment problem and a shortage of money thought that the town would be able to use its newly acquired Intermediate Development Area status as some sort of competitive advantage in its efforts to attract new industry to the town (DEP, 30/8/71). However when the *Hunt Report*, published in 1969, also recommended that this status be offered to Leeds and Sheffield, as well as much of Lancashire, this hope was ended. In his annual report to the council, Johnson now placed the town's future prosperity in the hands of the government's new regional development boards (DEP, 25/3/72).

The *Hunt Report*, had identified South Yorkshire and Humberside as one of two regions (the other being the North West), which needed massive assistance. In relation to mining it had predicted a fall in employment in the local industry from 100,000 in 1965 to 42,000 in 1975. The report however, whilst recognising the problems associated with declining local employment in the collieries, singled out Doncaster as a growth zone and one of the three locations with the potential for accelerated industrial growth.¹¹² Growth zones were defined at the time as areas which had: good communications (preferably access to the national motorway network); were large enough to support the full range of educational, social and cultural facilities; should provide technical education and training for skilled workers; contain sufficient industrial sites and room for urban expansion; offer a wide range of industrial and commercial services; and have an active and energetic local authority (Richardson, 1970). Hunt like previous reports chose to focus specifically on Doncaster's status as a nodal point, as did the local newspaper which suggested that it was as the last staging point for the

¹¹² The others were the south side of Leeds and Sheffield, Ellesmere Port, Warrington, Runcorn, and the Preston/Leyland/Chorley area (Hunt Committee, 1969)

Humber ports for southern and midland traffic that future potential growth was foreseen (*Doncaster looks into the 70's, 1969*).¹¹³ As for how growth should be created, the Hunt Committee had nothing more revolutionary to suggest than the old policy of creating industrial districts (Richardson, 1970).

The run up to the publication of the Hunt report witnessed a great deal of lobbying activity amongst the region's MPs, with the Yorkshire Labour MPs Group publishing a report on the 'grey' areas of Yorkshire, warning of a need to diversify the area's industrial base. One of the report's authors George Darling, MP for Hillsborough, argued that there were too few of the more rapidly expanding modern science – based industries in the region for a properly balanced progressive economy, and echoing the complaint of Doncaster's Mayor forty years earlier, that government policy had effectively steered new firms away from the region and towards the Development Areas. The subsequent government rejection of the *Yorkshire and Humberside Regional Strategic Review*, which had demanded a radical review of regional priorities (Department of Environment, 1977) only served to fan the flames in this regard.

The MP's report concluded that the region had only managed to maintain a relatively high level of employment through migration. The report therefore urged government to steer more new industry into the region whilst warning against the continuing drain of skilled workers and technicians to the West Midlands and the South East, and to a lesser degree the development areas (DEP, 21/2/69).¹¹⁴ The Doncaster District Development Council reported that whilst there had been a large number of outstanding development enquiries, particularly from foreign companies including Ford, these plans had been hit by a combination of external factors including the global recession, and the uncertainty regarding Britain's entry

¹¹³ Twenty years later local entrepreneurs, such as Giles Hunter of CDS Group remained convinced that his success to date was due to location (SY Industrial and Commercial Review, 28/4/88).¹¹³

¹¹⁴ Doncaster, unlike other areas, did not have the advantages of Development Areas or Development District Status. But subsequently was designated an Objective 1 region for the 2000-2006 period and is currently one of the 88 Neighbourhood Renewal Areas

to the Common Market (DEP, 25/8/71).¹¹⁵ Whilst one firm, Johnson's Air Fright, gambled on the UK's deliberations over entry to the European Community and located next to the town's airport expressing confidence that the local airport would be developed, opening up access to the Common Market, the broader international picture during the early 1970's looked less positive. In this regard the town's Development Officer, Gilbert Johnson's comments in the *Doncaster Evening Post* reflect a sense of powerlessness to affect the economic fortunes of the town, bemoaning the fact that not only had government policy effectively robbed the town of its one economic asset, that of intermediate area status, with the knock-on effect that potential and existing business were moving out of the town as they became eligible for development grant benefits in other regions,¹¹⁶ but also inflationary pressures caused by the global recession swallowed up his already limited development budget (DEP, 30/8/71).

¹¹⁵ Committee papers of the Industrial Development Committee between April 1969 and December 1973 highlight the range of interest in developing or expanding business in the area. These include: Volkswagen, Coalite and Chemical Products Ltd, Bartol Plastic, Brook Motors, John Smedley, I & R Morley, J. Pullans & Sons, Hepworth Ceramics Ltd and Formica International Ltd. Doncaster Archives, RD/DON/2/171

¹¹⁶ Industrial Development Committee 21/2/1972 RD.DON 2/171

Table 4:22 - Housing stock, 1991

Housing 1991	Doncaster UA (%)	GB
High income families	0.1	9.9
Suburban semis	7.4	11.0
Blue collar owners	19.2	13.0
Low rise council	32.5	14.4
Council flats	3.9	6.8
Victorian low status	18.2	9.4
Town houses and flats	5.8	9.4
Stylish singles	3.5	5.2
Independent elders	6.5	7.4
Mortgaged families	2.4	6.2
Country dwellers	0.0	7.0
Institutional areas	0.5	0.3

Source: Hillier Parker, 1997

Efforts were made by the local council to address issues and barriers highlighted in Hunt that it could affect. For example moves were made to improve the environment through reclamation schemes for disused collieries and spoil heaps (Official Guide, 1976), but wider environmental factors such as the poor housing mix (Table 4:22) and in particular the low density of high quality properties continued to hinder the town's efforts to attract new inward investment (Pieda, 1988). The town was also unsuccessful in addressing the town's growing militant image.

The town's militant image was associated specifically with the two national miners' strikes of the early 1970's. These strikes had come after a long period of industrial calm and reflected a response to the threat of pit closure. The subsequent 'militant image' of local miners portrayed on television was reported in the local newspapers as frightening off potential businesses. One London firm, for example having watched television coverage of the

miners' strike, decided to look to Cornwall instead of Doncaster (DEP, 25/3/72). Whilst the South Yorkshire coalfield has often been perceived as a militant region, Yorkshire miners were in fact regarded as moderate for much of the post-war period (Taylor, 1984). The Yorkshire region of the NUM however was complex: controlled by conservative officials, whilst having a higher than average strike record. Much of the militant image was said to be due to 'firebrands' in the Doncaster panel of the NUM which "prided itself on its militant policies, and for initiating strike movements in the area" (Allen, 1981, p. 135). It was these 'militant' branch officials that organised the strategy of roving pickets and who were to come to the forefront of national attention when leading the unofficial strikes of 1969 and 1970. The perception of an 'enemy within' was promoted by the *Doncaster Evening Post* which warned its readers:

Evidence is emerging of the part being played by outside extremists in fostering the spread of the unofficial pit strikes in Yorkshire ... it is not of course the first time that such elements have made use of industrial strife to further their sinister political aims... there is already, it is claimed, a splinter group within the NUM dedicated to the spread of militancy, without regard for the consequences ... the rank and file should beware of the insidious and unscrupulous propaganda now being aimed their way.

Whilst an image of poor industrial relations would continue to hamper the town's efforts to attract new business, the reality was that prior to the strike wave of the late 1960's and 1970's, Doncaster's industrial relations had been described as reasonably good (DEA, 1969), with the record of stoppages in the area broadly in line with the rest of the region. And that other than the brief period around the miner's strike in the mid 1980's the town's industrial relations record continued to be reasonably good.¹¹⁷ However the label had stuck

¹¹⁷ An ACAS Survey, *Working in Yorkshire and Humberside - a Review of the Industrial Relations Experience of Foreign Subsidiary Companies' undertaken in March 1987* survey found that twenty-three of the ninety-two companies reviewed had experienced some form of industrial action over the previous years, but that 99% of the same firms also stated that industrial relations were satisfactory or better, with 25% stating that they were excellent. Another local study also undertaken soon after the national miner's strike found that contrary to their expectations, 44% of respondents indicated that industrial relations were not an issue of contention (Pieda, 1988). A similarly positive assessment was made a decade later with one survey showing that 77% of local managers working in the former South Yorkshire coalfield found that the area's economic competitiveness benefited from the current state of industrial relations (Bowes, 2000).

and three decades after the end of the miner's strike the militant image would continue to negatively affect the town's brand (Bowes, 2003; Begley et al, 2005).

Economic structure and dominance

The inability of the town to attract new business meant that by the mid 1980's the local economy remained dependent upon a few large employers in what were now declining sectors. The growing dominance of these firms and sectors was evident in census data spanning both earlier periods. The extent to which sectoral dominance continued during this period can be illustrated by using Location Quotients (LQs). LQs express the percentage employment within an industry in an area, usually the country as a whole. The LQ can therefore be used as a measure of spatial concentration. A value of one indicates that the area in question has exactly the same proportion of its total employment within an industry as exists nationally. Values in excess of one indicate a concentration of industry and values less than one indicate under representation compared to the national average.

Table 4:23 - Location quotients: Doncaster 1981 and 1984

Category	1981	1984
Agriculture, forestry & fishing	0.51	0.65
Coal extraction	14.89	14.85
Mineral oil and natural gas extraction	0	0
Mineral oil processing	1.18	1.09
Nuclear fuel production	0	0
Gas, electricity and water	1.17	1.29
Extraction of other mineral ores	1.47	1.65
Metal manufacture	1.03	2.74
Manufacture of non metallic products	2.60	2.55
Chemical industry	0.18	0.16
Production of man made fibres	17.89	26.51
Manufacture of metal goods	1.51	0.70
Mechanical engineering	1.33	1.12
Manufacture of office equipment	0.19	0.19
Electrical and electronic engineering	0.53	0.52
Manufacture of motor vehicles	0.07	0.11
Shipbuilding and repairing	0.24	0.13
Manufacture of aerospace and transport equipment	2.98	6.24
Instrument engineering	0.03	0.20
Food, drink and tobacco	0.74	0.59
Textiles	0.34	0.12
Leather, footwear and clothing	1.03	1.20
Timber and furniture	1.18	1.40
Paper, printing and publishing	0.22	0.15
Other manufacturing	0.77	1.22
Construction	0.72	0.63
Wholesale distribution	0.51	0.61
Retail distribution	1.00	1.05
Hotels and catering	0.90	0.62
Repair of consumer goods and vehicles	0.58	0.54
Transport	1.22	1.24
Telecommunications	0.47	0.52
Insurance, banking and business services	0.38	0.46
Public administration and defence	0.72	0.73
Medical and other health services	0.80	0.90
Other services n.e.s.	0.71	0.75

Source: *Census of Employment/Pieda (1988)*

Table 4:23 presents LQ's for the years 1981 and 1984, and provides a picture of the local economy just prior to the national miner's strike. Coal mining shows a particularly strong concentration representing almost fifteen times the levels of employment evident nationally. In this regard little had changed from the 1920's. This level of dominance would remain more or less constant even as the mining workforce declined over the course of the forthcoming decade (Pieda, 1988). Table 4:23 also provides information on the overall structure of the local economy and in particular other sectors where Doncaster was over-concentrated. Earlier census reports had shown high concentrations in trades associated with the railways. During the early 1980's concentrations were particularly evident in the man - made fibres sector which exceeded coal accounting for over 25% of local employment by 1984. The vast majority of this employment was still in ICI despite the firm having shed 64.4% of its workforce between 1971 and 1981 (Pieda, 1988). Over-concentration is also evident in a number of manufacturing sectors especially transport, and to a lesser degree in retail distribution. This sector continued to dominate in local business directories with 1,057 registered in 1993 representing 50% of the total number of businesses registered. However, Table 4:24 shows that by 1993 only two retail businesses were large firms (over 250 employees).

Table 4:24 - Large firms, 1993

Primary	Manufacturing	Retail	Dist/transport	Public sector
7	16	2	2	12

Source: Doncaster Trade Directory 1993

Table 4:25 extends the analysis of local economic vulnerability identifying those sectors which employed over one thousand workers, and which lost over 25 % of jobs between 1971 and 1981. It shows that large jobs losses were estimated to continue over the period 1984 to 1988 and the sectors and companies where the greatest job losses were to be expected. Table 4:26 also shows the ultimate holding company and company location. This information can be used to understand levels of firm embeddedness in the area and supports earlier

analysis which showed local integration to be limited. Plastics are represented by three firms, Bartol, Polypipe and Rockware, with Polypipe Doncaster's only indigenous plastics firm at this time. Peglars, although originally founded in Doncaster was no longer independent having been taken over by the international conglomerate Tomkins. Bridon, and Mining Supplies (MS International) both originally started in Doncaster, and at this time remained independent. John Carr also started in the town. Whilst Doncaster had developed some successful indigenous industries, their success had meant that many of these had been acquired by other companies, which operated plants across a wider geographical area. The resultant loss of operating autonomy heightened the sense of local vulnerability to global trends.

