THE SUCCESS OF LOCAL ECONOMIES – WHAT CONTRIBUTION DOES SOCIAL CAPITAL MAKE?

THE CASE OF NORTHERN IRELAND

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ABSTRACT

This doctoral thesis examines the association between social capital and local economic success at the level of the District Council Area in Northern Ireland. A number of challenges have had to be addressed to progress this analysis. "Economic success" has had to be defined as a series of outcomes. These outcomes have each been shown to be sufficiently distinctive to justify their being synthesised into an Economic Success Index which can provide a more comprehensive measure of economic success. "Local" has been defined as the District Council Area in Northern Ireland. That spatial parameter has constrained the data available for analysis. Cross-sectional and time-series data has had to be combined in one analytical framework. "Social capital" has been defined as one of a series of potential economic success inputs. A set of social capital indicators has been identified. In order to put the association between social capital and local economic success into context, clusters of other potential inputs have been identified. Their association with economic success has also been measured.

The subsequent analysis of economic success outcomes, social capital and other potential economic success inputs, has revealed how internally complex Northern Ireland is. The region's heterogeneity has been proposed as an explanation for the relatively small number of inputs whose association with local economic success prevailed across enough of Northern Ireland's local economies to be statistically significant. Notably, social capital has been found not to have been associated with local economic success across Northern Ireland as a whole. This is in line with studies of social capital and economic performance at the level of large intra-national regions in the UK, Europe and the US which had found either no association or contradictory and inconclusive sets of statistical relationships.

This thesis has analysed social capital and local economic success outcomes at the intra-regional district level. This has revealed that at a sub-regional level in Northern Ireland there was in 2001 a high level of co-terminosity in some areas between the presence of social capital and the attainment of local economic success. In particular, a sub-region of contiguous Catholic District Council Areas

has been identified which was economically successful and in which social capital was also highly developed.

Other conclusions drawn from this analysis are that: social capital in Northern Ireland was a distinctively Catholic phenomenon; by 2001 the West/East, Catholic/Protestant intra-regional differential in economic success no longer seems to have prevailed; a new geographical disparity appears to have emerged between an economically less successful northern coastal arc and the rest of the region; Catholics overall were more likely to have been living in economically successful areas, a significant improvement in their historic position of relative economic disadvantage; self-employment, which in 2001 was positively associated with economic success, was much higher in Catholic areas than in Protestant areas.

The thesis has also generated two potentially important findings in respect of women: The presence of female small business employers was not associated with economic success, whereas women leaving the home to become economically active was. Cause and effect remains an open question in respect of these and other findings. However, at the very least this thesis suggests that the relationship between females becoming employers, females becoming economically active, social capital and economic success is a complex one which needs more research.

This thesis unravels some of the complexity of economic success and of the functioning of social capital in a complex region.

Note on Access to Contents

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CHAPTER ONE

INTRODUCTION

In 1991, Patterson, presenting research on inward investment to a group of economic development practitioners, contended that:

> *"The goal of all regions is to continue to 'develop' otherwise they face paralysis and inertia. Growth requires new investment. …… But for many there are insufficient indigenous resources to fulfil development demands."* (Conor Patterson: **Inward Investment,** Royal Town Planning Institute, 1991 p.i).

Patterson's study had focused on the role of inward investment in local economic development and in particular the factors which influenced the location decisions of inward investors. Its overall conclusion was that once a set of macro-level pre-requisites had been fulfilled (e.g. political stability, language, fiscal regime) local endogenous factors, such as site availability and skills/people at the right price, determined the specific location decisions of investors. Patterson's conclusion was that inward investment constituted only part of an area's economy: its significance as a provider of jobs and wealth differed from place to place because the success of places in attracting inward investors varied greatly. He argued that inward investment could not compensate for endogenous weaknesses in a local economy such as an inadequate skills base or poor educational outcomes. If endogenous circumstances were not right, inward investors were less likely to locate in an area, whatever incentives were on offer. Programmes to attract inward investment had to be part of a wider strategy which was sensitive to such endogenous factors. As the world economy changed more needed to be learnt by those seeking to facilitate economic development about how the economies of the future would function and what would be important to their success:

> *"The need for new perspectives to understand change has created a demand for new knowledge. Old models and methodologies have, in many cases, been rendered obsolete by change."* (Patterson: 'Inward Investment' 1991 p.ii).

Why some regions appeared to be better than others at maximising the benefits which inward investment offered; why some appeared better at organising themselves; why differentials in the distribution of inward investment within the UK appeared to reflect differentials in employment and income and output more widely in the economy: these were questions which were highlighted in Patterson's study but which were beyond its terms of reference.

Since the early 1990s there has been a lot of interest within the economic development policy community in the apparent persistence of economic disparities, within the EU, between its member States, between its regions, and within regions. Development disparities within the EU and the UK have been characterised as deeply embedded and widening.[1.1] It has also been observed that disparities within some regions have been as marked and as significant as differences between regions, with the result that pockets of wealth and poverty have existed together in close proximity within some regions. Shutt (2005) has highlighted the spatial polarisation of economic development in West Yorkshire; and Miles (2006) has described the economic exclusion of some communities in North East England, communities from which old employers have virtually gone and in which there has been very little re-industrialisation to replace the jobs and incomes which have been lost. Miles claimed that the resultant social drag in depleted communities had soaked up 41% of all public expenditure in the North East region in 2003 (i.e. costs associated with unemployment and related socio-economic deprivation).

There is now a substantial body of largely theoretical literature (which will be discussed in this thesis in Chapter Four) which proposes that in some circumstances some communities generate high levels of social trust which is manifest in a propensity to act collectively (social capital). Such collective effort increases the efficient use of human and financial capital and this in turn generates outcomes which can give those communities an economic advantage. As economic success is attained social trust is further reinforced and a virtuous cycle

[1.1] The phenomenon of the apparent economic development divergence of regions within the EU was highlighted among others by Dunford and Hudson (1996), Dunford and Smith (1998), Smith *et al*, (1999), and Martin (2001).

develops. This vector of causality which is described in Figure 1.1 below is a thread of consensus which runs through virtually all of the literature on social capital and community economic development; and it is a consensus which has influenced UK Government policy since 1997.

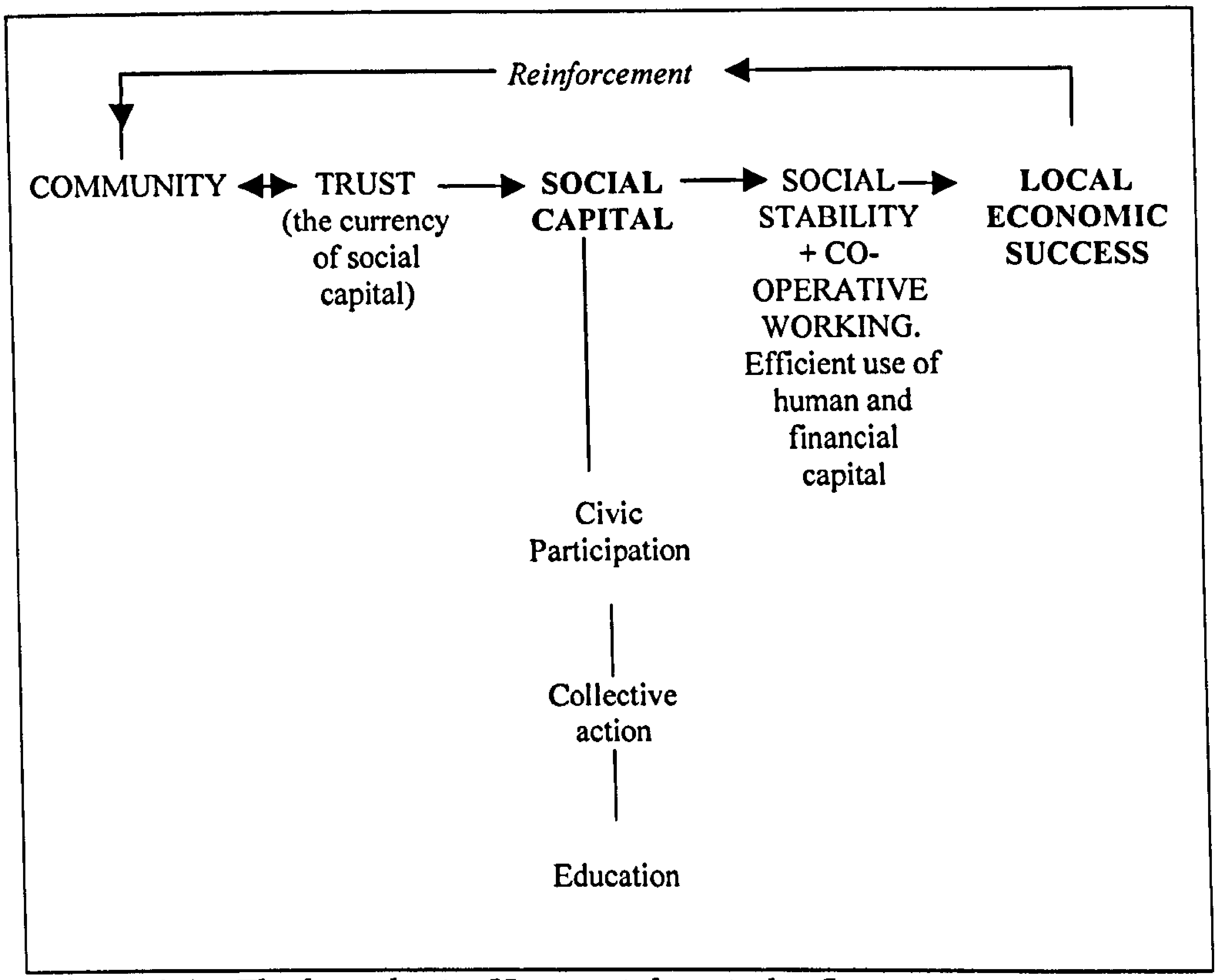

Figure 1.1: *The hypothesis: How social capital influences economic success.*

For the post-1997 Labour Governments in the UK the persistence of regional development disparities was a political issue. The constituencies of many Labour MPs were in regions which had been economically less successful. A series of position papers were published across Government in the late 1990s and early 2000s which proposed a strategy to improve the economic performance of lagging regions. Their stated objective was to create an inclusive society in which all districts and regions, irrespective of location, had the opportunity to share in and contribute to national prosperity; the ultimate outcome of which would be a more efficient, integrated and successful UK economy. It was argued, however, that the future of communities would be determined not by Government action but by local leadership and the actions of local residents.[1.2] This marked a shift in the UK Government's policy analysis away from viewing regional development differentials as in large measure the product of structural, macro-level issues, such as the impact on coalfield areas of changes in energy policy, to a perspective which stressed the importance of endogenous strengths and weaknesses: a position which Fothergill (2005) characterised as:

> "*treating unequal regions equally*" (Fothergill 2005 p.665).