Table 4:25 - Key sectors and key companies 1984-88

Sector	Empl (1984)	Empl (1983/4) Est	Empl (1987/8) Est	Company	Ultimate holding company	Location
Coal Extraction	15,324	15,000	7,500	British Coal	British Coal	
Manuf. Non-metallic products	2,491	1,000 300 650 100 Total 2050	1,000 350 350 400 Total 2100	Rockware Glass Ltd Pilkington Glass Ltd Bartol Ltd Polypipe	Rockware Group PLC Pilkington Bros Ltd Hepworth Ceramic Holdings PLC Polypipe PLC	Northampton St Helens Sheffield Doncaster
Prod.man-made fibres	1,299	1100	1250	ICI Fibres Ltd	ICI Ltd	
Manuf. Metal goods	1016	1000	800	Peglar Ltd	FH Tomkins PLC	Walsall
Mech. Engineering	3663	2000 1100 Total 3100	1000 1000 Total 2000	Bridon MS International	Bridon PLC MS Industries PLC	Doncaster Doncaster
Manuf. Transport Equip	5690	2,500 3,000 Total 5,500	2600 750 Total 3350	IH/Case BREL/RFS	Tenneco Corp RFS Industries	USA Doncaster
Leather, Footwear & Clothing	1652	N/A	600 200 Total 800	SR Gent Two Steeples	SR Gent PLC	Bamsley
Timber & Furniture	1260	700	700	John Carr Group	Rugby Portland Cement PLC	Rugby
Total	32,395		18,500			

Source(s) *Census of Employment, South Yorkshire Industrial & Commercial Directory (1984), Doncaster Business Directory (1987).*

Table 4:26 also highlights those sectors where the town was under-represented. It shows that this tended to be in those new and emerging sectors considered important to future local economic competitiveness. For example, and despite the increase in the number of insurance, banking and business services businesses registered in the local trade directories (see appendix 12) table 4.23 shows it to be the most under-represented sector in the town (0.46). The latter finding is consistent with earlier and subsequent census data which shows Doncaster to be poorly represented in this sector compared to the national economy. Table 4:26 and Table 4:27 show that despite Doncaster's manufacturing tradition it was also poorly represented in the high tech and high growth sectors in manufacturing, IT, electronics, or in tradeable services. Equally surprising was the limited sectoral emphasis in industries such as textiles and clothing, where the town had previously had concentrations, and where restructuring had been identified as providing development opportunities (Pieda, 1988). There is also limited evidence of development in distribution and warehousing, another sector where Doncaster had previously been identified as having a comparative competitive advantage. The decision in 1990 to locate the channel tunnel road-rail freight terminal in Doncaster altered this pattern and proved to be reasonably successful in attracting new business. However the local council's decision to close the town's airport in 1993 to make room for the Dome leisure facility provides a less positive example of a desire to extend the town's economic advantage as a nodal point at this time.¹¹⁸

Table 4:26 - Employment in service sector: Comparison Doncaster and GB 1991(%)

Service Sector	Doncaster	GB
Distribution, hotel and catering	22.0	21.5
Banking, finance and business services	6.3	12.1
Other services	28.0	31.2

Source: Hillier 1997 (based on 1991 Census)

¹¹⁸ The more recent decision to bypass the town with the new high speed rail link may reverse this trend (See Department of Transport, 2006).

Table 4:27 - Sub sectors: Comparison Doncaster and GB 1991(%)

High tech industries	7.2	16.2
Retail distribution	11.4	10.7

Source: Hillier 1997 (based on 1991 Census)

4.4.3 Closure and decline – the perfect storm

Despite the decline of the local mining industry from the late 1960's, the town would continue to remain heavily dependent upon employment in this sector. However, what had previously been a relative decline in mining employment became rapid between 1981 and 1992. Table 4:28 shows that during this period four collieries were closed and the local industry lost 11,037 employees, representing a reduction in manpower of 80%. Most of the Doncaster area pits closed during the 1990's, with only Rossington Colliery continuing to operate under private ownership, but with a vastly reduced workforce.¹¹⁹

Table 4:28 - Decline in employment in Doncaster collieries 1981-92

Pit	1981	1984	1985	1986	1990	1991	1992
Askern	1384	1434	1266	758	466	Closed	
Bentley	1299	1215	1022	880	605	630	654
Brodsworth	2720	2650	1670	978	Closed		
Cadeby	1300	1186	325	Closed			
Hatfield/Thorne	1870	1709	1352	1086	787	620	459
Markham Main	1756	1450	1499	1348	738	736	730
Rossington	1672	1580	1456	1177	766	820	873
Yorks. Main	1752	1200	1424	Closed			
Total	13,753	12,424	10,046	6,227	3,362	2,806	2,716

Source: British Coal, 2002

¹¹⁹ In 2000 Doncaster collieries had a workforce of just 563. Source: The Coal Authority. Based on production and manpower returns for the 12 month period ending March 2000. Accessed at <http://www.coal.gov.uk/media/E88/6A/Licensing-Mining-Production-Statistics-1999-00-FY.pdf>

The impact of the decline in local mining employment was compounded by the fact that the town's manufacturing industries also continued to shed jobs. This was particularly true of the railway industry with British Rail Engineering Ltd continuing to reduce the scale of its operations before putting much of its work out to private tender (The Engineer, 25/1/90). Table 4:29 suggests that whilst severe, the decline of the local manufacturing sector between 1971 and 1991 was not so great in comparison with the wider national picture. However in Doncaster it was the timing and speed as well as the scale of contraction which was the significant factor and placed tremendous pressure on the local labour market's ability to absorb displaced workers.

The service sector absorbed many of those displaced from the manufacturing industry and this sector grew to account for 56% of total employment by 1991, increasing to further represent 79% of total employment by 2004. Whilst the largest sector within services in 1991 was in local government (31%) much of the new employment in the town was within the retail sector, which was dominated by small businesses suggesting at one level that the town was managing a successful structural realignment both sectorally and in terms of organizational size. However, the ability of the service sector as a whole to absorb displaced workers from declining local industry was dependent upon the scale of demand for jobs and by the nature of the various spending multipliers and inter-linkages.

Table 4:29 - Employment by sector: Comparison Doncaster and GB 1971-91(%)

Sector	1971 Doncaster	GB	1981 Doncaster	GB	1984 Doncaster	GB	1991 Doncaster	GB
Primary	22	5	23	5	20	5	8.3	3.3
Manufacturing	33	36	27	28	27	25	21.8	21.2
Construction	5	6	4	5	3	5	7.4	4.5
Services*	40	52	46	62	50	65	56.3	64.8
Total	100	100	100	100	100	100		

Source: Census of Employment in Hillier Parker (1997)

The extent to which government policy affected the nature of decline and the scale of the subsequent challenge to the Doncaster economy is most clearly evident in the management of the closure programme. The onus was on government to determine the pace of closure. The speed of contraction was unparalleled and led to a perfect storm in the local economy. Beyond direct job losses, closure can be further illustrated in that the knock on 'multiplier-effect' of pit closure also ensured that jobs were lost elsewhere in the economy. Whilst the nature of inter-linkages is complicated with many local firms serving a number of customers and sectors,¹²⁰ one obvious measure of extent and impact would be those businesses identifiable in the local directories which directly served the needs of the local coal industry. Table 4:30 shows the number of coalmining related businesses registered in the local trade directories over the course of the century. In total seventeen businesses were registered in the local business directories as directly related to the coal industry in 1900, this increased to forty five in 1936, and peaked at seventy four in 1967, before falling to seventeen in 1993.

Table 4:30 - Mining related businesses registered in local business directories. All periods

Type of business	1900	1936	1967	1993
Mining engineers	2	5	7	0
Mining machinery	0	0	7	7
Colliery agent	2	3	0	0
Chimney sweep	4	8	0	0
Coal merchants/distributors	9	23	54	10
Coal Factors	0	3	2	0
Colliery furnishers	0	3	2	0
Contractors	0	0	2	0
Total	17	45	74	17

Source: Local Business Directories (all periods)

¹²⁰ Wild and Sykes Ltd for example was a local ironmongers which had a fairly diverse customer based but which had started by supplying local collieries in 1913. Order books show that by 1990 they no longer supplied the coal industry but continued to supply the industry's first tier suppliers Cementation and Green and Bingham. Order also show that whilst they still had a diverse range of customers including brickworks, local manufacturers as well as domestic customers, they had become heavily dependent on large local firms. The firm closed in 1991. Doncaster Archives, DY/WILD.

Table 4:30 shows seven mining machinery companies were registered in both 1967 and 1993.¹²¹ Of these, two firms were registered under this broad classification in both years: Don Valley Engineering and Green and Bingham Ltd. One other, Mining Supplies Ltd, whilst not registered under mining machinery in 1993 continued during this period. Mining Supplies Ltd, was also the only local firm registered as a main supplier to British Coal, and the only local member of the Association of British Mining Companies.¹²² In this respect the figure was low in comparison with neighbouring areas. Barnsley and Rotherham for example had four firms registered, and Sheffield had seven (Grundy-Warr,1989).¹²³ Placed within the wider context of engineering in the town, the 1967 trade directory includes twenty seven categories of engineers accounting for 155 businesses.¹²⁴ Engineering related to mining accounts for five of these categories; mining, structural, mechanical, coal preparations and consulting, and has a total of ten businesses registered.¹²⁵ As the coal industry declined, the extent of these firms' vulnerability depended upon their ability to diversify whether through product differentiation or new submarkets, and in particular the extent to which they could break any dependence on British Coal contracts. In 1987 British Coal was Mining Supplies Ltd's only customer (Grundy-Warr, 1989), yet Mining Supplies was able to survive through its subsidiary (also at the Carr Hill site) which designed and produced specialised products over a wide range of engineering.¹²⁶ Similarly, Cementation Skanska built its business on 90% sales in the UK but was able to diversify to focus on export markets.¹²⁷ However, most mining manufacturing firms (as in the UK as a whole) produced components specifically for

¹²¹ Mining manufacturing is classified under mechanical engineering (SIC, 1980) and in 1967 local firms were, Blandford Gee Ltd, Cardox (GB) Ltd, Don Valley Engineering, Green and Bingham Ltd, Huwood Ltd, Mineral Wealth Ltd, Mining Supplies Ltd (Nobel Division). In 1993, Action Vulcanising Services, Camsar, Deeweld Mining, Don Valley Engineering Co Ltd, Green and Bingham Ltd, MSI-Mech Construction Ltd, Simon Macawber Ltd. (Blair's County Borough of Doncaster Directory, 1967; Doncaster Directory, 1993).

¹²² Bridon Ltd was also registered which manufactured ropes for use in mining.

¹²³ Based on a survey in 1987.

¹²⁴ Largest entries are for, electrical engineers (28), civil engineers (17), heating engineers (16), and agricultural engineers (9)

¹²⁵ However one mining firm, Blandford Gee Ltd is registered under three different categories.

¹²⁶ This firm at time of writing now Cresco Industrial Supplies Ltd.

¹²⁷ By the turn of the century 87% of its business was overseas (DS, 3/6/2002).

the deep coal mining, and found it extremely difficult to diversify into other areas of mining, let alone entirely new markets. The result was that in Doncaster mining equipment manufacturers such as Green and Bingham declined alongside the local coal industry (DS, 19/10/2000).

In addition to mining engineering linkages in Doncaster, business directories also include registrations of coal related service-based businesses. Most of these businesses were registered in the distribution pages, and are typically smaller in size (see appendix 12). Table 4:30 shows the range of businesses registered, which included coal merchants, coal furnishers, and chimney sweeps. As coal declined as the principal source of domestic energy so too did these service industries. Many of the coal merchants had built their businesses over at least one generation. The longest lasting family business registered was Appleyard which first appeared in the 1936 directory and again in 1993 (although in the latter entry it was registered as part of a merger, Appleyard and Lumb Ltd). Another Mr J.G. Kelly had been operating in the town since 1940, and in his role as President of the Doncaster Coal Merchants Association, and subsequently a Member of Doncaster Action Group Committee to promote the sale of solid fuel (OG, 1970), argued strongly for his industry. Their efforts however would be in vain. Table 4:30 shows the rise and decline of the local coal merchant businesses in the town. It shows that the number of coal merchants increased steadily over the century reaching a peak in 1967 with fifty four businesses registered. By 1993 this number had been reduced to ten.

The challenges for those who were made redundant, and for the local economy in general was also compounded by the wider multiplier effect, with many local businesses in the service industries also reliant on the purchasing power of miners and their families, which in 1988 was estimated to be worth £35 million (Pieda, 1988). Declining purchasing power was evident from the late 1960's in the increasing number of stores unoccupied in the town's two shopping centres (Doncaster looks in the 1970's, Nov, 1969), but the impact would be felt more acutely as pits began to close. The Doncaster Chamber of Commerce estimated that

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pit closure would result in one in four businesses closing (DMBC, 1992) and by the end of the 1990's retail vacancy in the town remained high. The challenge for local retailers was compounded by the opening of the Meadowhall shopping mall which increased competition for what was an already dwindling customer base. Located between Rotherham and Sheffield, Meadowhall was able to draw on a marketing budget of £2.5 million (Williams, 1991) and by the mid 1990's was estimated to have attracted 7% of Doncaster's retail trade (Hillier Parker, 1997).

4.4.4 Response to decline: regional strategy and self employment

Whilst the decline of the coal industry had been evident in the region since the mid 1960's, the speed of contraction in the region was unparalleled. In Doncaster the closure of almost the entire British Coal owned deep mining industry in and around the town occurred between the years 1985 and 1993. This sudden withdrawal compounded not just the problems for the wider economy but also the difficulties both for agencies seeking to promote economic regeneration, and also for all those who had been encouraged throughout the 1970's by Lord Robbens, then Chairman of the NCB, to think of mining as life-long, secure employment. Not only did this prove to be misplaced optimism, but the speed of job losses in mining combined with retrenchment within the town's big manufacturing firms meant that ex-miners found themselves having to compete for alternative employment (with comparable wages) within a shrinking labour market. Opportunities for work were thus limited, but equally opportunities for sustainable self employment vastly reduced as unemployment reduced the economic viability of the local economy. Table 4:31 shows that unemployment within the area peaked in 1986 at 19.2% before slowly declining over the rest of the decade. Unemployment levels in the town began to rise again at the start of the 1990's and by May

1993, in the wake of further pit closures, peaked at 13.8%.¹²⁸ This figure compared with 9.9% for Yorkshire and Humberside and 9.7% nationally.

Table 4:31 - Unemployment 1973 - 1999

Year	Doncaster %	Year	Doncaster %
1973	5.3	1991	12.4
1981	15.8	1992	13.0
1983	16.7	1993	13.8
1984	17.2	1994	12.9
1985	18.0	1995	12.8
1986	19.2	1996	12.4
1987	18.3	1997	11.3
1988	16.1	1998	9.1
1989	13.1	1999	8.5
1990	9.9		

Source: DMBC Unemployment Statistics 1983-1994; 1991-1993; 1995-1999¹²⁹

The particular vulnerability of central wards of Doncaster is reflected in the change in the unemployment rate from 1981 to 1991 across the entire Doncaster area (see appendix 13). Unemployment rates during this period show that the greatest rate difference was not in the mining wards but in the urban centre of the town, reflecting the impact of decline in the local manufacturing as well as the coal industry. The Intake ward experienced the highest rate difference (+2.21%) with the other central wards of Town Field (+1.09%) and Wheatley (+1.29%) not far behind. The mining wards experienced lower rate increases with a number of mining wards, for example Askern (-0.75%), and Hatfield (-1.09%) actually reducing unemployment levels. The Armthorpe ward, which contained Markham Main Colliery, (and

¹²⁸ The closure programme in 1993 also coincided with the decision by the government to end the Urban Funding programme which had subsidised improvement in local shops. This decision hit the town's small building firms hard. (The Doncaster Star, 7/1/93)

¹²⁹ All statistics based on high point for unemployment in each year

which was drawn into Doncaster Central in 1983) also reduced its unemployment levels (-0.43%).

Unemployment also reflected the changing nature of the local labour market. By May 1994 there were 16,711 registered unemployed of which 13,495 were male and 3,216 female (Employment Service in *A Matter of Fact*, 1994). With the decline of the large scale manufacturers in the town, many of the local manufacturing jobs were now in the female dominated sub sectors such as clothing, textiles and light engineering.¹³⁰ The shift in the nature of the local labour market is reflected in the fact that unemployment was highest amongst the male skilled workforce, with Table 4:32 showing that a quarter of all unemployment claimants by October 1993 were identified as craft or related. A high level of unemployment is also evident amongst the unskilled. Full data on the extent of low skilled unemployment is not available as large numbers of ex-miners in particular are hidden from the analysis, with many ex-miners subsequently registering for incapacity benefits. Unemployment levels were lowest amongst management and the professions, which continued to reflect the general lack of management positions available within the town, and was a factor undermining the flexibility needed by inward investors (Regeneration Unit, 1994).

¹³⁰ One of the towns successes was in attracting clothing manufacturers such as Stainforth Fashions Industries Ltd which in 1982 employed 280 mostly women. Of the established manufacturing businesses in the town in the early 1980's seven employed predominately women; Stainforth Fashions Industries Ltd, Sainsbury Spillers Ltd, S. Parkinson and Sons, Freezing and Cold Store Services Ltd, GEC Machines Ltd, Crompton Parkinsons Ltd, and S.R. Gent Ltd.

Table 4:32 - Claimants by skills category 1993

SOC Major Groups	%
1 Managers & Administrators	4.1
2 Professional Occupations	1.5
3 Associated Professional & Technical	2.7
4 Clerical & Related	8.5
5 Craft & Related	24.9
6 Personal & Protective Service	5.9
7 Sales & Occupations	7.1
8 Plant & Machine Operatives	12.7
9 Other Occupations	27.8
10 No Previous experience	4.8

Source: Employment Service (Oct 1993)

The experiences of those made redundant from Doncaster pits also follow similar patterns to those of miners in other regions. The difficulty in finding alternative work is reflected in the Table 4:33, and is based on the experiences of those made redundant at two of Doncaster's collieries: Markham Main and Brodsworth. Perhaps the most notable finding being the high percentage of ex-mineworkers who had temporarily or permanently left the labour market through long-term illness. This figure is particularly concerning given the mean ages of the redundant miners in this study were thirty nine and forty three respectively. This age profile is consistent with wider studies conducted by the Coalfield Communities Campaign which found that more than a fifth of those made redundant since the miners' strike 1984-85 were under the age of forty. Also significant was the high levels of prolonged unemployment after pit closures, again a common place finding within the coalfields. Those ex miners from Brodsworth that did find alternative work, other than those who returned to mining, reported similar problems to that of other ex-miners, that they were at least £100 per week worse off.

Table 4:33 - Redundant miners experiences, 1993

	%
Employed by British Coal	1.75
Employed full-time elsewhere	26.9
Employed part-time elsewhere	4.0
Self-employed	2.85
(Total employment)	35.6
Further education part-time	1.45
Further education full-time	Nil
Employment training full-time	3.56
Employment training part-time	Nil
Long-term sick	20.85
Unemployed	35.6
Retired	1.25
Other	0.7
Total	100.1
Number of respondents	246

Source: Aggregated data taken from two of the local collieries, Markham Main and Brodsworth. Labour market status. July 1992-September 1993 and based on Turner & Gregory, 1995

Table 4:33 also provides data on self employment amongst former miners. The severity of the recession in the 1970's had caused the local council to reassess its priorities away from traditional areas such as housing and other environmental services to unemployment and job creation. Whilst existing businesses remained central to local planning, the Labour-led local council (see appendix 14) also decided that there was a need to encourage alternative regenerative measures, which would include a greater reliance upon the growth of an indigenous small business sector.

4.4.5 Local enterprise strategy

The town's indigenous small business strategy can be dated back to 1969, and focused at that time on the need to build low rent small industrial units to encourage business start ups. A decade later green shoots were being reported in the local press and there was some optimism that the town could create a new economic trajectory driven by new and indigenous small firm growth. Councillor Welsh, for example, the Labour Chairman of the town's Industrial Development Sub-Committee, reported on a well attended seminar at the Mansion House on 5th October where small firms were able to hear specialist speakers on subjects relating to starting up and expanding small firms (DG, 12/1977). By the end of the decade with the country entering a new political era, a new spirit and lexicon emerged and entered the local economic vernacular. Mr W. Jackson, the local council's Chief Executive, was quick to recognise the shift in political mood stating that the town's future must be aligned with a 'more entrepreneurial direction' (Doncaster Digest, 1979). Specifically these statements meant that smaller businesses would be encouraged alongside a continued focus on growing the local service sector – particularly tourism.

Increased support for small businesses was not perceived as presenting any real problems as a more entrepreneurial direction was said to fit well with what was described as, 'a degree of self help which has always been a feature of the district' (European Industrial and Commercial Review, 1976). The town's guide of the same year referred to Doncaster's long tradition of adapting to change. This theme was developed in a chapter entitled 'Heritage and Enterprise', and drew its inspiration from the success of the local coal industry and its related tradition of inward migration. It stated that the 'backbone of the population comes from pioneering stock supremely capable of turning the geology of the area to economic advantage' (1976, p.59).

Having harked back to a previous era for inspiration, culture change was associated with the future and therefore considered relevant for local education policy. The emergent

entrepreneurial spirit was the subject of a meeting of the Doncaster School's and Employer's Association, in which the audience was told that young people should be given more information and advice about self employment. Whilst this might have seemed improbable given that British Coal provided the Chair for this Association until 1989 (ICE, 1989), the subsequent scale of the contraction in the coal industry had led to the establishment of British Coal Enterprise (BCE) in 1984. Given the rising levels of unemployment in the town, BCE was one of a number of agencies established with responsibility for implementing government enterprise policy. BCE included as part of its expanding remit, the training and financial support for new start up businesses. By 1993, enterprise development had become central to the Doncaster partnership agenda. The town subsequently appointed a Young Enterprise Development Manager with a remit to promote enterprise generally, and Young Enterprise within schools in particular, with the latter initiative resulting in a 65% increase in participation rates, with 240 pupils accessing the scheme in 1993/4 (Barnsley and Doncaster TEC, 1994). Further signs of an emergent enterprise culture were identified with increased demand from nascent entrepreneurs reported within the town. Representatives of the Doncaster Business Advice Centre (DonBAC) and another local training and support company, Instant Muscle, informed one meeting that there was no shortage of people coming forward. In fact the speakers had to devote considerable effort to ensure that would-be entrepreneurs did not let their enthusiasm run away with them (ICE, 1987).

In the wake of the pit closure programme there was also no shortage of money available to meet the demand. Over £14 million of government money was pledged to help the town, and a raft of training schemes offered to redundant miners in the wake of the pit closure programme announced in 1992. Financial assistance was not restricted to redundant miners, with BCE offering funding to both new businesses and to existing local businesses wishing to expand. The Bounty Scheme for example offered a £400 one-off payment to companies willing to employ an ex-miner (DS 1/10/93). BCE reported that this scheme was responsible for the employment of more than 700 ex-miners from Markham Main (DS 5/4/93). Funding

was also available through BCE for British businesses wishing to diversify, expand or locate in coal areas, as well as overseas companies seeking to locate in Britain. The BCE 'plus' loan scheme to help struggling SME's offered up to £25,000 per business and a further £5,000 per employee (DS, 7/5/93).

This broader focus which went beyond the immediate needs of ex-miners had always been part of BCE's mission although its 'objectives and methods were varied and often misconstrued.' They were also often poorly communicated. The wider public impression BCE contend in their *1996 Annual Review*, was that the company had been set up to 'find jobs for ex-miners, or to promote the establishment of new private business by redundant miners', and to 'only operate in those areas where the NCB intend to close future pits.' However, as early as 1986 BCE had announced 'support would be offered to viable business projects creating new jobs in mining communities'. The employment of ex-British Coal employees, whilst always gratifying, 'was not a precondition of assistance'. This broader focus was a de facto recognition of the limitations of the 'enterprise' strategy, as BCE did not expect any significant demand from older ex-miners either for the opportunity to start up their own businesses or even for new employment (Rees & Thomas, 1991). Rather:

...the critical demand arises amongst the younger generations even those expecting to leave full-time education in the near future, who grew up in the coal mining communities believing that their future employment prospects lay either directly or indirectly in the local colliery, and who found the changes in the coal mining industry now meant that the employment opportunities were reduced. (British Coal Enterprise, 1985-6, p.4)

The decision in October 1992 to close a further thirty-one pits placed even greater pressure on the local agencies including BCE to create new job opportunities. As with earlier attempts to generate jobs, BCE schemes largely supported the establishment of sole traders. BCE's *Annual Review* for the year 1987/88 reported that 71% of all loans had been for amounts less than £15,000 and 93% for less than £50,000 (BCE, 1988). In the financial year 1992/3,

59% of loans were awarded to new businesses. Small loans were typical across all other local support agencies. Instant Muscle offered interest-free loans of up to £1,000 to enable its clients (usually 18-30 year olds) to qualify for the government's Enterprise Allowance Scheme. DonBAC's 1992 *Annual Report* shows that its loans ranged from £5,000 to £50,000 (DonBAC, 1992). Faced by a deepening national recession, speed became a key determinant in the application process. BCE's 'Fast Track' loan scheme was subsequently introduced offering gap funds up to £15,000 (later to become £25,000) and the guarantee of a decision to applicants within twenty-one working days of receipt of a business plan (BCE, nd).