This was a policy which reduced the role for redistributive intervention by central government and which instead focused on encouraging local actors to take responsibility for the future development of their own areas by building competitive advantage from within.

Questioning whether there is an adequate evidence-base to underpin this shift in Government policy a number of economists have sought[1.3] more recently to investigate the extent to which economic success can be attributed to endogenous factors over which local populations can exert some control. Martin (2005) has argued that such comparative analysis of area performance should be:

> "*an essential pre-requisite for informed and strategic policy-making*".
> (Martin, 2005, p.38).

...... although:

> "*in order to yield conclusions that are useful for policy-making*"
> (Martin, 2005, p.33)

...... comparisons should extend beyond pure economic measures to include societal information, as well as drivers, externalities and fundamentals.

1.2 This rationale is set out in a 2002 White Paper: *Your Region, Your Choice; Revitalising the English Regions*. (Office of the Deputy Prime Minister).

1.3 Martin (2003 and 2005), Kitson *et al* (2004), Casey (2004), Beugelskijk and Van Shaik (2005), Iyer *et al* (2005).

However, these recent analyses have all focused on the interaction of variables at an aggregate national or regional, rather than an intra-regional local economy-level. They have not assessed empirically whether local community initiatives (as manifestations of social capital) have been associated with economic success, perhaps because these local-level actions can be difficult to measure and local economies can be hard to define

This thesis is seeking to test whether there is evidence of an association between social capital and economic success across the local economies which make up the Northern Ireland region. It is also attempting to determine whether the presence of social capital has been associated with differential success outcomes, and whether the presence of social capital has been associated with a particular cultural milieu and if so whether that association has varied as other sets of circumstances have varied.

These challenging research objectives will require a complex research strategy not least because the distribution of economic success has been politically contentious in Northern Ireland. The region has had a history of inter-community tension and significant intra-regional disparities in respect of employment opportunities, earnings and industrial development. It is a region which has been characterised as having:

> "*such deep divisions that the term ethnic rather than civil society might best describe it*" (Morrissey and Gaffikin, 2001, p.2);

...... as being:

> "*hyper segregated*" (Morrissey and Gaffikin, 2001, p.11);

...... a place with a:

> "*distinct socio-political history within the UK*" (Cooke *et al*, 2005, p.1072);

...... as a:

> "*troubled Province*" (Casey, 2004, p.100)

...... in which:

> "*the peculiarities of social capital*" (Cooke *et al*, 2005, p.1076)

...... merit detailed investigation.

In order to determine whether there is an association between social capital and economic success within Northern Ireland and, if there is, how that association manifests itself, it will be necessary to define in a Northern Ireland context what constitutes a "local" economy, and what is meant by "economic success" and "social capital". However, while there have been a large number of studies which have sought to analyse and explain regional economic development since the early 1990s, it seems that, as Kitson *et al* (2004) argued:

> "*we actually know surprisingly little about such issues*" (Kitson *et al*, 2004, p.995).

With regard to social capital, the literature review in Chapter Three will show that attempts to empirically analyse the phenomenon at the national or regional level have either failed to identify a significant association between social capital and economic success (revealing only generalised and potentially coincidental sets of circumstances) or have generated contradictory findings. Beugelsdijk and Van Schaik (2005) have attributed this to a lack of consensus as to how social capital should be conceptualised and the absence as a result of an agreed methodology to measure it.

In this thesis an attempt will be made to measure economic success and social capital at the level of the local economy in Northern Ireland. Local economic success will be defined as a set of individual "outcomes". Once selected their distribution across Northern Ireland will be mapped. The variables associated with those distributions will then be identified in the hope that insights will be generated which will be of value to economic development policy-makers and academics.

To assess the contribution which it may have made to the achievement of local economic success, social capital in Northern Ireland will be set in a context which allows its significance to be assessed alongside other variables which may also have potentially been economic success inputs. Figure 1.2, which is based on a model proposed by Kitson *et al* (2004), identifies the clusters of potential inputs whose association with local economic success in Northern Ireland will be measured in order that the relative significance of social capital as an input can be established.

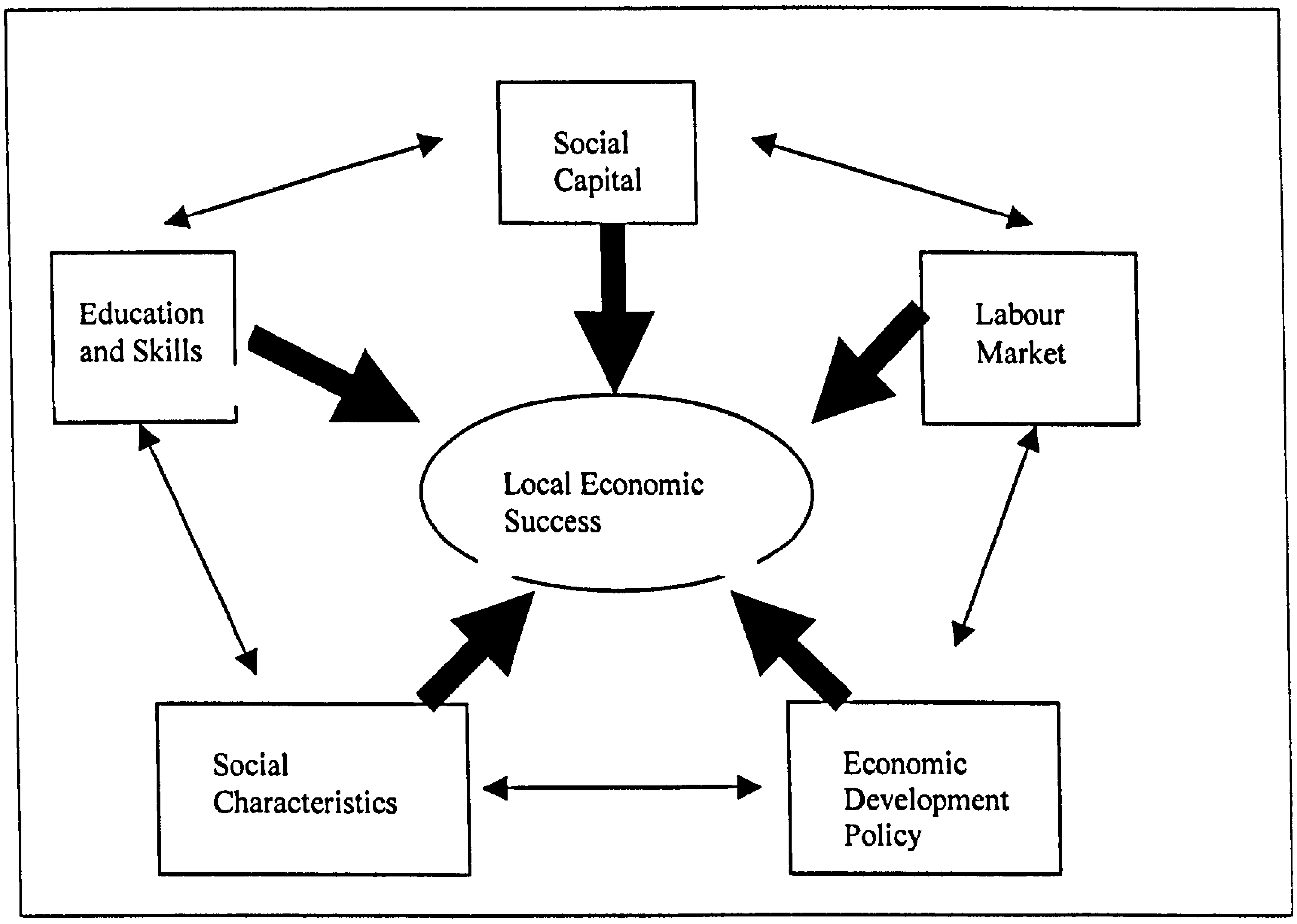

Figure 1.2: *Inputs whose on the economic success of Northern Ireland's local economies will be tested in this thesis.*
(Source: A derivation of the model proposed by Kitson et al, 2004).

Much of this empirical analysis will be new. A study of economic success on this scale has never before been carried out at the level of the District Council Area in Northern Ireland.

The first step in progressing the analysis will be to review the literature on local economic success and social capital and to profile Northern Ireland. Measures will then be constructed which attempt to reflect the complexity of Northern Ireland's local economies and uncover the presence of social capital. The range of measures will be constrained by the availability of data at the level of the "district" local economy. To maximise the breadth of data which can be captured, the analysis will focus principally on census year 2001. An attempt will be made to augment this one-year snapshot by setting it in a change context using time-series datasets. The challenge of progressing an analysis of this kind will be discussed in Chapter Five. The judgments which will be made with respect to the definition of local economies, the variables which will be used and the methods employed to analyse them (including the rationale for dovetailing time-series datasets with snapshot data) – these will be presented in Chapter Six.

The analysis of economic success outcomes (Chapter Seven) will reveal that different aspects of economic success are manifest in different ways in different parts of Northern Ireland. It will be shown that because each outcome represents a distinctive dimension of economic success, no one can be an effective proxy for the others. In order to identify which Districts are comprehensively successful, the success outcomes will be progressively combined into a multivariate Local Economic Success Index which can reflect some of the multi-faceted complexity of economic success (Chapter Eight). The analysis which then follows of social capital will reveal that in 2001 there were sub-regional concentrations of social capital in Northern Ireland (Chapter Nine). The association between the distribution of social capital (and other variables) and the distribution of the composite local economic success index will then be analysed (Chapters Ten and Eleven).