The acute problems facing the Doncaster economy meant that speed and quantity were prioritised over a more strategic and careful process aimed at selecting and supporting businesses with growth potential. The nature of Doncaster's subsequent economic development therefore became contingent on a selection process that was largely indiscriminate but which would have negative longer term consequences for the nature of the local economy. Whilst the qualifying criteria for BCE loans was that 'the business should not displace jobs in other local businesses', many new firms that received subsidies from BCE and other agencies were often able to undercut and put their competitors out of business (Edwards, 1991). Whilst the company had an expressed aim to support businesses in the manufacturing sector, 40% of all businesses supported by BCE were in the service sector where displacement was typical. DonBAC, the town's principal enterprise agency was also complicit in this regard. It too had a stated mission to preserve and realign the town's traditional (manufacturing) skills but also failed in this regard.¹³¹ Its 1992 *Annual Report* shows that it was in fact service based businesses which received the highest percentage of assistance (including financial assistance) from the local authority. Table 4:34 provides a breakdown of businesses supported between the years 1990 and 1992, and shows that

¹³¹ This mission was evident for example in the Financial Assistance to Business scheme launched in 1986 which stated that DonBac would discriminate in favour of businesses engaged in manufacturing. Doncaster Archives, Financial Assistance to Business in the Doncaster Metropolitan Borough Area, MB/LEAD/1/109

while the numbers are representative of business in the town, the number of service based businesses supported by Donbac increased from 54% to 58% over these years. When services are combined with retail (another sector which tends to be based on micro businesses) this figure rises to 82% of all businesses.

Table 4:34 - Businesses supported 1990-92

Type of business	1990	1991	1992
New businesses	3808	4669	5606
Existing businesses	1003	1240	1503
Total	4811	5909	7109
Sector			
Manufacturing related	525	655	737
Retail	1303	1516	1733
Service	2619	3321	4090
Other	364	417	549

Source: Doncaster Business Advice Centre Annual Report 1992

The town's development path from the late 1980's was therefore contingent on a local economic strategy which prioritised growing the service sector, particularly leisure and tourism, but which failed to take into consideration three key points. Firstly, as discussed above it was at variance with DonBAC and to a lesser degree BCE's 'stated' objective of maintaining and realigning the town's manufacturing skills base which the local directories (see appendix 12) show comprised of 172 businesses distributed across the three sectoral classifications. This number reflected 8% of all businesses registered. Appendix 12 also shows that manufacturing provided a constantly high number of businesses registered throughout, ranging between 8% and 13%. It was these sectors that provided the basis for newer and more sustainable economic trajectories. Doncaster's small business tradition in manufacturing was not dissimilar to that of Sheffield which maintained its long tradition of small scale manufacturing (Tweedale, 1995) and with which it has often been compared.

Whilst picking winners is not an exact science, a more disciplined focus on sectors which could build on but also develop the town's historic engineering skills offered greater potential for newer and sustainable economic trajectories.

Secondly, the town's enterprise strategy failed to take into account the interrelationship between local services and the town's industrial sector. Whilst Doncaster's industrial sector was buoyant as had been the case for example during the 1950's and early 1960's, the town's service sector flourished. There were exceptions, such as the Doncaster Branch of Wilkinson Hardware Store Ltd which achieved a £2 million turnover in 1988, at a time when the town was experiencing 16% unemployment (Cuppleditch, 1998). However even this 'anomaly' is probably a reflection of the economic problems in the town, with tighter household budgets and enforced leisure time resulting in more household DIY. Any threat to this local economic equilibrium was always going to be reflected across all local sectors. Between 1981 and 1984 for example, the local Food, Drink and Tobacco industry, and the Hotel and Catering industries lost 31% and 26.7% respectively of its employment. These losses were directly related to a reduction in spending caused by the national miners' strike (Pieda, 1988).

Thirdly, Doncaster's 'post-industrial' strategy appeared to ignore the fact that service based businesses tended to start small and remain small offering little by way of employment opportunities for the increasing number of unemployed in the town, and are more typically associated with high closure rates. Table 4:35 provides a summary of companies moving in to Doncaster in 1996 and shows that 90% of all new businesses that year were in the service sector. These businesses created 74% of the total jobs, compared with the new manufacturing business established during that year, which made up less than 10% of total business attracted to the town, but generated 26% of new jobs.

Table 4:35 - New businesses 1996

Sector	Number	Jobs
Manufacturing	7	248
Service	13	79
Retail	50	585
Leisure	2	57

Source: DMBC Inward Investment Unit 1996

The result of the local enterprise strategy was that there were lots of new businesses started but a high proportion of which were crowded into businesses like fish and chip shops and hairdressers, which added little value to the well being of the local economy' (DS,1988). Net growth rates of registered businesses during the 1980's show that despite starting from a low base, Doncaster increased its number of new business at a higher proportion than both the region and the country as a whole. Table 4:36 shows that between 1981 and 1991 the town's net increase of VAT registered businesses was 33.9% against a UK figure of 28.4%. However, a substantial proportion of these businesses subsequently failed, with a total of 90% of businesses in Doncaster de-registering over the course of the 1980's (Barnsley and Doncaster TEC, 1992). This trend continued into the 1990's. Table 4:37 shows for example that survival rates between 1993-1994 for new businesses were consistently lower for Doncaster (and Barnsley) than for Rotherham or Sheffield. This would continue into the new century.

Table 4:36 - Net growth of VAT registered businesses 1981-1991

	1981	1991	% Change
Doncaster	4,115	5,510	33.9
Yorkshire and Humberside	105,157	127,495	21.2
UK	1,336,700	1,716,299	28.4

Source: NOMIS in GOYH (1999)

Table 4:37 - Business survival periods in South Yorkshire 1993-1994

Survival Period	Registration Year	UK	Barnsley/Doncaster	Rotherham	Sheffield
12 months	1993	84.3	81.3	85.8	87.0
	1994	85.3	81.5	84.5	85.2
24 months	1993	68.5	64.5	67.9	70.5
	1994	69.8	65.6	71.9	69.4
36 months	1993	57.0	51.4	54.5	58.1
	1994	59.2	54.4	60.0	58.2

Source: Regional Competitiveness Indicators in GOYH (1999)

Understanding the impact that mining had on the town's ability to succeed in the enterprise economy has been a key contribution of this study. Coal as discussed above has been associated with a number of unique legacies which make re-integration into a modern economy difficult, one of which was that coal areas lacked an entrepreneurial spirit with lower than average levels of indigenous SMEs (Fothergill, 1992). Doncaster has become one of the most 'business deprived' districts in England performing poorly in comparison to other areas across all traditional indicators of enterprise (IPPR, 2006). Was this due to a particular legacy of mining? The answer is yes and no. Yes where coalmining remained an undiversified industry which offered few opportunities to develop new internal capabilities and experiences. But no-where the assumption is that mining uniquely predisposed its employees to lack the confidence and drive often associated with starting a business.

New firm formation across regions can be explained by differences in the regional composition of industries and by the differences in one particular industry in specific regions (Stam, 2010, p. 145). The latter would suggest that there are context-specific differences affecting entrepreneurship rates, while the former would indicate that the explanation should largely be sought in the specific industry structure of a region. Mining was one of a number

of dominant industries in Doncaster yet tends to be more regularly associated with limited spin off businesses and new firm formation rates. Industries differ in their degree of contestability (entry barriers) and the extent to which entrepreneurial opportunities emerge. The evidence shows that there were only isolated examples of local heroes spinning off enterprises from the local mining industry.¹³² Where business directories are accurate representations of the nature and structure of local economies, then there is evidence that there were few spin out opportunities available in the local mining industry. Appendix 12 shows the number of coalmining related businesses registered in the local trade directories over the course of the century. It shows that the number of businesses in the power classification across the 20th century to be low compared with all classifications other than agriculture. This broad conclusion is supported by census data which in 1961 for example records fifty-five men registered as self employed in the mining industry. In 1981 this figure was twenty-three self employed in an industry which at the time employed over 28,000. However whilst few opportunities existed while the pits were open, even less were available once they were closed.

Whereas the narrow economic trajectory pursued by British Coal ensured that the industry and its employees lacked many of skills, experiences and networks crucial to business formation, the resultant low new firm formation rates were not indicative of a lack of entrepreneurial spirit. There was some enthusiasm for entering self employment shown by a significant number of displaced Doncaster mineworkers. Of those made redundant from Markham Main colliery for example, 32% said that they intended to take steps to enter self employment (Turner 1993). A more recent local study found that more miners than had been predicted had considered self employment at one time (51%) (in Murray et al, 2005). However, the majority of ex-mineworkers who did choose to start up in business were often

¹³² One rare entry in the 1970 Annual Guide's was Mineral Wealth and Co. Ltd, which had been established in 1966 by Mr Derek Palmer, an ex-faceworker, and which specialised in the design, manufacture and repair of underground cutting equipment (DG, 30/11/67). Other examples were Cireoreel Ltd and Hydra Tools International, both of which prospered during the 1980's but like Mineral Wealth both had British Coal as their key customer.¹³²

previously employed as electricians and fitters while at the pit (Murray et al, 2005).¹³³ For those without trades or newer skills the opportunities were less obvious. Here self employment was crowded into service and retail sectors which offered little sustainability.

So whilst coal mining is clearly associated with strong cultures and legacies, the experience of Doncaster suggests that this does not extend to the lack of an entrepreneurial spirit. The inability of the town to regenerate through a small business led set of policy measures at this time is better understood as determined by declining levels of local affluence which reduced purchasing power. This has been shown to have been contingent on the manner with which the pit closure programme was managed and the subsequent regeneration measures introduced. Both of which were determined at a national level, but in the case of regeneration, implemented at a local level through a self sustaining coalition led by BCE but including the local authority and agencies such as Donbac. However the extent to which both local agencies were able to affect the nature of policy measures was limited by the need to compete for government funding. In the case of Donbac much of its funding came through BCE. In the case of the local authority, the fact that the town had been awarded Intermediate Area Status in the early 1970's meant that it could not attract automatic Regional Development Grants. It is possible therefore that potential inward investors screened Doncaster out as a result. This was certainly the impression amongst local authority at the time. This sense of powerless is also evident a decade later when the town failed to win Enterprise Zone status where neighbouring areas including Rotherham, Wakefield and Scunthorpe had been successful. These areas subsequently attracted firms which competed with Doncaster firms but on a subsidised basis.¹³⁴ This is not say that that the local authority and other agencies had no responsibility for the economic plight facing the

¹³³ One Local ex pit engineer, Russ Light, received national coverage after setting up a business building fold away aeroplanes (Daily Mail, 2/11/95). As with former steel workers, these transferable skills offered opportunities outside of the mining industry, although not all ex mining craftsmen set up businesses in related trades. Ken Savage, a former pit electrician, for example, set up China Vision, a china plates business (DEP 6/5/93).

¹³⁴ In a letter dated 11/3/1983 from Councillor Redmond Chief Executive of DMBC in response to Wakefield's proposed application of Enterprise Zone status he outlined the potential negative impact it would have on Carcroft Industrial Estate and on the retail areas of the north east of the town. Doncaster Archives. Ref. MB/LEAD/1/25.

town at the end of the century. The Confederation of British Industry (CBI) had described the towns local authority as "being positive even though it is Labour controlled" (in Piedad, 1988, p.15) with a flexible attitude towards development, although its actions according to the Doncaster Chamber of Commerce came too late and then in "an opportunistic rather than strategic manner." The Chamber of Commerce levelled similar criticisms at agencies such as BCE which they argued appeared "to take a fairly short term view" (in Piedad, 1988, p.31).

4.4.6 Conclusion

During the period 1971-2000 Doncaster's economic vulnerability was exposed as being dependent upon a small number of large firms narrowly concentrated in declining sectors, which included coalmining. Whilst the local mining industry continued to decline, the town continued to remain heavily dependent upon employment in this sector. However, what had previously been a relative decline in mining employment, offering a window of opportunity to develop alternative employment, became rapid between 1981 and 1990, which offered none. This combined with an equally dramatic decline in the town's other major industrial employers provided a 'perfect storm' challenge for local policy-makers. Decline and the town's subsequent economic trajectory however was not inexorable nor determined by mining, as alternative paths were available, but these were not taken. It was therefore the timing and speed of decline which most clearly reveals the contingent nature of Doncaster's trajectory during the last two decades of the 20th century.

The town's ability to deal with the challenges of a declining industrial base during this period is evident in the growing frustration and resignation of the town's Development Officer. The limit of his and local agency in general is evident in the town's powerlessness to compete with regional policy measures and to dispel the increasingly negative image associated with the local mining industry. The town's image problem remained significant throughout the period and remains the single most negative determinant of coalfield competitiveness. Whilst stubborn, the militant image was to a degree contingent on the way that public memory was

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reinforced, and as was shown above largely associated with the national miner's strike rather than the experience of local employers, which was largely positive. Local agency was dealt a further blow by the election of the Conservative government in 1979. The election of the Thatcher government represents a critical juncture in both the history of the mining industry and the nature of Doncaster's economy from this time. It heralded a definitive shift in policy style of government, which has been described as marking a conscious attempt to move from a consensual to an impositional style of governing (Dudley & Richardson, 2000). In the case of mining this is evident in the manner in which the government prepared the industry for privatisation. Ignoring the merits of the economic case for pit closure, the shift in style is also evident in the manner with which closure was managed. The comparison with the German experience highlights the fact that the onus was on government to determine the pace of closure. The impact of closure was therefore largely contingent upon these policy choices.