This staged analytical path is summarised diagrammatically in figure 1.3 overleaf:

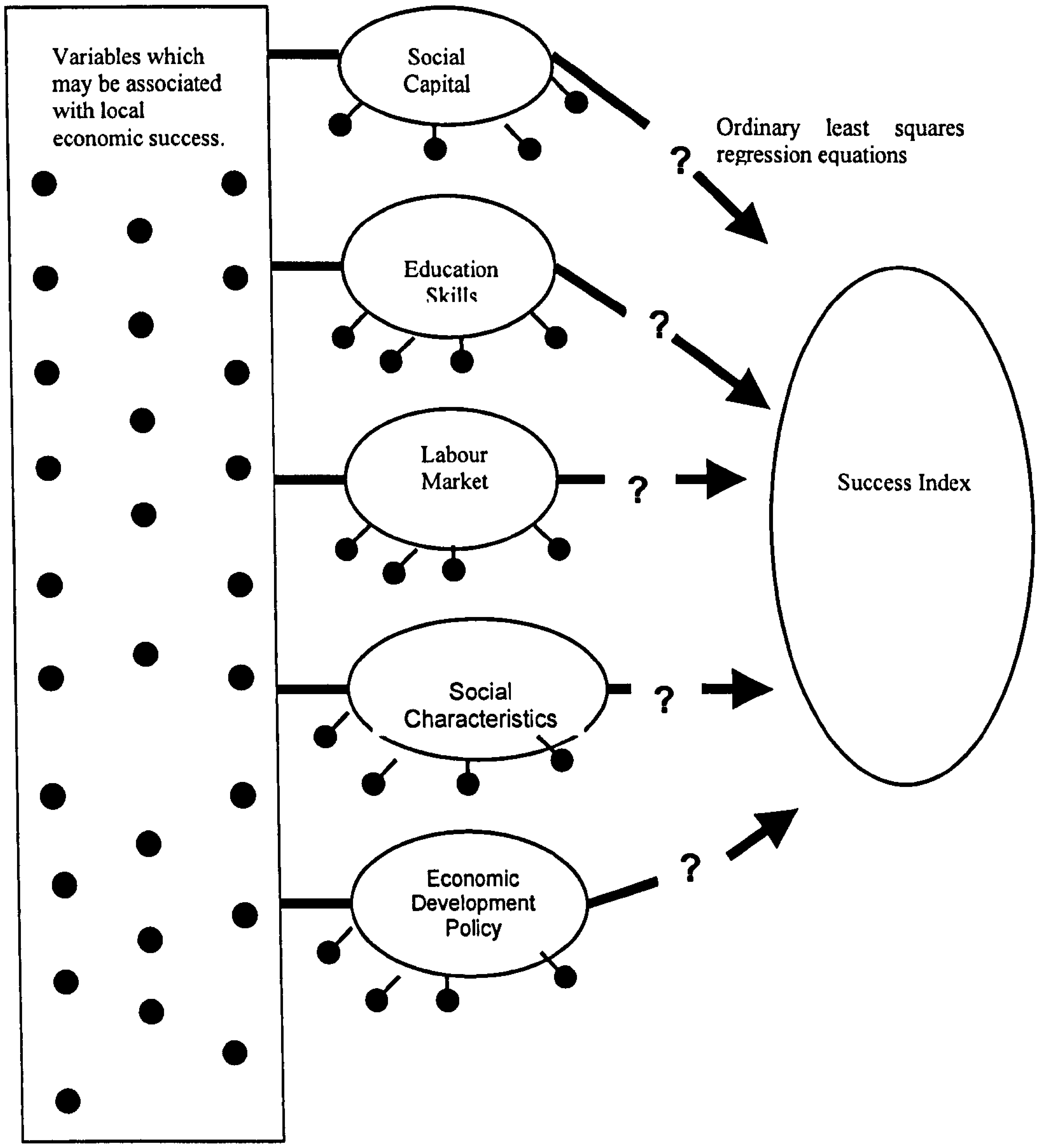

Figure 1.3: *Design of the research to assess the independent association between social capital variables and local economic success and thereafter between other bundles of variables and local economic success.*

The intention in progressing the analysis through a series of stages in this way is to uncover as much information as possible in respect of the complexities of social capital and local economic success in a region which has had a history of inter-community conflict and intra-regional income and employment disparities. The spatial distribution of social capital and economic success and the patterns of statistical association between inputs and outcomes will provide a basis for a number of *a priori* inferences to be made in Chapter Eleven. This thesis will demonstrate that it is not possible to draw definitive conclusions with respect to cause and effect in this field because the processes involved are so complex and the data available to shed light on their functioning is relatively thin.

PART ONE

KEY THEMES

- **Local economic success – Chapter Two.**
- **Social capital – Chapter Three**
- **Northern Ireland – Chapter Four.**

PART ONE: KEY THEMES

CHAPTER TWO

LOCAL ECONOMIC SUCCESS

2.1 INTRODUCTION

As the first step in defining "local economic success" this chapter considers the process by which an economy develops and the influence of location on an economy. It attempts to set in a theoretical context some of the questions which the forthcoming analysis of local economic success and social capital will raise: At what spatial level can an economy be defined? Why do some territories appear to perform better economically than others? What factors are associated with the variable economic performance of territories? Does variable economic performance between districts or regions endure? How significantly associated with differential economic development are endogenous circumstances? Is social capital such an endogenous circumstance? Does the distribution of economic success across districts in Northern Ireland conform to a particular theoretical model?

The chapter starts by looking at the phenomenon of differential development in Western Europe, the UK and Eastern Europe. Theories of location and economic development are then reviewed. Different models suggest different scenarios, ranging from the accelerating divergence of successful and less successful economies to the convergence of less successful and successful economies. Each scenario carries with it a different set of policy implications. There follows an assessment of the policy response in the EU and the UK to the issue of differential regional economic development; after which there is a reflection on the debate as to whether the concept of a local economy is defensible. Finally there is a review of the literature on the factors which are associated with economic success at the level of the region and district.

The following conclusions will be drawn from this review of the literature:

- Economic development disparities in Europe and the UK have been embedded.
- Stronger regional and district economies appear to continuously reinforce their advantage.
- Recent endogenous and evolutionary growth theories emphasise the importance of inherent propensities at the local level in determining whether a district's development trajectory can be altered.
- This endogenous growth perspective has shaped UK regional policy since 1997. In the UK the policy emphasis has switched from direct state intervention to encouraging local actors to take more responsibility for tackling economic inequality and perceived indigenous economic weaknesses.
- There is disagreement as to whether the concept of a "local" economy is tenable. One perspective stresses the importance of the macro-economy, of structural factors, of globalisation and the impotence of local actors in the face of those currents. A very different perspective contends that regions and districts have taken on greater not less economic significance and that the regions and districts which are successful are those in which prevail very particular sets of local circumstances.
- How to measure economic performance is contentious. "Competitiveness", now widely used to differentiate the "successful" from the "less successful", has been a controversial construct, particularly when applied to territories.
- There is now a consensus that there are success factors which differentiate strong economies from weak economies. While there is disagreement as to the relative importance of these factors, there is broad agreement as to what they are. Economic success is generally characterised as a set of "outcomes". Much of the debate in the recent literature has focused on the inputs which may or may not have influenced those outcomes and how permutations of inputs can vary from one territorial context to another. Among those inputs potentially is social capital. There appears now to be a consensus that social capital can in some circumstances play a role in adding value to economic success, although there is less agreement as to how significant that role may be.

2.2 THE DIFFERENTIAL DEVELOPMENT OF PLACES

The concentration of people inhabiting the populated spaces on earth is variable. Historically the capacity of places to support people was determined by a combination of factors including climate and topography, location in relation to water resources, accessibility, fertility of the land, as well as the aptitudes and motivation of those people in making use of resources to develop industry and commerce. At particular points historically some factors were so economically significant that the advantages they bestowed were sufficient to compensate for other locational disadvantages. In Europe in the 19th century those factors included proximity to coalfields and deposits of iron ore. As Western Europe's economy evolved through the 20th century, becoming less labour intensive and more energy efficient and as its industries increasingly found cheaper sources of raw materials overseas, some of those factors became less economically significant. Many of the regions which had come to depend on the industries whose advantage had been built on the exploitation of those factors fell into decline, unable to generate new commercial activity quickly enough to replace losses of jobs and incomes. Some regions did, however, adapt and were able to maintain and then enhance their positions of relative economic advantage. As the pace of industrial change quickened after the Second World War a widening gap began to open up between those regions and other regions.

The question which has exercised economists who have noted this apparent trend has been whether this is a process of Darwinian natural selection in which a dominant group continuously strengthens its position, or whether the distribution of advantage and success is likely to change again (as it did in the early to mid-twentieth century) as technology and other factors change.[2.1] Since the early 1990s the debate has intensified[2.2] with regard to how long an uneven economic success map is likely to endure; and how subject the factors which contribute to economic success might be to change initiated both from within (e.g. community

[2.1] Classic texts on the economic development of regions include those by Myrdal, 1957; Hirschman, 1958; Perroux, 1961; Richardson, 1976.
[2.2] Articulated by Krugman and Obstfeld, 1991; Hudson, 1991; Allen *et al*, 1998; Dunford and Smith, 1998; Gudgin, 1996; Smith *et al*, 2000; and Porter, 2003.

action) and from outwith (e.g. change in consumer tastes in overseas markets).

Analyses of the mature economies of Western Europe[2.3] have suggested that the pattern of uneven regional economic development which existed in Western Europe when the European Communities were established in the 1950s has remained largely unaltered in the late 20th and early 21st century.[2.4] Smith et al (1999), for example, argued that despite large scale investment transfers over a twenty-year period as part of EEC and EU regional policy, Western Europe had continued to be characterised by:

> *"significant and enduring territorial inequalities .... A mosaic-like pattern of uneven development .... and the continued reproduction of inequality".*
> (Smith *et al* 1997, 1999, p.1)

Courteney *et al* (2001), in a report on the European Commission-sponsored *Dynamics of Rural Areas* (DORA) research project (2001) which had been established to investigate why the economic performance of a sample of regions across the European Union had varied so significantly, claimed that there was strong evidence of diverging economic growth trajectories across the EU. Their conclusion was that the factors which contributed to economic success in Western Europe varied from one type of area to another with, depending on the circumstances in the region, endogenous factors acting either to accelerate economic development or to constrain it.

De Vet (2004) noted the extent to which Europe's regions differed, in particular with respect to population density, whether they contained or were close to major urban centres, how many people in their workplaces were educated and in what disciplines, how much firms and Governments spent on R&D in those regions, whether they were geographically peripheral from, or close to, a part of Europe's metropolitan core, whether they had a good quality information and communications infrastructure, how good the quality of life was that they offered;

2.3 Such as those by Dunford (1996), Hudson (1997, 1999 and 2001), Smith *et al* (1999), Jouen (2000), Courtney et al (2001), Bryden *et al* (2003) and De Vet (1993, 2004).
2.4 This was confirmed by the European Commission in its Sixth Periodic Report on the Social and Economic Situation and Development of Regions in the EU (1999).

and whether they had had a legacy of industrial decline. De Vet concluded that Europe's regions had experienced a heterogeneity of economic outcomes.