The contingent nature of decline is also evident in the policy response to the consequences of decline. The shift from the recommendations in the Hunt report to those policy measures encouraged as part of the Conservative governments 'enterprise crusade', represent a cognitive shift as increasingly market forces came to determine regional economic development paths. For local authorities the shift to the enterprise economy came as a shock. However engagement with this agenda at local level (whilst often tactical) is clear, and is a conclusion which challenges one of the key assumptions underpinning current explanations of spatial distribution of new firms, namely, that Labour-led local authorities would be less likely to support such a policy agenda (Keeble & Walker, 1994). In their efforts to shift the town's economic trajectory towards an enterprise economy they were supported by various enterprise agencies who offered what Macdonald and Coffield (1991, p. 80) have termed "implied regional policy written small." At the centre of this self-sustaining coalition was British Coal who having previously supported the development of a narrow economic trajectory around large employers and narrow skill sets, and despite the decline in its

significance as an employer, remained a key local agent in determining Doncaster's post-coal trajectory.

However at a more fundamental level, regional policy during this period remained typified by continuity rather than change. By initially enforcing capacity cuts in preparation for privatisation which contributed to the decline in private sector business, and then opting to close pits so quickly rather than as part of a staged decline as had been the policy choice in Germany, the UK government effectively locked the area back into a narrow and ultimately unsustainable trajectory. In previous eras regional policy had focused on attracting inward investment and more latterly through the spatial distribution of public sector employment. Both of these approaches have subsequently been identified as reinforcing regional lock-in. Whilst the shift to a small business led regional development appears on the surface to mark a cognitive shift, it is better understood as further evidence of a cognitive lock at a policy level as it seeks to impose a national measure, whilst failing to consider sufficiently the wider impact on regions. A wide range of studies have challenged the view underpinning enterprise policy that entrepreneurship can play a significant role in revitalising de-industrialised regions (Benneworth, 2004; Troni & Kornblatt, 2006). They show consistently that sustainable small business economies are associated with areas with high levels of affluence, and a high proportion of skilled and professional workers. The timing and speed of decline ensured that Doncaster during the 1980's and 1990's experienced high levels of unemployment, and what skills had been developed over the course of the century were either inappropriate, or were gradually lost as the town shifted towards a service-based economy, which in turn ensured comparable wage levels were lower. The lack of job opportunities in the town's traditional sectors may well have served to 'push' unemployed workers eventually into self-employment. Even where this led to an increase in the number of businesses as had been the case nationally at this time, it was not indicative of an emergent enterprise culture. The section concluded by addressing the question does mining bequeath negative entrepreneurial legacy. Whilst the number of spin outs and level of self

employment within the local industry was low it should not be seen as an indication of a lack of entrepreneurial spirit amongst the town's miners, more a reflection of the skills, experience, and subsequently the opportunities, all of which have been shown to have been contingent on a failure of entrepreneurship at a corporate and government level.

The decline of Doncaster's economy between 1970 and 2000 was therefore not associated with processes inexorably linked to mining but more the result of poor decisions across multiple levels of decision making. At a local level despite the rhetoric there was no concerted attempt to prioritise manufacturing, and despite the town's strong communications base there was little effort to capitalise on this advantage at this stage. However local efforts did not happen in a vacuum and must be understood as part of a reaction to the structural collapse brought about by a government which having rejected opportunities to diversify the industry into new sub markets in emerging sectors, also rejected the option to manage closure in a staged manner. The perfect storm that resulted therefore not only explains the nature of decline between these years but also the continuing local regeneration challenges.

4.5 Conclusion

The overall objective of this study was to explore the impact of coalmining on the town of Doncaster with a view to understanding the extent to which the legacy of the mining industry has inhibited the town's economic competitiveness in what is today called an enterprise economy. In this regard the study contributes to a wider understanding of the nature of change in old industrial regions. The study has placed the analysis within a conceptual framework which sought to determine the extent to which path contingency captures the transition from growth to decline in former industrial regions, more adequately than does that of path dependency (Hudson, 2005). It has made contributions to knowledge in two specific but related domains, these are: local history and regional policy. In order to meet the study's objectives an historical approach has been adopted which explored the impact of coal

across a range of socio-economic and political variables spanning the course of the 20th century.

Given that coalmining is an extractive industry it has been argued, the decline and closure of particular collieries and the communities dependent upon them is an inevitable, if regrettable fact of life (Bennett et al, 2000). Multiple generations over time it is argued are locked in to narrow patterns of production, leading to both an institutional and cognitive lock, and results in inappropriate attitudes, skills, networks and expectations, which make moving a regional economy onto a new and more promising developmental trajectory difficult. This is an accurate depiction of the experiences of most former coal areas. However, this study concludes that whilst the decline of coal as an energy source was in some ways determined by technological advances in new energy sources and more latterly environmental concerns, this did not need to signal the decline of the areas that had come to depend upon it. Even old industries such as coal mining provided the basis for diversification into new products and markets. Such cases of 'resurgent innovation' have been described as evidence of a phase of 'dematurity' (Storper, 1985). Processes of this sort would seem to fit a less deterministic development model in which an industry (and that part of a local or regional economy dependent upon it) undergoes radical adaption, in effect renewing (or extending) the industry's (regions) development path (Martin & Sunley, 2010). However, diversification is contingent on investment decisions through for example a continued commitment to both research and development, and the development and exploitation of internal competencies, and equally importantly a willingness to identify and grasp opportunities. Both of these particularly from the nationalised era were contingent on political will which was not forthcoming. It has been shown that possible new trajectories were available to the coal industry and a number of piecemeal initiatives were developed, but no political party was prepared to support diversification in any systematic way. Where this leadership was evident industrial cumulative innovation was possible, as was demonstrated in the case of Dutch State Mining. In the UK opportunities existed for example to diversify towards energy

conservation and renewable energy sources, but these opportunities were not pursued. That today British Coal tends to use former colliery sites for property development purposes is therefore both indicative and representative of the legacy of this institutional inertia. The study therefore also places this study within the wider context of British economic decline. In particular it supports but also updates the view that a lack of entrepreneurial leadership was endemic in the management of the UK mining industry. A central conclusion of the study therefore is that the nature of the UK coal industry's decline, and therefore any regional instituted legacies was contingent on human agency and not determined by the nature of its principal product.

5 Impact of mining on Doncaster

The decline of coal mining has been considered within the context of the experiences of the town of Doncaster. Specifically this thesis has sought to contribute to a greater understanding of the role that coal mining played in determining the town's economic trajectory and subsequently its ability to compete in today's enterprise economy. The manner in which local economies develop lies somewhere on a continuum between accidental and random emergence and deliberate intended consequences (Meyer & Schubert, 2007), and therefore isolating and assessing the contribution of a single factor is not easy. For example Doncaster's economic development path over the course of the 20th century provided examples which span the entire breadth of this continuum. It has been shown that the town's development path over the course of the 20th century was contingent on a wide range of factors which ranged from acts of God, to the impact of globalisation, and the increasing levels of supranational decision making, and that decisions led to unintended as well as intended consequences. For example, the town became increasingly reliant upon a small number of dominant manufacturing firms, many of which were subsequently taken over by international firms increasing the town's vulnerability to global pressures. Similarly the town initially benefited from wartime dispersal of industry but became a regional policy 'loser' when government provided incentives for Ford to move production to Liverpool. Whilst the above (both of which can be related to branch plant syndrome), were clearly contributory factors in Doncaster's subsequent economic decline, coalmining remains central to explanations of the nature of decline, and in particular its continued challenge to regenerate within the enterprise economy.

The study has shown that a 'coal effect' can be identified across a number of local economic and socio-political indicators. It shows that like other coal areas, Doncaster over time suffered from a narrowing skills and employment base and high levels of migration, although this was more evident within the surrounding pit villages. The nature of the town – village

divide was not analysed in any depth, and is an area which needs further analysis, but the study has demonstrated clear differences were evident particularly in local politics which in Doncaster would remain representative of the wider interests in the town. The extent to which coal came to dominate the culture of the town is therefore moot, with most miners and their families preferring to live within the surrounding pit communities, only using the town for retail and leisure purposes. Nevertheless despite this the lasting legacy of coalmining on Doncaster has been its influence on the town's external image. The town's publicity materials managed over many years to hide the surrounding coalfield, but the town today remains strongly associated with mining. That this image is largely based on a misperception does not detract from the stubborn nature of this image which continues to inhibit economic development. It also tells us something about how regional brands are constructed around a historically based narrative but one which changes more slowly than the region itself.

The study shows that Doncaster at no stage could be described as a typical coal town displaying some but not all of the characteristics associated with mining areas. The town for example maintained a relatively diverse economic infrastructure throughout the century with manufacturing remaining Doncaster's largest industrial sector. In fact Doncaster could better be described as it had been as early as 1912 as a railway town surrounded by a coalfield. If anything the coal industry enhanced the town's status as a transport nodal point in particular boosting the local railway industry. This factor alone distinguishes Doncaster from many other coal mining areas and provided the basis for economic competitive advantage which continues to this date.

The study has shown nevertheless that over time the town's economic prosperity became over-reliant upon mining employment and related economic multipliers. One economic impact study found that by 1988, one fifth of all jobs in the Doncaster area were still in mining or quarrying - over ten times the national average. In the same year miners' spending in the town was estimated to be £35 million (Pieda, 1988). Whilst the town's overall economic vulnerability was based on its dependence on a small number of large employers

in what would become shrinking economic sectors, one of which was the coal industry, it was however the dangers associated with mining's dominance which tended to be reported in the local newspapers. This concern was evident from the earliest days of the Doncaster coalfield. The *Doncaster Gazette* in particular maintained a consistent editorial line throughout the century which sought to impress upon local political and business leaders the need to use coal mining as a catalyst to attract new industry and to build a modern and diverse industrial infrastructure. Whilst coal attracted new business to the area it was never sufficient to address the concerns of the *Gazette*, nor was it comparable with the scale or type of business that had been attracted by the railways which had also been responsible for attracting additional investment, and provided the hub for subsequent engineering clustering, and developing engineering and draughtsman skills. Evidence from actual numbers of businesses started in the town suggest also that mining provided comparatively few spin-off or start-up opportunities, a factor which could be indicative of resilient local economies in the enterprise economy.

5.1 Understanding the process of regional lock in

Regional lock-in is a multi-scaled process, and one which also has a high degree of place-dependence, but is in fact influenced and affected by both intra-regional and extra-regional factors. It is argued in this study that human agency within and between these levels is the key determining factor in understanding the nature of regional decline. Institutional inertia at both meso and macro level in particular was highlighted as a key factor in the coal industry's failure to diversify in to new or different markets. It has also shown through the case study of Doncaster that decisions at a micro level through local agency can also affect a town's development path. The town's engagement with the coal industry spanned the entire 20th century and during that time numerous impact indicators were evident. It is clear from the pages of the *Doncaster Gazette* that the town's decision makers were well aware of what the paper described as the 'peculiar problems' afforded by the growing dominance of the local

coal industry. They were also aware of the 'gathering storm' as the town became increasingly dependent upon a small number of large employers in what over the course of the century became declining sectors. Numerous opportunities existed to address these challenges and reduce if not break the town's dependency levels, suggesting therefore both foreseeability and opportunity, supporting the overall conclusion that the nature of the town's decline was contingent on human agency.

Understanding what factors drive policy decision-making needs further development, although there is a broad cross disciplinary consensus that policy makers are always likely to focus on their own career progression, which often results in short term popular decisions. These decisions may or may not be in the best interests of a given area's future development path. Examples were highlighted at all levels of decision making. For example at a micro level the Doncaster Progressive Party's prioritisation of cheap rates during the Edwardian period was shown to be at the expense of necessary investment in the town's infrastructure, and came at a time when coal provided key locational advantages to new industry. A more industrialist policy was evident from the inter and post war years as local politics became dominated by the Labour Party. This did not however lead to a fundamental shift in the town's subsequent development path. The decision of Doncaster's labour controlled council to build council houses in the early post Second World War period for example, was shown to have resulted in a housing mix which subsequently acted as a deterrent to professional workers and inward investment. These two examples highlight how decisions can have both intended and unintended consequences, but also serve to illustrate how the processes of economic lock-in manifest themselves at a local level. Both had negative consequences for the town's subsequent development.