De Vet reflects a consensus in the recent literature that economic success in Western Europe has been unevenly distributed and that, while there may have been some exceptions, in general stronger districts have been getting stronger, and weaker districts, even if their absolute standards of living have been improving, have been falling further behind in respect of their relative economic performance.[2.5]

Differential levels of development between regions were also identified in a number of studies of post-communist Eastern Europe[2.6] where in a matter of just a few years the system of centrally controlled development which had been in place since the Second World War had largely been swept aside. These studies sought to discern how relative economic advantage was being re-configured in the absence of a supra-national and national regional policy framework (i.e. essentially in a "policy-off" *laissez faire* scenario).

From the early years of the 1990s it became possible for overseas investors to exercise freedom of choice in selecting locations for the establishment of new branch plants. The result was that some regions in Poland, for example, were securing a disproportionate share of that country's overseas investment, its growth in employment and its increase in personal disposable income. The conclusion which these studies came to was that in Eastern Europe the economic performance of regions seemed to be diverging, just as it had been in Western Europe. Investors were choosing areas advantaged by proximity to airports, the quality of road, rail and port infrastructure, and the availability of manufacturing skills at low cost. However, there was also some evidence (e.g Dornisch 2002) that people who were ambitious, well organised and dynamically-led could through their own

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[2.5] Martin (2005) had found a high degree of inertia in EU regional economic performance rankings (measured by per capita GDP) with no dramatic movement of regions up or down the GDP per capita rankings over a 15-year period.

[2.6] e.g. by Sabel (1992, 1995), Hausner *et al* (1997), Dornisch (1997, 2002), Gorzelak (1998), Smith and Swain (1998), Smith *et al* (1998), Stark and Bruszt (1998).

efforts subvert locational disadvantages and exploit what Visco (2000) described as:

"*new weightless ways of creating wealth*" (Visco, 2000, p.2)

...... although Sabel (1995) contended that such local initiatives were more likely to achieve their objectives if they could access outside "boot-strapping" support in the form of advice and funding.

Because the restructuring of the former communist economies of Eastern Europe is ongoing it is still not clear whether the relative economic success attained by some regions will be self-reinforcing or whether some regions and districts in Eastern Europe will be able to achieve relative economic success despite a history of disadvantage. Nor is it clear whether, without intervention, the divergence of successful from less successful areas will accelerate.

In the UK divergent regional economic performances have been a long-term trend. The depression of the 1930s, which had led to mass unemployment in regions across northern Britain and in Northern Ireland, had accelerated the development of the south-east region, where commerce was able to exploit the availability of cheap labour. After the Second World War enormous sums of public money were invested by successive UK Governments in industrial and infrastructural development programmes intended to reduce the wide disparities in economic development which had opened up between the South East, the East and West Midlands and East Anglia and the rest of the UK. Yet Fothergill and Gudgin's influential "Unequal Growth" (1982) concluded that, after 30 years, the North/South divide in Britain had not only remained but had actually widened in respect of some economic performance measures.

By the 1990s, however, a number of eocnomists were suggesting that the phenomenon of differential economic success across territories within the UK was more complex than a straightforward North/South divide.[2.7] Within apparently successful regions such as South-East England it was obvious that there were districts which were not performing well and which were experiencing levels of socio-economic deprivation comparable to the nation's weakest regions. By contrast in some apparently weaker regions there were districts which were economically successful and whose populations were enjoying relatively high standards of living. Some groups in the population also appeared to be attaining relative economic success (Asians, for example) while others seemed not to have advanced their relative economic situation (West Indians, for example); in both cases irrespective of apparently advantageous or disadvantageous regional locations. There was also some evidence that at the inter-regional level the distribution of economic success was changing. Some of the regions which had since the 1930s been consistently among the UK's weakest economic performers, notably Northern Ireland and Scotland, appeared to have significantly improved their economic performance during the 1990s, despite their relative geographical peripherality.[2..8]

Whether the phenomenon of economically successful districts within otherwise less successful regions was simply a manifestation of a trend in which successful and less successful people and places were diverging and becoming more and more polarised or whether it heralded the beginning of a turnaround of formerly weak regions; whether the divergent economic performance of territories was a long-term trend, or whether a convergence of economic performance was underway, and if so whether all weaker regions would ultimately become economically successful or just some; and what factors enabled this to happen, in what timeframe – questions such as these in respect of the forces which shape

[2.7] Keeble *et al* (1993), Keeble and Bryson (1993), Storper (1995), Gudgin (1996), Stanyer (1997), Dunford (1997), Martin and Sunley (1998), Wood (1999), Martin (1999).
[2 8] Dunford and Hudson's comparative study of European regions (1996) noted the improved economic performance of Northern Ireland; a trend confirmed by Hart and McGuinness (2003).

territorial devleopment have generated a body of economic theories which will be discussed in Section 2.3 overleaf.

2.3 ECONOMIC DEVELOPMENT PERSPECTIVES AND THEORIES

It is relevant to this thesis that there are different explanations for the economic development and success of areas, each of which lays a different emphasis on the factors which have influenced the development process. Summarising these theories highlights what a complex area of analysis any attempt to explain differential territorial development is, particularly because:

> "*there is still no generally agreed theoretical or empirical framework for answering these questions*" (Kitson *et al* 2004, p.992).

The range of models, theories and perspectives they offer will provide a context for the assessment of patterns and associations in the forthcoming analysis of social capital and local economic success in Northern Ireland (Chapters Seven to Eleven).

Explanations of where people live and why; how they interact with their environment to create and develop an economy; and which seek to explain the differentials in the performance of economies, measured by productivity, incomes or employment levels; can be grouped under four headings:[2.9]

- Standard growth theories
- Increasing returns theories
- Knowledge and innovation theories
- Evolutionary and endogenous growth theories.

Knowledge and innovation theories and their antecedents, increasing returns theories and standard growth theories, hypothesise that patterns of economic advantage and disadvantage are embedded and that advantage is self-reinforcing.

[2.9] Although there are almost as many theoretical models as there are studies in this area. The perspectives of some authors do not fall neatly under one or other of these four headings, ranging instead across a number of paradigms, and in some cases, (Krugman and Porter for example) they have changed over time.

They suggest that the uneven distribution of economic success across territories will endure. If evidence in this thesis were to point to a pattern of enduring development disparities in Northern Ireland this would suggest that these theories had some validity.

If, however, there was evidence that some areas which had previously been economically advantaged had slipped into positions of relative disadvantage, while other previously disadvantaged areas had attained positions of relative advantage, this would suggest that economic development differentials could in some circumstances be reduced and that it was not inevitable that disparities between areas would continuously widen. If it was found that social capital, as an endogenous phenomenon, had been associated with a changed pattern of economic success in Northern Ireland, this would lend support to the endogenous growth model, which asserts that endogenous conditions determine a community's capacity to respond to exogenous circumstances. If it seemed from the analysis that differential economic success was attributable to a combination of historic economic advantage/disadvantage and endogenous change factors such as social capital, and that the way in which those factors interacted varied from one location to another, this would suggest that the evolutionary growth model was applicable.

2.3.1 Standard Growth Theories

Standard Growth Theories represented the traditional consensus among economists as to the mechanisms by which the economies of places develop. This group of theories[2.10] went largely unchallenged until the late 1950s. They emphasised the role of the endowments which an area possessed in determining its development prospects. Marshall (1890 and 1920) who influenced a generation of economists in the 20th century, had observed a tendency for some locations to have the advantages which they offered in relation to other places continuously reinforced in what he described as a "virtuous cycle". He speculated

[2.10] Encompassing the works of Ricardo (1817), Weber (1909), Schumpter (1912), and Marshall (1890 and 1920).

that this was reinforced by the propensity of people and firms to cluster. Locating together offered the prospect of mutual support and security. As a clustered population achieved functional success, more people would be attracted by the benefits of the cluster and would seek to be a part of it. Those benefits were described as "agglomeration economies". As areas specialised in production activities which exploited the resources which they possessed, some attained a "comparative advantage". Trade reflected the differences between areas in factor endowments such as labour and natural resources and the comparative advantages which they represented. It was possible through trade and factor mobility for some regions which had initially been less advantaged in respect of factor endowments to generate other comparative advantages and catch-up in terms of productivity and incomes.

However, while these theories had an undoubted:

> "*intuitive appeal*" (Kitson *et al*, 2004, p.992)

...... which had:

> "*informed much Government policy*" (Kitson *et al*, 2004, p.992)

...... there was also a growing sentiment after the Second World War amongst economists that they were not sufficient to explain observed patterns of trade and economic activity.

2.3.2 Increasing Returns Theories

The **Increasing Returns** theories which emerged between the 1950s and 1980s[2.11] proposed that people in some locations would reinforce their comparative advantages by adding value to them, to create "competitive advantages" which set those places apart from other areas. The implication of this was that the uneven

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[2.11] Hirschmann (1958), Myrdal (1959), Perroux (1961), Richardson (1972), and updated more recently by Scott and Storper (1987).

distribution of wealth accruing from resource exploitation would endure over time, with the most advantageously endowed locations strengthening their power in respect of other regions. While weaker local economies might improve their absolute position, acquiring greater wealth and access to consumer durables there would not be a convergence of their relative position in respect of stronger advantaged areas. Rather, this perspective suggested (though the emphasis varied from author to author), that without intervention the pace of the divergence in economic performance between areas would accelerate over time.[2.12] The dynamic for this would be the increasing returns generated by increased scale and increased specialisation (the economy of scale). With specialisation came the advantages conferred by agglomeration (agglomeration economies), advantages which could not readily be overturned. Knowledge and technology would not be diffused to less successful regions quickly enough to allow them to catch-up. A pattern of successful and less successful local economies would become entrenched. Hudson and Williams (1999), argued that it was its economic and political relationship with the rest of the world, along with the extent to which an area had been advantaged by various factors, which would determine its development trajectory; and they suggested that this could be predicted.

Krugman had supported this proposition in a series of books and articles in the 1990s [2.13] which considered economic trends, including so-called "globalisation", at the end of the 20th century. He contended that the infrastructure and skills associated with past industrialisation often provided a platform for the exploitation of new technologies. That and the locational factors which had facilitated earlier industrialisation, such as proximity to a seaport, he described as an area's advantageous distinctiveness. Some areas used their advantageous distinctiveness to specialise in high value-added economic activity, and displayed a capacity to do so iteration after iteration. That ability to specialise and differentiate over and over by sharp-witted decision-making, or innovation, was the basis on which competitive advantage, Krugman said, was founded. Competitive advantage both required and reinforced uneven development and the

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[2 12] As articulated by: Krugman (1991 and 1994), Krugman and Obstfield (1991), Porter (1992), and Hudson and Williams (1999).

unequal distribution of resources. Wealthy and advantaged areas across the globe were engaged, he said, in a process of ongoing enrichment with the result that, progressively, the gap had widened between them and less wealthy areas. However, he also argued that the concept of "competitiveness" could not be applied to large territories such as national economies and that trade did not necessarily have to exacerbate unequal development, but could, if based on principles of equity rather than exploitation, create opportunities and ameliorate disadvantages.

Casey (2004) argued that the increasing returns/competitive advantage perspective was too producer-focused. It offered only a partial explanation for the variation in growth trajectories which prevailed between regions and could no longer adequately explain the persistence of uneven development in the context of a modern economy.

By 2003, Krugman had come to believe that at least at the regional level "competitiveness" was a meaningful concept. He observed that inter-regional growth rates were much more sensitive to competitive pressure than national growth rates:

> "*regional growth is much more sensitive to differences in productivity performance.*" (Krugman 2003 p.18).

He accepted that regions did compete to attract labour and investment. Whereas the advantages enjoyed by nations tended to be comparative (with those in one country being complemented by others in other countries), some regions were able to acquire positions of absolute advantage and in those positions to attract further factor inflows which reinforced those absolute advantages. Krugman's thesis was that absolute advantages, which he described as "fundamentals", such as the level of education within a population, conditioned a region's underlying economic environment, the suggestion being that the competitiveness of a region was more than an aggregation of the actions of individual firms located in that

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[2.13] Notably: *The Age of Diminished Expectations*, 1990; *Geography and Trade*, 1991; and *Competitiveness – A Dangerous Obsession*, 1994 region – it was also the product of region-specific characteristics which had advantaged or constrained those firms.

Kitson *et al* (2004), citing Marshall (1920), characterised competitiveness as the:

> "*something in the air*" (Kitson *et al,* 2004, p.993)

...... which determined how productively or successfully resources were employed to achieve a:

> "*high and rising standard of living*" (Kitson *et al,* 2004, p.993)

Porter (1992) was interested in determining what that "something" was. For him, competitiveness was:

> "*a function of dynamic progressiveness, innovation and an ability to improve*" (Porter, 1992, p.40).

He saw competitive advantage being created and sustained in a highly localised process; and from 1998 he had also come to increasingly focus his attention on the concept of "regional competitiveness"; a key determinant of which was the degree of what he described as "social embeddedness" prevailing in a region, manifest in social capital and institutional structures (Porter 2001).

2.3.3 Knowledge and Innovation Theories

A recognition of the importance of locally specific influences, what Kitson *et al* (2004) described as:

> "*regional externalities*" (Kitson et al, 2004, p.994)

...... was at the heart of the **knowledge and innovation theories** advanced by Saxenian (1994) Morgan (1995); Maskell et al (1998); Porter (2001) and subsequently by Krugman (2001, 2003). This perspective proposed that knowledge, education, innovation and the infrastructure which supported them were what made the difference between successful and less successful areas. It was suggested that culture and quality of life could reinforce the comparative advantages identified by the increasing returns theories; although it was acknowledged that the interaction between socio-cultural factors and the intellectual property which facilitated specialisation could be complex. Like the increasing returns theories it was suggested that inequalities in productivity and income would persist and that, *ceteris paribus*, it would be the pre-existing advantaged commercial clusters which would continue to most successfully exploit the opportunities offered by new technologies. There would be little spillover from these areas to other areas and their competitive advantage would be cumulatively strengthened. Spectacular concentrations such as Hollywood (in respect of media and the arts) and Silicon Valley (in respect of computer technology) were cited as confirmation of the pervasiveness of this centrifugal clustering force within free market economies. In the so-called "new economy" centred on information and computer technology, knowledge would be exploited to maintain pre-existing patterns of competitive advantage. While the infrastructure required to acquire and refresh knowledge might not necessarily be restricted to local economies which had a legacy of advantage (with information being increasingly accessed and exchanged remotely via the internet) crucially the infrastructure to exploit knowledge was likely to remain concentrated in already advantaged locations.

2.3.4 Endogenous and Evolutionary Growth Theories

During the 1990s a body of **endogenous growth theories** also emerged.[2.14] These emphasised the importance of "human capital" and "social capital" within what Casey (2004) described as the "growth equation". Porter (1990) had stressed that competitive advantage was a made disposition, the product of how efficiently and effectively human resources, physical resources, knowledge resources, capital resources and infrastructure resources were deployed by people. Development was something done by and not to people. Courtney *et al* (2001), commenting on

[2.14] As advanced by Romer (1990 and 1994), Amin and Thrift (1994), Martin and Sunley (1998).

the phenomenon of differential local economic performance, identified less tangible, soft factors as having become important in the development process. They pointed to the growing academic acknowledgement of the role played by factors such as institutional capacity, community self-image, quality of life and business culture.[2.15] They argued that endogenous socio-cultural factors could exert a significant influence on an area's economic success prospects.[2.16] In the case of development differentials within a region these theories attributed the phenomenon less to structural factors such as the quality of infrastructure or industrial development policy, and more to endogenous factors such as culture, attitudes to commercial ambition and the system of education. The implication was that whether or not the economy of a region became successful would be determined by the people who lived in that region.

The more recent **evolutionary growth** perspective[2.17] suggests that the prognosis for less advantaged economies proposed by Increasing Returns and Knowledge and Innovation theories is too bleak. However, while accepting that endogenous factors can be very important in determining an area's economic development prospects, this analysis also recognises that inherited advantages or disadvantages can enhance or constrain the effect of those endogenous factors and that they cannot be ignored. Martin (2005) has suggested that the phenomenon of self-reinforcing competitive advantage is an evolutionary process of:

> "*feedback and cumulative causation*" (Martin, 2005, p.23)

...... in which "outputs" became "inputs" which in turn shape future outputs. Some of these inputs may have long-run consequences which can either constrain or facilitate future economic development.

This perspective also suggests that differentials in the performance of local economies, even though they may be the product of a combination of geography

2.15 As suggested by Sternberg and Arndt (2001).
2.16 They cited Wong (1998), Cooke and Morgan (1994), and Johnson and Rasker (1995) as having argued likewise.
2.17 Articulated by Fujita *et al* (1999), Boschma (2004) and Martin (2005).

and history, will not necessarily continue *ad infinitum*, at least in their current form. The dynamic interaction of factors which are a legacy of past development and factors which are the product of contemporary circumstances can be manifest in a variety of different (and often unpredictable) ways, some of which may open up new economic development opportunities. Changes in the means of exchange, in modes of communication, in political relationships across the globe, are making it easier for local actors to take local initiatives to exploit external opportunities[2.18] and in the process alter the prospects of their local economies. The implication of this is that, while inherited advantages can be very important, it is possible for areas less advantaged by a legacy of factor endowments to shift their relative economic success situation by their own efforts, by deploying their social capital.

[2.18] An example is the availability of intellectual property via the internet.

2.4 POLICY ISSUES

While the debate was ongoing among academics as to what made economies successful, policymakers at EU and national government-level during the 1990s were devising policies to improve the areas for which they were responsible based on the notion of what Storper (1997 p.20) described as "*place competitiveness.*" "Competitiveness" had come to be widely used during the 1980s by politicians, in the press, and by some academics to describe an area's capacity to succeed in gaining access to and control of resources. By the 1990s much of the economic policy output of OECD countries was based on the premise that "competitiveness" was the pre-requisite for economic success. The friction which competition produced, according to this perspective, inspired the innovation which differentiated successful places from the rest.

Martin (2005) said that policy-makers at all levels, from the OECD to the EU, from nation states to local authorities, were swept up in a competitiveness fever:

> "*Economists and experts everywhere have elevated 'competitiveness' to the status of a natural law of the modern capitalist economy*" (Martin 2005 p.2).

In the EU, competitiveness policy was advanced as both the means to achieve regional convergence and cohesion, and the pre-requisite for monetary union and enlargement. The central goal of the EU's Lisbon Agenda, for example, was to make the European Union the most competitive knowledge-driven economy in the world by 2010. The European Commission in 1999 described its rationale for promoting regional competitiveness within the EU thus:

> "*The idea of regional competitiveness should capture the notion that, despite the fact that there are strongly competitive and uncompetitive firms in every region, there are common features within a region which affect the competitiveness of all firms located there*".
> (European Commission, 1999, p.5)

Also during this period an economic argument was being made for greater regional devolution and decentralisation, with the European Commission arguing that EU regional policy was more effective when there was local involvement in its delivery.[2.19]

The UK's post-1997 Labour Government, as part of its aim to improve the performance of the UK economy as a whole, subscribed to the notion that the competitiveness of the nation was a function of the competitiveness of its individual regions and cities. According to Martin (2005) UK regional development policy in the late 1990s and early 2000s was based on the premise that poor regional growth was attributable to:

> "*a lack of competitive advantage which in turn is the outcome of inferior supply-side processes and characteristics in the region*" (Martin, 2005, p.37)

...... which:

> "*puts considerable emphasis on the indigenous causes of a region's lagging competitive performance*" (Martin, 2005, p.37).

A key HM Treasury report, *Enterprise and Social Inclusion* (1999), argued that the way to achieve regional convergence was to encourage local entrepreneurship. Differences in levels of entrepreneurship between the regions of the UK (and in particular the substantial regional differences in business start-up rates) were highlighted as having significant implications for the nation's economic success prospects. Kitson *et al* (2004) contended that there was:

> "*more than a whiff*" (Kitson *et al,* 2004, p.995)

...... of endogenous growth theory in this Treasury analysis. Follow-up policy papers published across Government[2.20] appeared also to have been heavily influenced by Porter's perspective on regional competitiveness. They argued that the regions and cities of the UK had to be competitive if there was to be an overall

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2.19 In its reports on *Competitiveness* (2003), and *Convergence, Competitiveness and Co-operation* (2004).