The study has also shown however that local autonomy declined over time and in this regard it challenges the centrality of place in understanding the nature of regional trajectories. Two critical junctures can be identified in this study both of which resulted in an increasing role for the State in the subsequent determination of the town's developmental trajectory. The first

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came with the emergence of regional policy from the 1930's, and the second with the nationalisation programme in the immediate post Second World War period. Local labour markets were often constituted to be dominated by a single industry, with government actively colluding in this process to ensure there was little by way of alternative employment. This was apparent during the inter-war years, with industry steered into the depressed regions, which perpetuated local economic vulnerability through branch plant syndrome, but was particularly evident after nationalisation when alternative male jobs were intentionally kept out of the coalfields. Hudson's (2005) assessment of industrial decline in the North East concluded that the State had a central role in determining a particular economic trajectory by creating and reinforcing lock-in to ensure path dependent development. This study builds on and extends this conclusion beyond a single region, highlighting ways in which government management of the coal industry and regional policy affected the development trajectory of Doncaster. It has shown that windows of opportunity were available when entrepreneurial action at both meso and macro levels could have enabled the town to develop new paths, for example at the time of the publication of the White Paper on energy in 1967, but shows that this and other opportunities were not taken. Conversely the Coal Board as a dominant actor in the local self-sustaining coalition actively constrained the town's ability to develop new opportunities. The disproportionate influence of the Coal Board in Doncaster ensured that as long as coal remained profitable the longer term interests of the town would be of secondary concern. Given that the Coal Board had social as well as economic obligations this represents a significant failure, and any resultant local instituted legacies should therefore be understood as contingent on a legacy of institutional or political lock-in. Hudson also argued that having locked the North East in to a narrow industrial trajectory the State subsequently sought to erode such lock-in to facilitate new developmental trajectories. This study extends this conclusion by highlighting how the manner by which the State chose to erode Doncaster's dependence on coal merely perpetuated the problem, limiting both the range of possibilities that may have lead to newer and more sustainable trajectories. In doing so it

shifts the focus of cognitive lock in from a place based phenomenon to an institutional phenomenon operating at national regional policy making level.

Whilst pit closure on any scale did not occur in the Doncaster coalfield until the 1980's, the resultant speed of decline placed tremendous pressure on a local labour market which was also suffering similar levels of retrenchment amongst its main manufacturing employers. The timing and scale of unemployment caused by the closure programme rather than any particular dependence upon the coal industry therefore explains the nature of the problem facing the town during the 1980's and 1990's. It also explains the extent to which the town could realign its economic trajectory during these years.

Government response to closure was to create new organisations to support regeneration, in itself an admission of the scale of the problems. One of these was British Coal Enterprise (BCE) whose influence in the town grew as local pits closed. Whilst not the sole regeneration measure, the local enterprise strategy focused on the encouragement of local people to start up businesses as regional policy shifted in the direction of market-based, indigenous solutions for regional problems. Evidence based on new firm formation rates in the town suggests that the town was making a successful transition onto an enterprise trajectory, but deeper analysis shows that this trajectory was based on low-value adding businesses within sectors typified by high failure rates. This is typical in regions suffering high levels of unemployment and declining levels of local affluence, but in Doncaster this did not have to be the case. Whilst local directories showed few mining-related businesses registered (a factor associated with sectoral inertia caused by institutional inertia rather than a cultural flaw), they also showed that Doncaster maintained a strong engineering and manufacturing tradition, which along with sectors which built on the town's connectivity such as logistics and distribution, provided the basis for more concerted and sustainable regeneration strategies. There was some recognition of this fact with BCE and other business support agencies having a strategic objective to maintain the town's manufacturing skills base whilst realigning the sector towards emergent technologies. However the scale of unemployment

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caused by the pit closure programme and its wider multiplier effect placed greater pressure on what was already an inadequate resource and supported an untargeted approach to business support. This is not to say that the local decision makers were not complicit in this regard, as there is evidence that the town saw opportunities in enabling the development of a service-orientated economy. However faced by a perfect economic storm, which resulted in mass unemployment, speed was bound to become the key motivation behind action, as too was access to funding. The subsequent misalignment of the allocation of an admittedly scarce resource nevertheless provides an example of a short term fix where a more considered longer term strategy was required. If towns are going to shift onto to new, but sustainable development paths then early interventions which provide time are crucial.

Doncaster's experiences during the 1980's and 1990's highlight the fundamental paradox of the enterprise strategy at this time. That is, it ignored the clear relationship that had existed between the local collieries (and manufacturing plant) and local business success, whether through the supply chain or customer base. Structural change cannot come through structural collapse. The lessons to be drawn from this conclusion are as relevant today as they were thirty years ago and provides a better explanation for the levels, and also type of new business activity in the town than does any industry-based cultural legacy. Given the wider local economic context with declining levels of affluence and increasing deprivation this finding also supports the broader conclusion that government understanding of the causal flows within the relationship is incorrect. Rather than low start up rates explaining deprivation, high levels of deprivation explain low start-up rates. This conclusion has implications for current regional policy particularly where localities have high concentrations of public sector employment, which today also includes Doncaster. Evidence from the most recent business analysis of the town conducted by the local Chamber of Commerce suggests that the town continues to be dominated by micro businesses in low value adding

service sectors, with the result that the economy still suffers from disproportionately high business failure rates.¹³⁵

In considering the nature of decline the study draws the broad conclusion that despite the political shift from social democratic politics to neoliberal politics started during the 1980's, regional policy fundamentally remained locked into solutions which were based on national blueprints not applicable to all regions, and which merely reinforced the problems the policy rhetoric claimed to be addressing. Whereas 50 years earlier government was labelling regions 'depressed' or 'derelict', hardly, as Aneurin Bevin pointed out at the time of South Wales, 'a great inducement to anybody to open a business when you tell him that he is going to a place where there is a depression' (in Parsons, 1988, p. 8), during the time of the pit closure programme, government, including many local authorities were describing regions as lacking an 'entrepreneurial spirit' or an 'enterprise culture'. There is an important connection between the ways the regional problem is defined and the perception of appropriate forms of regional policies to tackle it, and each of the above were designed to effect a change in what we might term the 'meta' policy, each definition adopting what was then the prevailing discourse of the day. Murray Edelman, a political scientist who wrote on the linguistic and symbolic dimensions of public policy, expressed this as an 'impression that induces acquiescence of the public in the face of...tactics that might otherwise be expected to produce resentment, protest and resistance' (in Parsons, 1988, p. 8) whilst at the same time seeking to help reinforce or to change forms of instituted behaviour, and to secure or alter the existing developmental trajectory.

The study has highlighted how self-sustaining coalitions often determine regional trajectories. One particular limitation of this study is that in describing the various stakeholders and actors within these coalitions it has done so under the broad categories: macro; meso; and micro. Whilst not questioning the central conclusion that local autonomy

¹³⁵ See also the latest Doncaster labour market profile (2012) accessed at www.Nomisweb.co.uk on 28/5/2013

was eroded over time there is merit however in extending understanding of how local influence is represented and develops within these coalitions. The study has made reference at various times to the influence of business networks and trade unions in addition to elected local officials. It has also shown how these coalitions comprise networks often held together by expediency based on the need to compete for regional funds. These provide the basis for further analysis. However it is recommended that any subsequent analysis of self-sustaining coalitions should also include the role played by the academic community and specifically their role in relation to the publication of research. Despite extensive reference to the weaknesses inherent in one-size fits all solutions to regional problems, policy making remains locked in to standardised measures often derived from the experience of super-star regions. This tradition represents not just a political consensus but is also indicative of a dominant research tradition which seeks generalisation, but which often comes at the expense of understanding. Regions are different, and policy measures should be based on both the needs and the desires of the regions. To this end, recent work on the re-conceptualisation of regions presents a possible critical juncture in not just how we think about regions, but also how we develop and implement regional policy. This is not particularly a comment in support of regional Mayors, but more a recognition that within any re-conceptualisation both quantitative and qualitative regional development is possible (Pike et al, 2007). Quantitative growth might lead to rapid but short-lived growth, based on low quality jobs, dis-embedded inward investors and/or failing start up firms. Qualitative 'development' on the other hand, can be based on low level, weak (but perhaps more sustainable) growth, insufficient (although potentially good) quality jobs. Or regional development could be based on a mixture of the two. This area clearly needs more thought, but asking the question what is a region for, provides the correct starting point rather than top down solutions based on the experiences of certain successful regions. This study has looked at the experiences of Doncaster over the course of the 20th century and it should be remembered that whilst today it continues to face numerous economic challenges, it had

previously been at the centre of a successful region. A key conclusion therefore is that a prerequisite for any re-conceptualisation would be a greater understanding of regions and their histories, many of which, particularly within old industrial regions, may be underpinned by cultures currently judged to be inhibitors to economic growth, but as demonstrated by the example of the Ruhr may provide a valuable anchor point around which change can be developed.

Towns and regions often become victims of their own history. If they are to escape it they first must understand it. To paraphrase a recent NESTA document,¹³⁶ economic performance varies substantially across the UK and the different history of each town/region has a substantial bearing on its economic position today. However, until recently regional policy has not taken sufficient notice of regional histories. This is a major oversight. History shows that old industrial regions find it harder to adapt to new ideas than those starting from a new industrial slate. This has been illustrated by the case of Doncaster. Policy-makers therefore need to develop an historical awareness in developing regional policy. However this study concludes that even where related to industries such as the coal industry, processes of lock-in are not inevitable or inexorable. It has been shown that opportunities exist to break industrial trajectories and the development paths of regions associated with them. It is not correct therefore to say that regions sow the seeds of their own decline. Industries especially the coal industry clearly have an impact on the subsequent trajectory of related regions, but this, and any related instituted legacies (including any particular attitude to starting a business) is contingent on wider factors which are not necessarily place dependent. In this study it has been argued that understanding the nature of Doncaster's decline cannot be limited to any specific industry legacy as all industrial legacies are largely contingent on agency. Any coal legacy affecting Doncaster is therefore an effect and not a cause.

¹³⁶ History matters. Unlocking innovation in British cities and regions. Policy briefing, HM/26/July 2008, National Endowment for Science Technology and the Arts, London.

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6.1 Newspapers

DG (Doncaster Gazette)

DC (Doncaster Chronicle)

DEP (Doncaster Evening Post)

DS (Doncaster Star)

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The Engineer 25/1/1990

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The Yorkshire Post 30/3/1988

6.2 Doncaster Archives

Agreement to lease a Brickworks, Askern. Askern Coal and Iron Company Limited to W J Hardy on behalf of intended company. 7 January 1911, DY/YBO/8

Agreement to lease a Sand and Gravel Pit, Armthorpe. Rt Hon W.C. de. Meuron Earl Fitzwilliam with J.P. Crawley 1 March 1922, DY/YBO/14

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6.3 Sheffield Archives

Memoranda and certain statistics as the production of coal, coke and bye products in the coalfield of Yorkshire in relation to the coalfields of the UK, 25th November 1921, SY 187/B11/2

Wage rates for south Yorkshire and west Yorkshire. Tables showing rates of wages payable May 1937, SY 187/B11/3

Appendix 1: The 24 Regional Factors of Competitiveness as used by IFO (1990)

Economic	Infrastructure	Social	Educational	Political/infrastructural
1. Proximity to customers 2. Proximity to suppliers 3. Business culture 4. Availability and quality of banks, insurance companies, and lawyers 5. Availability and quality of advertising and consultancy agencies 6. Availability and quality of servicing for machinery	7. Connection to the traffic network 8. Availability and costs of energy supply 9. Modern communications system 10. Availability and costs of waste disposal facilities 11. Industrial sites	12. Availability and quality of municipal cultural and social facilities 13. Availability of leisure time facilities 14. Social climate (e.g. labour relations) 15. Availability and cost of housing	16. Availability and quality of school-education and training facilities 17. Availability of qualified labour 18. Availability of less or not qualified labour 19. Proximity of vocational / managerial training facilities 20. Proximity to colleges, universities and research facilities	21. Regional policy incentives 22. Co-operation of regional authorities. 23. Flexibility of planning decisions by local authorities 24. Local / regional taxes and public fees

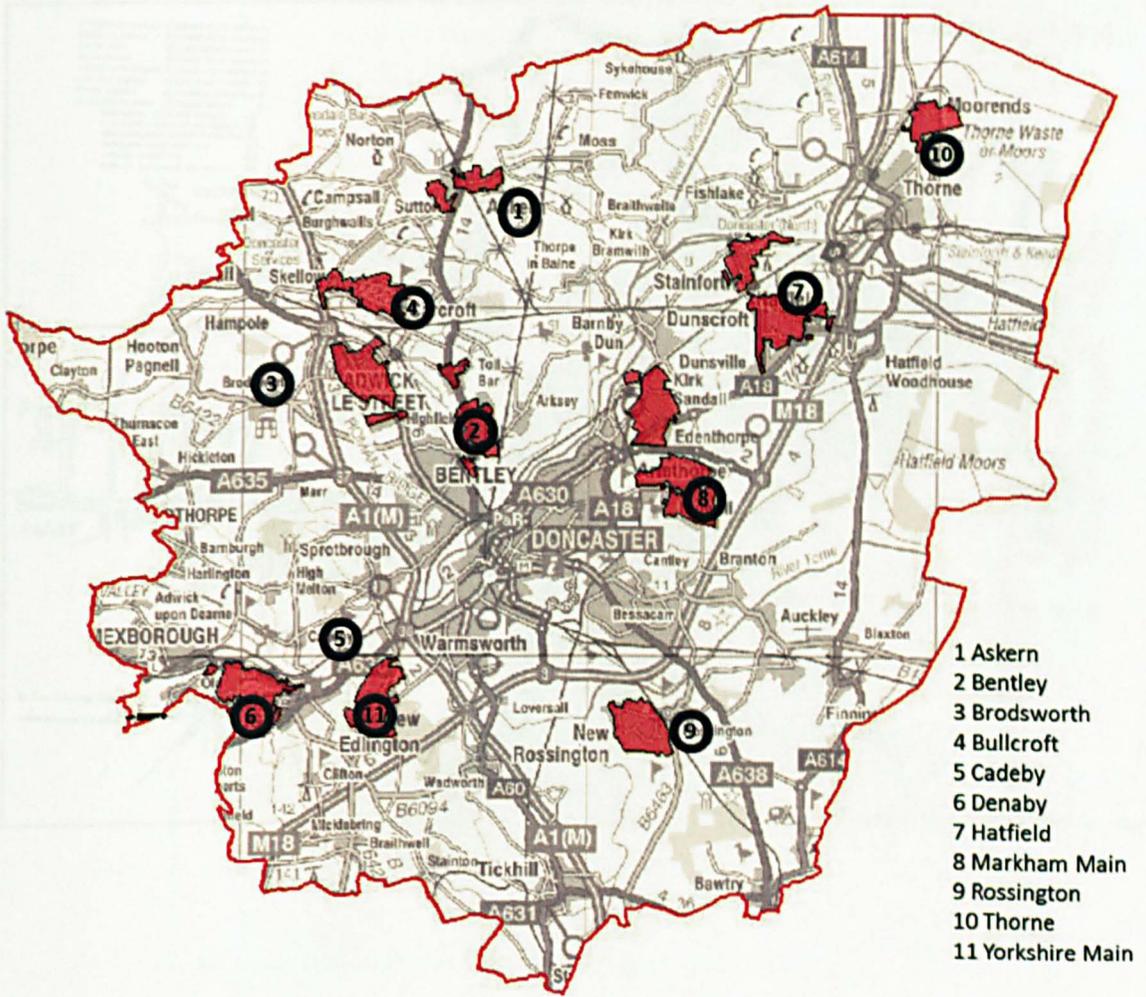
Appendix 2: The 41 Regional Competitiveness Factors as used by Bowes (2000)

Infrastructure	Quality of life factors	Institutional factors	Labour force factors	Business environment factors
1. Transport network 2. Road network 3. Rail network 4. Air network 5. Water network 6. Communications system 7. Industrial sites	8. Society values 9. External reputation and/or notoriety 10. Crime levels 11. Cost and availability of housing 12. School facilities 13. Leisure facilities 14. Cultural and social facilities	15. Local authority co-operation 16. Local political culture 17. Business rates 18. Regional policy incentives 19. Support structures (e.g. TECs, Business Links)	20. Direct labour costs 21. Supply of qualified labour 22. Supply of qualified make labour 23. Supply of qualified female labour 24. Supply of unqualified labour 25. Supply of unqualified male labour 26. Supply of unqualified female labour 27. Flexibility/adaptability of workforce 28. Worker motivation 29. Brain drain 30. Industrial relations	31. Proximity to customers 32. Proximity to suppliers 33. Supply and cost of energy 34. Supply and cost of waste disposal 35. Banks, insurance companies and lawyers 36. Advertising and consulting companies 37. Machinery servicing companies 38. Proximity of vocational/managerial training facilities 39. Proximity of third level education 40. Regional and local industrial legacy 41. Business culture

Appendix 3: Occupational category list

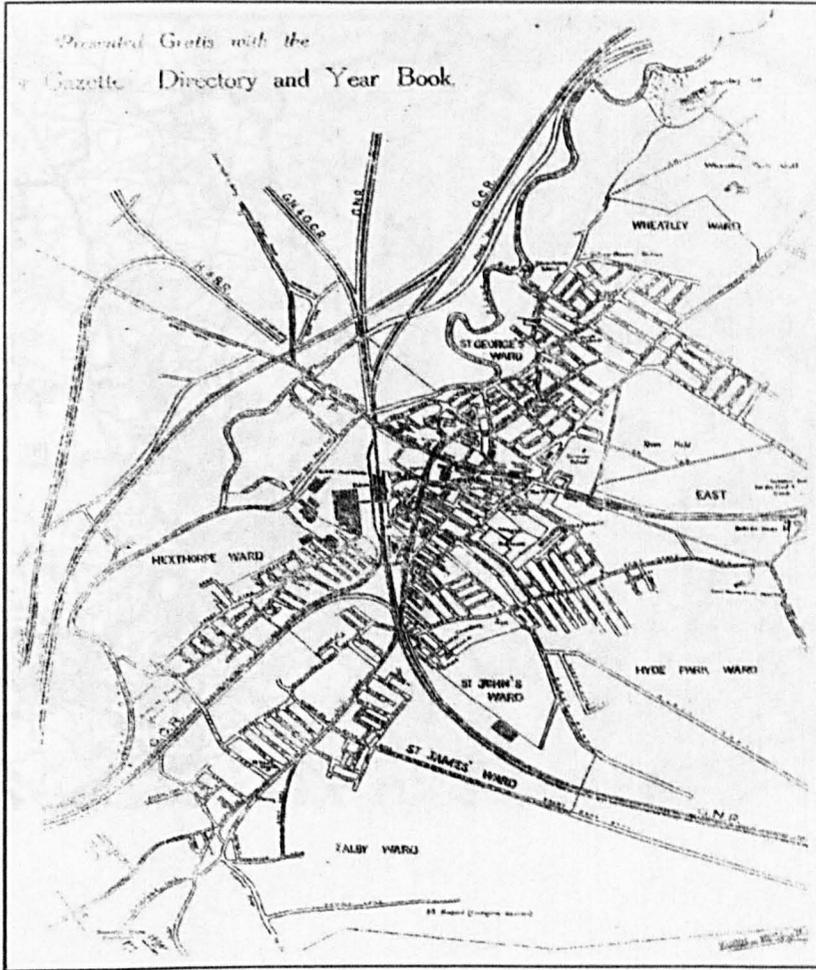
1. Managerial staff: includes working directors and managers.
2. Professional engineers, scientists and technologists
3. Technicians and technical engineers
4. Administrative and professional staff
5. Clerks, office machine operators, secretaries and typists
6. Surveyors
7. Craftsmen
8. Operators and other employees

Appendix 4: The Doncaster Area



The above map shows the town of Doncaster within the Doncaster Area with the (former) pit villages in red and is based on the Doncaster Coal Mining Referral Area 2010

Appendix 6: Doncaster ward map 1914



2 Armthorpe

4 Balby

6 Bentley

6 Brasscott & Conley

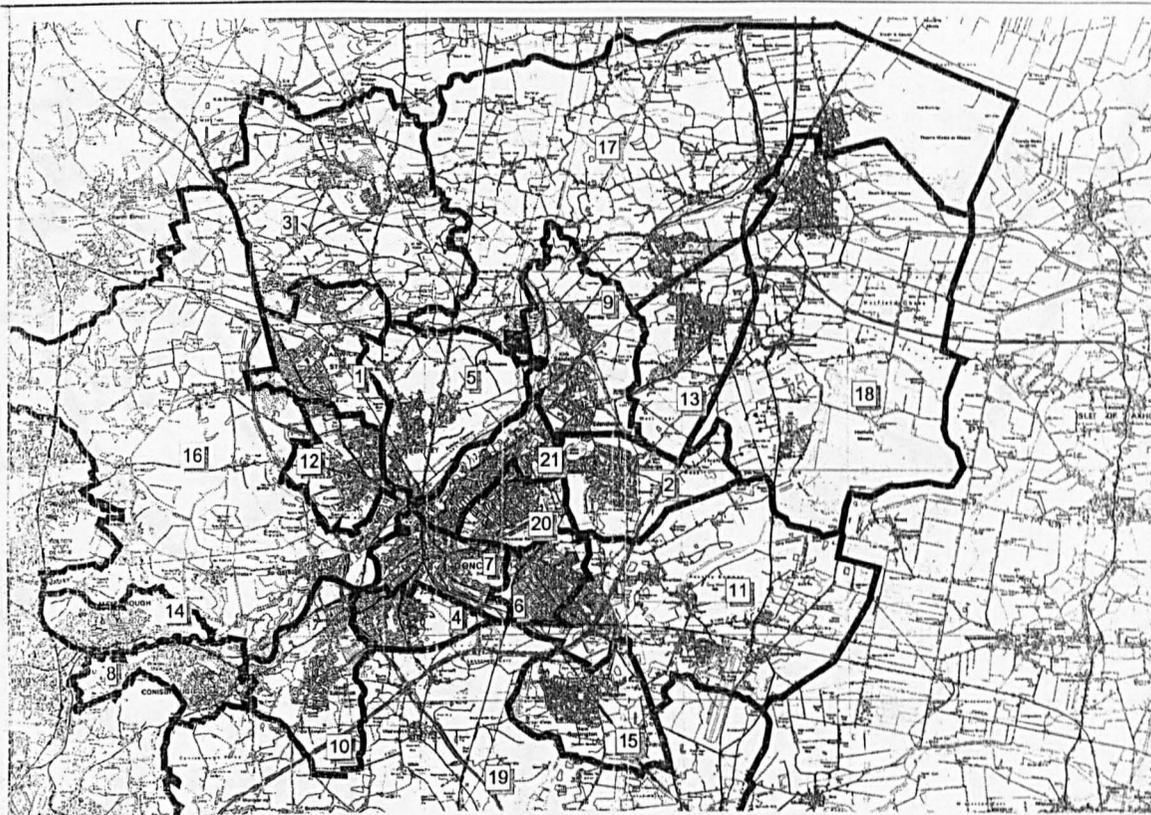
7 Central

9 Edenthorpe, 12th, Sandall & Humber Dams

20 Town Moor

21 Wheatley

Appendix 7: Doncaster Borough ward map 2004



2 Armthorpe

4 Balby

5 Bentley

6 Bessacarr & Cantley

7 Central

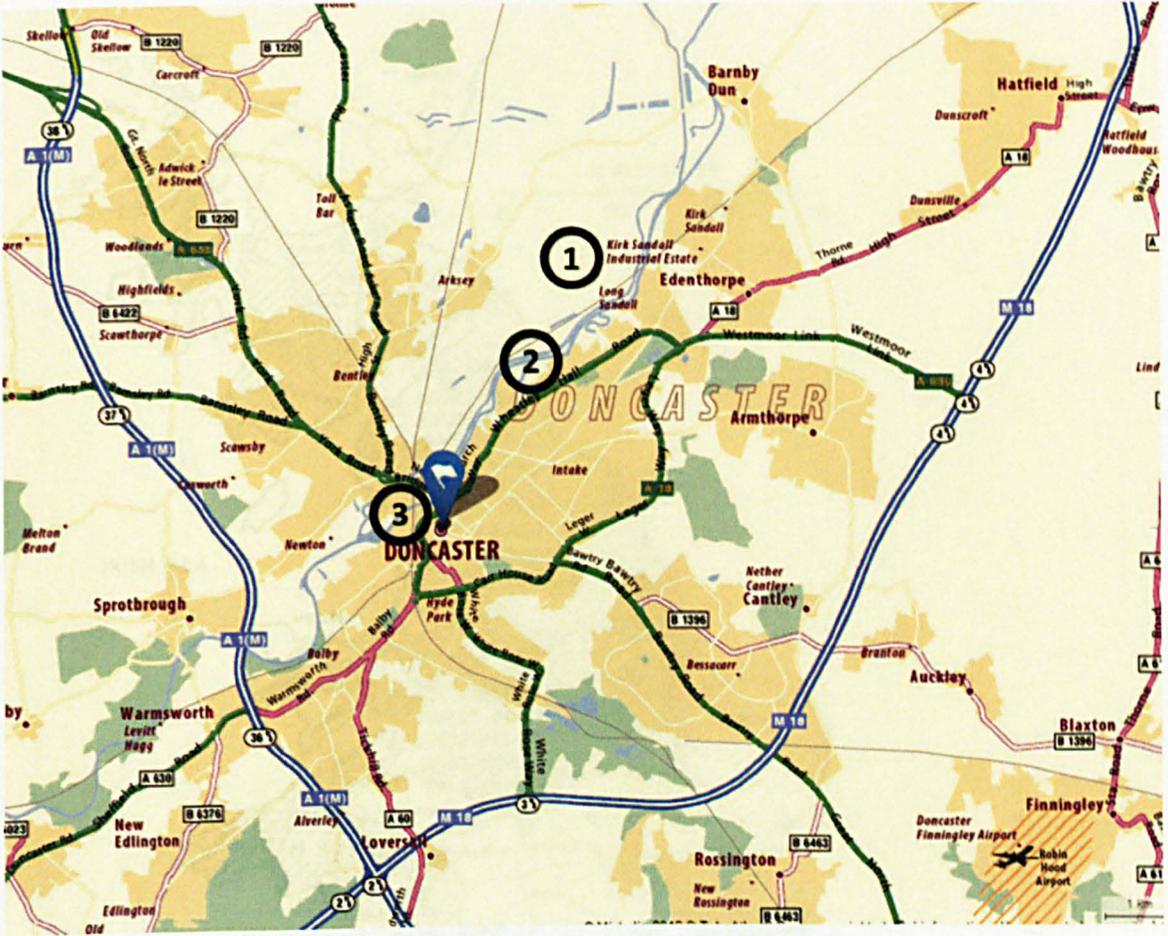
9 Edenthorpe, Kirk Sandall & Barnby Dunn