2.20 By the Treasury (2001 and 2003), the DTI (2003 and 2005), and the Office of the Deputy Prime Minister (2003 and 2004).

improvement in national productivity and if regional inequalities were to be reduced. This was most explicitly articulated in two Treasury papers[2.21] which proposed a strategy centred on "*drivers*" of regional productivity.[2.22]

Martin noted that a "*plethora*" of regional and city indices were being used to underpin these policies, ranking places on the basis of:

> "*this or that measure of competitiveness*" (Martin, 2005, p.3).

His conclusion was that, while there was evidence that policy could sometimes make a difference to regional competitive performance:

"*at the same time it is hard to know exactly what the right policy is.*" (Martin 2005 p.42).

Hudson (2001) criticised the UK Government's analysis. He said that in effect it promoted:

> "*a war of all against all in a zero sum game in pursuit of investment, employment and incomes*" (Hudson, 2001, p.11).

Smith *et al* (2000) and Lovering (1998 and 2001) argued that competitiveness was too crude a concept to capture the actuality of how communities of people, districts or regions interacted to acquire, distribute and use resources. The UK Government's Darwinian competitiveness scenario, with its matrix of winners at the expense of losers, failed to acknowledge the complementarity which could be achieved between economies if they were functioning within the right policy framework. Shutt (2005), commenting on the idea which was being promoted by the UK Government that competitive communities could drive wider regional development and ameliorate economic disparities, observed that in West Yorkshire empirical evidence pointed to a growing social and economic

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2.21 *Productivity: the Regional Dimension* (HM Treasury 2001); and *Productivity in the UK: The Local dimension* (HM Treasury 2003).

2.22 The ODPM Report, *Cities, Regions and Competitiveness* (ODPM 2003) also advocated an approach focused on "drivers", in that case four drivers of "urban competitiveness".

polarisation, with little evidence that the advantages associated with the success of sectors such as finance in the City of Leeds had percolated through to neighbouring towns and cities such as Bradford, Wakefield, Huddersfield and Hull. He expressed concern that Government-sponsored economic development programmes like those being delivered in Yorkshire had lacked an over-arching strategic focus and as a result had been too fragmented, too localised, to address the macro-political and macro-economic challenges presented by widening territorial inequalities.

This thesis will seek to determine whether within a UK region, Northern Ireland, there has been a polarisation of less successful and successful local economies and if so to what extent this might be associated with locally specific endogenous factors (and in particular social capital) which have the potential to be exploited using locally specific policy tools.

On what basis, however, is an economy and the endogenous factors and social capital which may be associated with it to be defined as "local"?

2.5 IS THERE A "LOCAL" ECONOMY?

Where does the power to make the decisions which will have an economic impact reside? Smith *et al* (1999) and Crickley (1996) both emphasised the importance of national and supra-national power and control structures, rather than local factors, in determining the spatial pattern of successful and less successful economies. They counselled against overstating the significance of local factors and expressed concern that focusing on the local shifted policy attention away from the macro-economic and political structures which had created disparities in local economic development. Focusing on the local encouraged the view that areas which were economically disadvantaged had been the architects of their own failure.

Shearman (1998) worried that the efforts of those involved in trying to promote local economic development were being rendered impotent by globalisation and the trend within business to integrate via mergers (de-localisation). Massey (2002), however, suggested that globalisation, where it meant inter-connectedness, was not necessarily a bad thing. She pointed out that economic exploitation and social exclusion could be just as much a product of local action by local people, of local culture influenced by local conditions, as of trans-national trade and co-operation. She argued that it was naive to claim that local was better simply because it was local. The real issue for her was what she described as the geography of power.

There is another body of opinion in the literature which proposes that, as economic globalisation has accelerated, regions have become increasingly important as areas of wealth production and economic governance. A large group of authors[2.23] have been proponents of this thesis. Ohmae (1995) contended that because investment could flow largely unimpeded across borders in pursuit of markets and resources (including people), the nation state was progressively

[2.23] Among them Ohmae (1995), Storper (1997), Scott (19980, Porter (1998 and 2001), Hudson (2001) and Martin (2005).

becoming a meaningless territorial unit in an increasingly borderless world economy. Hudson (2001), citing Jessop (1994), also suggested that changes in the contemporary capitalist economy, in particular the advance of globalisation, had resulted in regions taking on greater economic significance and nation states being hollowed out. His conclusion was that nation states would be superseded by region states which would be shaped by new patterns of investment and trade.

Benney (2000), argued that the future of economies lay in the hands of the owner-managers of the small firms who would have, she predicted, provided more than 60 per cent of new jobs in the US from 1994 to 2005. These millions of wealth generators had all emerged from local communities and had been influenced, initially at least, by local constraints or local opportunities. Castellis and Hall (1994) asserted that local society, its structures, its laws and traditions were important in determining whether there would be an innovative milieu in which individual initiative could thrive. Kanter (1995), claimed that survival within the evolving global economy was increasingly dependent on the quality, creativity, talent, resources and innovativeness of people at the local level. Comparing the Silicon Valley and Route 128 development experiences in the US, Saxenian (1994) claimed that similarities in terms of university competence, the presence of large firms and technology know-how had not been sufficient in themselves to ensure similar levels of sustained success in those two local economies. Much more important, Saxenian contended, had been the nature of the social contacts and the socialisation processes which had been inherent in those local communities; what Dornisch (1999) described as:

> *"well functioning educational systems, social norms of individualism and legality, supportive family networks"*(Dornisch 1999 p.18)

Arzeni and Pellegrin (1997) said that people were not passive. When they acted together at a local level they were capable of generating their own innovative processes. New opportunities for co-operation and trade had provided motivated and well-organised businesses and civil authorities with opportunities to bring advantages to the locales in which their operations were concentrated and from which they drew their sense of identity.

Richards (1997) commented on the rise of the region from a somewhat different perspective, however, arguing that globalisation represented a potential threat to social democracy insofar as the patterns of political co-operation which had formed nation states were being subverted by new forms of economic collaboration, with certain regions securing power by redefining their co-operative relationships. He was concerned about the lack of accountable political control which could be exercised over these new economic interactions

Kitson contended that regions and districts were neither:

> "*simple aggregations of firms, nor are they scaled down versions of nations.*" (Kitson *et al*, 2004, p.993).

Spatial units were not economic actors in the sense that firms were – they had limited direct control over the activities which took place within their ambit and they had less organisational coherence either than a firm or a nation state.

Is there then such a thing then as a "local economy"? Curran and Blackburn (1994) argued that it was difficult to attribute the interactions between people and the resource management, exploitation and exchange systems which were the basis of trade, to particular local territories. A local economy, they contended, was in many respects a spurious concept because businesses located in a city, for example, would seek imports and sell their products not just within the city but beyond the city confines also. How much business activity was limited to the city would vary depending on the nature of the business; from a hairdresser at one end of the spectrum to a specialist ICT consultant at the other. Curran and Blackburn's study of a number of so-called local economies in England had concluded that, in relatively small areas, there was insufficient observable coalescence of patterns of interaction among businesses to justify the attribution of integration which was the pre-condition for an area to be defined as a discrete "economy". Based on their study of small enterprises, large private sector firms and public sector organisations in seven localities[2.24] they questioned the supposition that an integrated local economy could be demarcated from a wider national economy. Beyond this issue of the extent to which economic activities in a locality might:

> "*cohere into a whole*" (Curran and Blackburn, 1994, p.170)

...... they also questioned how the locality within which an economy was supposed to reside was to be defined. They concluded that, while people might describe themselves as being from a locality such as Sheffield, *locality qua locality* had little relevance in business terms. They cautioned that, in their experience, the various levels of territorial definition used in economic geography, regional studies and spatial economic policy-making had:

> "*little or no demonstrated foundation in real economic and social relations*" (Curran and Blackburn, 1994, p.162)

...... and were:

> "*essentially arbitrarily imposed mainly for administrative or policy purposes*" (Curran and Blackburn, 1994, p.162).

Moreover, there had, they said, been a neglect in conventional analyses of economic activities at a local level of:

> "*the non-economic, the ways in which economic relations are embedded in other kinds of social, cultural and political relations*" (p.162),

...... factors which they acknowledged, would also be important in defining a zone as an economy.

Yet it is also true to say that every locality in the UK which has an accepted identity will be a place made up of layers of activities, some of which will be locally focused, others of which will use local resources to service external

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[2.24] Kingston, Sheffield, Nottingham, Guildford, North East Suffolk, Doncaster and Islington.

demand which has been generated by external forces.[2.25] A locality will usually also be layered with various definitional attributions, some of which will relate to concentrations of these activities. What ultimately defines a regional or local economy are the activities which connect projects and places together. The nature and scale of that connectivity can be influenced by structures of decision-making, such as those managed by regional governments and municipal authorities. Hausner *et al* (1997) proposed that local economies were systems composed of multiple locations and multiple networks bound together by patterns of co-operation and control. Dornisch (1999) described a regional or local economy as a:

> "*composite of constituent localities, sectors and organisational networks………… an ecology of projects*" (Dornish, 1999, p.24),

...... where those projects were:

> "*the collective efforts of actors to organise to deal with the joint problems plaguing them*" (Dornish, 1999, p.25).

While they may not have the organisational coherence of firms, regions and districts do represent systems of co-operation and management. As such they may compete with each other, through the efforts of their development agencies to capture inward investment, for example. In that sense they compete as directly as do nation states. Within the UK, Invest Northern Ireland competes head-on with Scottish Trade International or the Welsh Development Agency for foreign direct investment, in practice unconstrained by national UK policy, and as vigorously as it competes with Enterprise Ireland or development agencies elsewhere in Europe. Within Northern Ireland, Scotland, Wales and England, local authorities also endeavour to court investors and to attract special EU funds in competition with each other.

For the purposes of this research a "local economy" will describe a concentration of business, of buying and selling, of employment patterns and of

2.25 As acknowledged by Hart and Murray (2000).

community ties, in an area defined by the institutional and administrative structures of Local Government: The structures, in other words, which give those collective efforts described by Dornisch (1999) a shared identity, notwithstanding that there might be leakage of co-operation and contact beyond their confines. For the purposes of this research the term "local economy" will not be claimed as a rigid and all-encompassing designation. Rather it will define contiguous activities and relationships at a sufficient level of concentration to be defensible as a "district".

As compelling as Curran and Blackburn's (1994) argument in respect of their English case study may have been, it was an "English" case study. It will be argued later in this thesis that one of the endogenous circumstances which has differentiated Northern Ireland from other parts of the UK has been the significance of locality and all that it represents in terms of cultural identity and contested economic development.

2.6 LOCAL ECONOMIC SUCCESS

2.6.1 Introduction

How is "success" to be defined in respect of a regional or district economy?

"Success" can be a designation based on an absolute set of circumstances A high level of small firm creation and expansion, for example, is an indicator that resources within an economy are being productively exploited by people who have confidence that the goods and services they produce will be sold. Deployment of labour is another such absolute, in the sense that if people are working they are engaged in some form of productive activity, and if they are unemployed they are not.

The economic development practitioner is interested in more than absolutes, however. He/she is interested also in the implications of a set of circumstances within a particular context (in this case Northern Ireland). Success in such terms is measured as a relative achievement. Outcomes which are designated as indicators of success, usually a set of political objectives such as high average wages or low levels of multiple deprivation, can be compared between regions or districts in the jurisdiction within which those objectives constitute policy.

Although a number of economists[2.26] have sought by cross-referencing between regions to identify the factors which have coincided with the attainment of economic success, Kitson *et al* (2004) have argued that:

> "*despite the rush to measure, compare and promote 'regional competitiveness', the very notion is contentious and far from well understood*" (Kitson et al, 2004, p.992)

...... with almost every study of place competitiveness and local and regional economic development seeming to generate its own theoretical model.

2.26 Among them: Johnson *et al* (1990), Dunford (1996), Dunford and Hudson (1996), Martin and Sunley (1996) and Smith *et al* (1999).

Yet there is also in the literature a significant degree of agreement as to the factors which appear to play a role in determining the distribution of regional and local economic success. While Martin (2005) accepted that there was unlikely to be a:

"*one size fits all*" (Martin 2005 p.4)

...... prescription for success, no two areas being alike, each facing different challenges and opportunities, he also suggested that there were some common factors which had:

"*universal applicability*" (Martin, 2005, p.4).

......; although he did observe that there was less agreement as to the relative significance of each of those factors and how they might have interacted.

2.6.2 Inputs and outcomes

Most studies of relative economic success since the mid-1990s have defined success as a set of "outcomes" the achievement of which is attributed to a series of "inputs";[2.27] and in most the attainment of those outcomes will have been compared between regions or districts; although Dunford and Hudson (1996) concluded that, while successful regions appeared to share a number of characteristics,[2.28] there was no such thing as a transferable model of a successful region.

An input/outcome model was adopted by the European Commission-sponsored DORA project (2002) in its study of variable local economic performance across the European Union. The success outcomes which the DORA team identified inlcuded: population change, employment change, and rates of new business formation. Variables which contributed to those economic success outcomes were also classified. These inputs were differentiated between those which were "tangible" and those which were "less tangible". The tangible inputs were linked to traditional factors of production and were available to most areas (factors such as human resources, infrastructure, investment, and economic structures). The less tangibles were those factors which determined how badly or how well the tangible resources were put to use (factors such as institutions, networks, community and quality of life).

2 27 Storper (1997) in his conception of "place competitiveness" differentiated "inputs" (e.g. number of companies of various types) from "outcomes" (e.g. earnings, employment levels); and the Institut d'Amenagement et d'Urbanisme de la Région d'Ile de France (IAURF) study of innovative urban areas in north west Europe made a similar distinction between "input" indicators and "output" indicators (IAURIF 2001). Hutchins (2004) drawing on much of this work in a report to the UK Office of the Deputy Prime Minister on urban competitiveness, recommended that the most effective way to determine the relative competitiveness of urban areas was to measure competitiveness as a set of "outcomes".

2 28 notably: a high degree of social cohesion and inclusion; good industrial relations; a high level of inter-firm co-operation and networking; embedded high-value-added inward investment; strategies in place to foster innovation and technology transfer; enabling institutions of governance, which had 'learned to learn'; successful cross border synergies; and a vibrant civil society, with which the state interacted.

Huggins (2003) in his UK regional competitiveness index chose to cluster the inputs[2.29] which he claimed contributed to the "tangible outcomes" which constituted "competitiveness"; and he weighted the influence of these clusters of inputs equally on the basis that:

> "*each will be inter-related and economically bound by the others*" (Huggins, 2003, p.92).

In this thesis an attempt will be made to measure the association between social capital and economic success in Northern Ireland using such an input/outcome model. Social capital will be designated as one of a number of potential inputs and economic success as an amalgam of outcomes. The challenges involved in designing an appropriate analytical framework for this type of research will be described in some detail in Chapter Five and in Chapter Six the specific input/outcome methodology which will be used in this thesis will be rationalised.

2.6.3 Success is more than a growth outcome

Included among outcomes identified as measures of "success" in most studies are measures of "growth", notably growth in employment, number of businesses, population and incomes; the implication being that those regions which have grown more slowly will have lost competitiveness and been less successful.

However, because a region or district economy is growing may not necessarily mean that it is more successful. Some regions or districts might register as growing simply because historically they have lagged behind other areas but have now entered a phase of maturation. While they will, as a result, be growing relative to their former position of under-development, they might still be relatively weak in terms of the level and sophistication of their consumer demand,

[2.29] For Huggins the key inputs were: business density; proportion of knowledge-based businesses; and economic activity rates. These variables, he argued, contributed to the output (and thus the productivity) of an area. Productivity he measured as GDP per capita. Unfortunately GDP cannot be deployed in this thesis because GDP data is not reliably disaggregated beyond NUTS III level in the UK.

the skills of their workforce, their degree of innovation in commerce, and the presence of well developed supplier networks.

Porter (2003) proposed that true competitiveness; and by implication success, was achieved only when areas combined a high standard of living with a high level of productivity. Thus growth statistics alone were not an adequate measure of competitiveness or economic success. Massey (2002) similarly argued that a measure of growth, on its own, amounted to an arid definition of economic success, no more than a calculus of assets and profits. She suggested that economic success should also be assessed using quality-of-life and distributional measures. For the same reasons Rabinowicz (1999) had argued that research into economic performance had to be multidisciplinary and its output multivariate.

An Audit Commission paper (2003)[2.30] on measuring the success of economic regeneration initiatives argued that because the attribution of outcomes to specific policies was so problematic, outcome indicators should be analysed together. To understand business growth in an area, for example, the number of business registrations should be analysed alongside employment change.

The Scottish Executive, in a 2005 Review of Scotland's Cities came to the same conclusion. It argued that for many citizens and companies, economic success in 2005 was a more broadly defined concept than growth and profits for firms. Employment growth accompanied by low incomes, for example, would not, the Review suggested, be regarded as a success outcome. Environmental impacts and equity considerations figured strongly in the broader multi-variate definition of economic success which the Scottish Executive proposed; although it did stress that assessing the performance of an economy in these terms was a complex exercise, not least because quality of life variables in particular were difficult to measure.

[2.30] The paper was a response to the UK Government's 2002 Spending Review which though it had designated "promoting the vitality of localities" as a shared priority for public services, had not indicated how the success of such initiatives was to be measured.

2.6.4 A complex weave of inputs and outcomes

In the various attempts since the mid-1990s to identify a recipe for economic success at the level of the region or district it has not always been clear which factors were being proposed as inputs to success, which as success outcomes, and which were co-linear markers for other more significant factors.

Bench-marking statistics from one place against those from elsewhere which was the basis of most of these studies tended to miss the endogenous factors which were specific to particular places and which may have been an important ingredient in their success status. Dunford and Hudson (1996) argued that because success was context specific there was a limit to the variables which could be compared across space or across time; and this in turn restricted the conclusions which could be drawn from comparative studies.

The challenge for researchers is to differentiate success factors which can be replicated with the help of intervention elsewhere from those which are unique to particular places; and to determine how significant those factors are relative to each other.

Hudson (2002) proposed a heterodox theory of local economic development which, while acknowledging the significance of exogenous factors such as the national macro-economy, recognised also as important sociological and cultural elements, local institutional structures and whether there was a pre-disposition for learning and knowledge transfer.[2.31] He contended that success could not be judged as a one-off completed achievement; but rather was a designation which described an ongoing process of adaptation in which change was anticipated and adjusted to. Success, Hudson said, was embedded in the contingent specificities of national, regional and local influences. The variety of economic development trajectories which he had found in western Europe was testament to this. Recipes for success were, as a result, elusive.

[2.31] He cited Allen *et al* (1998) as having presented a similar argument.

Elusive perhaps; nevertheless the search has continued. Hutchins (2004) referring to research by Business Strategies Limited (2001) into what made some European regions prosperous, identified a number of influential factors, including industrial and commercial structure, skills, and the presence of an airport (in particular the average travel time to the airport and the airport's passenger handling capacity). Camagni (2002) suggested that what determined regional comparative advantage were regional assets (social, infrastructural, institutional, technological), external to producers but benefiting them and the places in which they were based.

De Vet (2004) in claiming to have identified the key influences which in the future would determine whether areas would attain (or retain) economic success,[2.32] also suggested that the influence exerted by these factors would vary depending on the structure of the regional economy. In some areas, supply-side cost variables would be more important, in others it would be the presence of active indigenous SMEs which were successfully specialising, whereas in others the business culture and the innovation and skills associated with densely populated metropolitan areas would be the source of competitive advantage: The point again being that there was no standard recipe for an economically successful region.

Kitson *et al* (2004) chose to define the factors which they argued most commonly were contributors to regional competitive advantage as forms of "capital": human capital, social and institutional capital, cultural capital, knowledge capital, infrastructural capital and productive capital. They cautioned that not all of these factors operated at the same spatial scale, were developed equally, or had been of equal significance across a regional economic space. For Kitson *et al* a key consideration for researchers was the spatial scale at which factors were measured. The spatial focus of a piece of research, they said, constrained the choice of outcomes and inputs which could be analysed.

[2.32] They were: The level of entrepreneurship; the degree of connectivity, through conduits, such as airports, which allowed for the rapid movement of people and knowledge; availability of land and premises to provide an adequate platform from which connectivity could be exploited; the quality of place, in terms of its appeal to young qualified experts and to potential in-migrants who could mitigate labour shortages; the educational infrastructure, particularly in supporting applied technical disciplines and innovation; and the extent to which indigenous companies and embedded foreign firms engaged in technology transfer.

2.6.5 The social milieu

Wood (1999) tied the factors which, he claimed, some of the world's most successful regions[2.33] had in common back to the endogenous social milieu prevailing in those areas; and in particular the extent to which business people and public sector officials had been socialised to exploit knowledge. This was most likely to have occurred in regions where reserves of "social capital" had been high, well developed networks had been in place and learning was valued. Wood argued that at the end of the twentieth century creativity had become a source of competitive advantage, in the way that in the past a repository of information or an industrial infrastructure had bestowed a competitive advantage.