20 Town moor

21 Wheatley

270

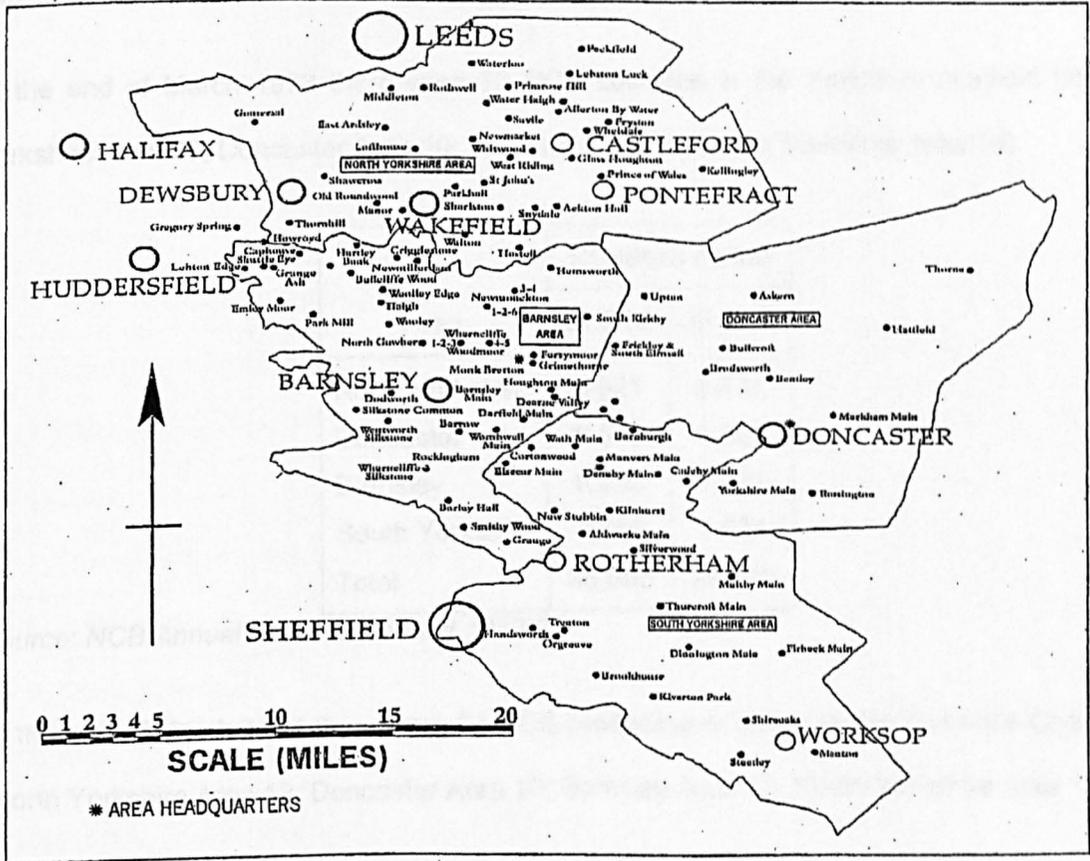
Appendix 8: Doncaster industrial estates showing motoway development



1. Kirk Sandall Estate
2. Wheatley Hall Estate
3. Marshgate Estate

Appendix 10: Yorkshire coalfield showing Doncaster area

1967



Reorganisation of Yorkshire Coalfield into North, South, Barnsley & Doncaster Areas, 27 March 1967.

Source: NCB Yorkshire Coalfield

Appendix 11: Doncaster coalfield statistics 1972-73 & 1983-

84

Tables of saleable output ('000 Tonnes)

At the end of March 1973 there were 70 NCB collieries in the Yorkshire coalfield (North Yorkshire Area 20; Doncaster Area 10; Barnsley Area 21; South Yorkshire Area 19)

Area	52 weeks ended	
	24.3.73	25.3.22
North Yorkshire	9,921	8,438
Doncaster	8,675	6,809
Barnsley	8,083	6,727
South Yorkshire	9,416	7,624
Total	36,095	29,598

Source: NCB Annual Press Statement 1972-73

At the end of March 1984 there were 53 NCB producing collieries in the Yorkshire Coalfield (North Yorkshire Area 12; Doncaster Area 10; Barnsley Area 16; South Yorkshire Area 15)

Area	52 weeks ended	
	31.3.84	26.3.83
North Yorkshire	7,548	8,391
Doncaster	5,816	6,780
Barnsley	6,195	8,132
South Yorkshire	6,574	7,328
Total	26,133	30,631

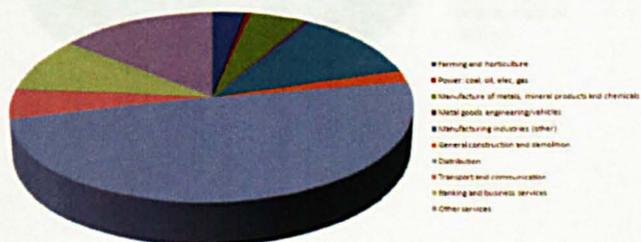
Source: NCB Yorkshire Coalfield Annual Review 1983-84

Appendix 12: Businesses registered in local business directories (all periods)

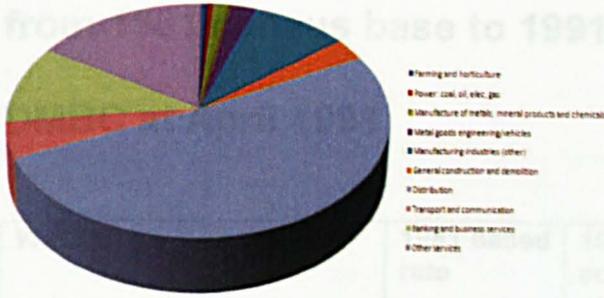
Standard Classification Codes	1900	1936	1967	1993
0. Farming and horticulture	27	13	31	22
1. Power: coal, oil, electricity, gas	4	12	89	17
2. Manufacture of Metals, Mineral products and Chemicals	46	28	83	18
3. Metal Goods Engineering/Vehicles	5	52	169	41
4. Manufacturing Industries (other)	113	188	261	113
5. General Construction and Demolition	19	59	487	199
6. Distribution	467	1055	2357	1057
7. Transport and Communication	46	105	110	96
8. Banking and Business Services	86	217	378	340
9. Other Services	127	327	334	229
Totals	936	2056	4,299	2115

Source: Local Trade Directories based on 1980 Standard Classification Codes.

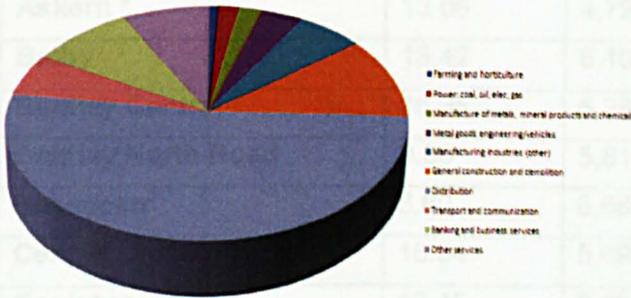
Businesses Registered in Local Directories - 1900



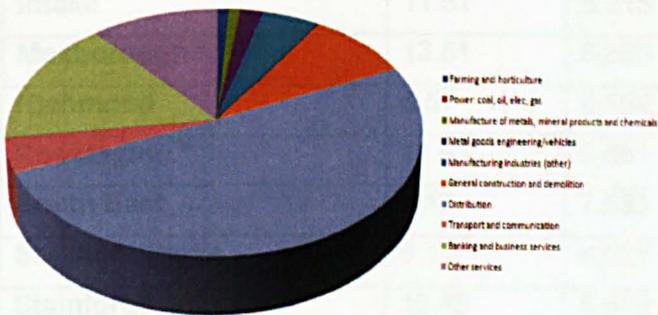
Businesses Registered in Local Directories - 1936



Businesses Registered in Local Directories - 1967



Businesses Registered in Local Directories - 1993



Ward	1985 economic activity	1991 economic activity	1991 economic activity	Change in % since 1985
Adwick *	7,084	12,711	8,700	+1.64
Armthorpe *	8,855	7,053	6,497	-2.25
Asker *	13,065	17,750	12,311	-4.16
Beaumont *	8,107	13,247	8,735	-0.83
Beaumont Park *	5,815	10,041	6,443	+1.25
Conistone *	5,980	10,218	7,047	+2.87
Conistone Park *	5,191	17,705	5,041	-1.33
Conistone Park West *	13,465	8,481	14,701	+1.38
Edlington *	6,025	14,271	8,701	+1.36
Hatfield *	6,175	4,397	7,007	+1.36
Intake *	11,511	8,115	10,011	+1.31
Intake Park *	3,111	5,251	3,201	+1.34
Stanningley *	15,111	10,111	17,111	+1.31
Thorn *	7,111	11,111	8,111	+1.31
Town Field *	6,111	10,111	7,111	+1.31
Wheatley *	5,111	9,111	6,111	+1.31
Doucaster Borough	100,000	100,000	100,000	0.00
Doncaster mining wards	100,000	100,000	100,000	0.00

*Armthorpe was down this time

**Appendix 13: Change in estimated unemployment rate
from 1981 census base to 1991 census base by Ward for
DMBC at April 1991**

Ward	1981 based rate	1981 economic activity	1991 based rate	1991 economic activity	Difference in % rates
Adwick *	13.07	7,094	13.71	6,792	+0.64
Armthorpe **	8.85	7,683	8.42	8,074	- 0.43
Askern *	13.06	4,792	12.31	5,085	- 0.75
Balby	13.42	6,101	13.45	6,088	+0.03
Bentley Central *	16.36	5,287	17.17	5,038	+0.81
Bentley North Road	9.58	5,816	10.83	5,145	+ 1.25
Bessacarr	6.60	6,680	7.51	5,875	+0.91
Central	16.34	5,691	17.35	5,359	+1.01
Conisbrough *	13.45	6,491	14.81	5,895	+1.36
Edlington & Warmsworth *	11.45	6,025	12.83	5,377	+1.38
Hatfield *	9.73	6,237	8.64	7,029	-1.09
Intake	11.51	5,315	13.72	4,460	+2.21
Mexborough *	13.61	6,890	14.15	6,627	+0.54
Richmond	6.57	6,559	6.36	6,774	-0.21
Rossington *	11.61	5,661	12.07	5,443	+0.46
South East	5.12	7,533	4.50	8,579	-0.62
Southern Parks	6.17	6,027	5.25	7,079	-0.92
Stainforth	10.85	6,679	10.27	7,061	-0.58
Thorne *	12.52	7,478	13.07	7,161	+0.55
Town Field	18.41	5,599	19.50	5,288	+1.09
Wheatley	11.53	5,656	12.82	5,085	+1.29
Doncaster Borough	11.24	131,298	11.41	129,275	+0.17

*denotes mining wards

**Armthorpe was drawn into Doncaster Central in 1983

Appendix 14: Doncaster Local Council Election Results

1973-92

Ward	1973	1975	1976	1978	1979	1988	1989	1990	1991	1992
Armthorpe	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lib Dem	Lib Dem	Lab
Balby	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Lab	Con
Bessacarr	Con	Con	Con	Con	Lab Con	Lab Con	Lab	Lib Dem	Lab	Con Lab
Central	Lab	Lab	Lab		Lab	Lab	Lab	Lab	Con	Lib Dem
Intake		Con	Con	Lab	Lab	Lab	Lab	Lib Dem	Lib Dem	Lib Dem
Town Field (& St Georges pre 1980)	Con	Con	Con	Con	Lab	Lab	Lab	Con	Con	Con
Wheatley	Con	Con	Con	Lab	Lab	Lab	Lab	Lib Dem	Lab	Lab

Sources: *Doncaster Metropolitan Borough Election Results 1979-92, (DMBC), British Local Election Database, 1889-2003*