Martin (2005) argued that the way in which the people and firms in a region who were producers responded to change and to the moves of their competitors, as well as their capacity to create new oportunities from within, would determine whether they were successful. How people and firms responded to change was a function of their goals, assumptions and capabilities, and those in turn were influenced by the social milieu in which they lived.

Maskell *et al* (1998) contended that how industry in an area was structured and managed was important in determining its prospects of economic success, more so than the sectors per se which were present there. To be successful, producers had to differentiate what they were offering for sale. A firm's ability to differentiate was closely tied to its capacity to develop specialist knowledge and that was determined by the way that the firm was managed. Maskell *et al* argued that how a firm was managed was influenced by endogenous attitudes which shaped individual and organisational culture; and it was this which would determine how imaginative or innovative a company's sales strategy would be and how well it would perform. As well as wages and returns for shareholders, successful firms generated income for re-investment. The higher the density of successful firms the more investment resources there would be for others in a local economy to

[2.33] He cited Catalonia, Baden Wurtenburg, and Emilia Romagna.

access and the more successful that area would be. By comparison, less successful local economies, with fewer successful firms, risked getting caught in a long-term cycle of disadvantage, in which unemployment and low incomes prompted migration and a haemorrhage of talent and innovative potential.

Hart and Gudgin (1999) also said that endogenous factors at the level of the firm, including the attitude, competence, motivation and background of key people, especially owner managers, strongly influenced an area's economic performance. The "background" of an owner manager was defined as a combination of educational attainment and personal circumstances (those being class, race and religion); all factors which were influenced by the social milieu in which they lived. A later study by Barkham *et al* (2002) claimed that these factors explained up to half of the growth variation between firms across the UK.

This thesis will attempt to determine whether, across Northern Ireland's local economies, the prevailing milieu of social characteristics and social capital was as significantly associated with economic sucess (relative to other inputs) as these authors have suggested it should have been.

2.7 LOOKING FORWARD

Across all of these models and the literature which supports them, the "outcomes" which were consistently identified as defining economic success were: quality of life, labour market performance, a dynamic industrial and commercial sector, and relative growth (of population, of business stock and of employment). The "inputs" which were consistently identified as important in shaping those outcomes and thus determining an area's economic success prospects fell into five clusters. They were: social capital, the structure of the labour market (including the level of self-employment), social characteristics, education and skills, and economic development policy. The model which represents this in diagrammatic form (figure 2.1), and which provides the structure around which the forthcoming analysis will be structured, is a derivation of a schema proposed by Kitson *et al* (2004).

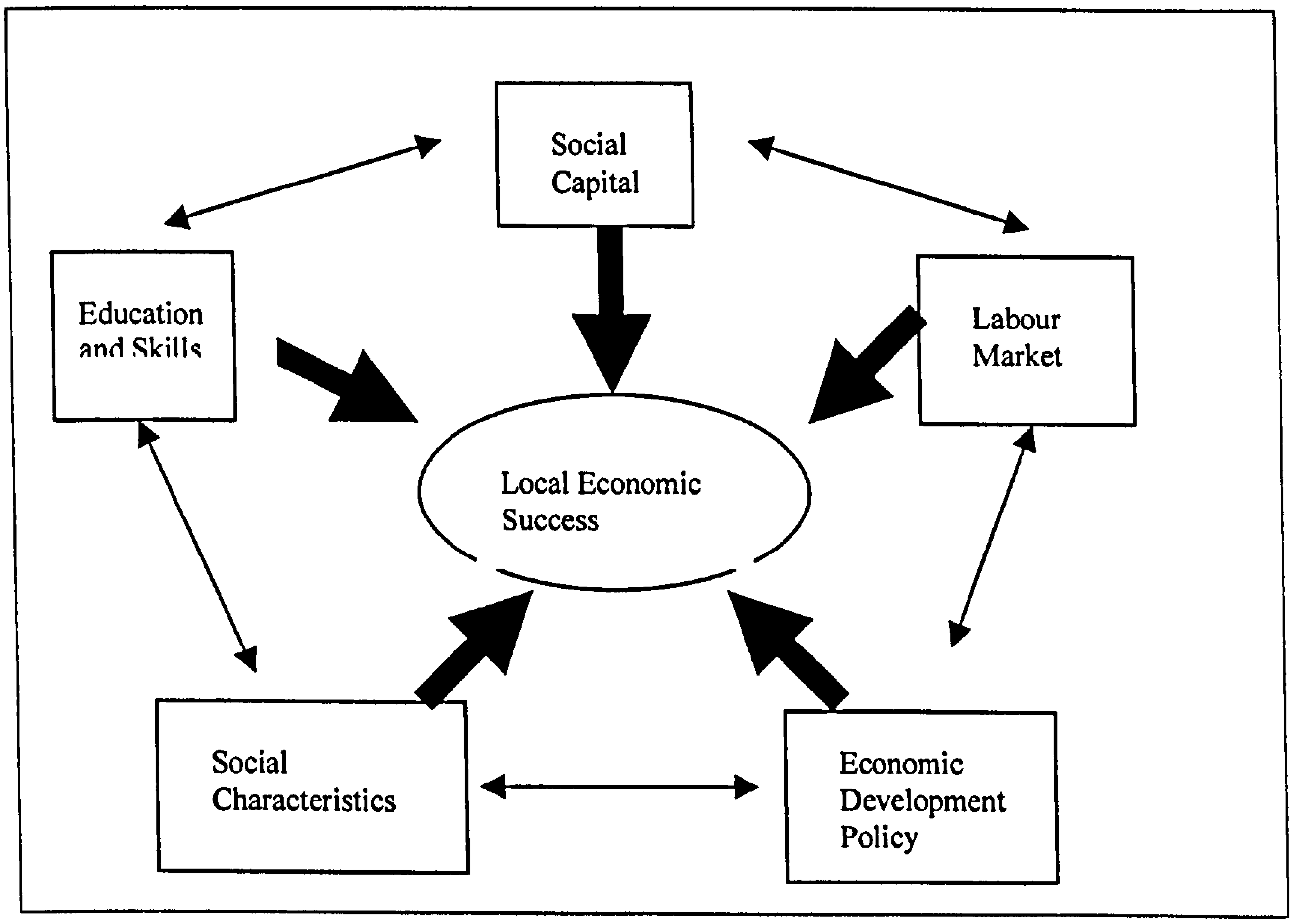

Figure 2.1: *Inputs whose influence on the economic success of Northern Ireland's local economies will be tested in this thesis.* (referred to also in Chapter One as Figure 1.2)
(Source: A derivation of the model proposed by Kitson et al 2004)

However, this model differs from the Kitson *et al* model insofar as it does not differentiate between cultural capital, social capital and creative capital; the rationale being that in the context of Northern Ireland's cultural complexities (discussed in Chapter Four) it would be difficult to attribute variables solely to one or other of those designations.[2.34]

To what extent might such "inputs" have been a function of the initiative of individuals? Is individual initiative nurtured or is it born, an unpredictable quirk of fate? Can it be detached from the social and cultural milieu in which it is located? If it is found that social capital in an area is associated with the propensity of individuals to be entrepreneurial (by providing the leadership and skilful management which make firms successful) might this suggest that social capital has the potential to be the most important contributor to an area's success prospects?

Because of the complex and subtle way that social capital appears, from the studies which will be reviewed in the next chapter (Chapter Three), to exert its influence; this research is interested in analysing not just the direct relationship between social capital inputs and local economic success outcomes but also the relationship between social capital inputs and other inputs.

Having considered in Chapter Five the analytical challenges involved in progressing research of this kind, an attempt will be made in Chapter Six to identify the measurable "outcomes" which define local economic success in a Northern Ireland context, and to then identify clusters of the measurable "inputs", among them social capital, which may have been associated with the distribution of those outcomes. The substance of this thesis will be focused on measuring the complex interaction between these inputs and outcomes to enable a judgment to be made as to the relative significance of social capital's association with the

[2.34] Gaffikin and Morrissey (2001), for example, contended that much of the social capital in Northern Ireland was a product of culture. In fact they went so far as to suggest that much of the way that Northern Ireland functioned, including its propensity or otherwise to be creative, was constrained by its cultural proclivities.

distribution of local economic success. The analytical path which will be taken to get to that end will be set out in Chapter Six.

CHAPTER THREE

SOCIAL CAPITAL

3.1 INTRODUCTION

This chapter seeks to clarify from a substantive and relatively recent body of reference literature the parameters of the term "social capital". It examines why it seems to exist and how it can be manifest. It presents a set of conclusions from across the literature which will constitute a benchmark of opinion to which this thesis may either lend support or mount a challenge.

This chapter begins by offering a perspective on the propensity of communities of people to act collectively and reflecting on definitions of social capital. This is followed by a review of the principal assertions made in the literature on social capital: its association with trust, civic engagement and political stability; with institutions; with economic prospects; with educational attainment; and with socio-economic disadvantage. Two specific community and territorial settings where an apparent association between social capital and local economic success has been observed are then examined: Native American communities and Poland. In both cases authors have contended that how communities are organised can in some circumstances determine their economic development trajectory. Despite these studies presenting observations from very different geographical settings they seem to suggest a consistency of human process. They also reveal that in a field where empirical evidence is sparse the most in-depth studies available are likely to be anthropological rather than econometric in style, the emphasis being on observation rather than statistical measurement.

The chapter ends with a consideration of the way in which social capital has been used as a policy lever, through "deliberative partnerships" and the "social economy". The consensus on the significance of social capital in the literature (notwithstanding the relative absence of supporting empirical evidence) seems to have been shared in the economic development policy community at EU, UK and

Northern Ireland level. That consensus is another benchmark against which the findings from this research can be assessed.

A number of conclusions will be drawn from this review of the literature on social capital:

- Culture can shape social behaviour. Social behaviour can in turn affect economic outcomes.
- The propensity to acquire and exploit resources can be a culturally transmitted convention.
- Where culture is homogenous community institutions are more likely to act coherently and be successful.
- Social capital is a "virtual currency" exchanged by people when they act together in pursuit of shared objectives.
- In general socio-economic deprivation suppresses social capital. There can be exceptions. Examples presented in this chapter are: some Native American communities; some districts in Poland; and Northern Ireland's Catholic community.
- Culture and leadership are proposed as the variables which differentiate those socio-economically deprived communities which generate high levels of social capital from those which don't.
- In the literature there is a lot of intuitive reasoning but an absence of empirical evidence. This seems to be because social capital takes different forms and its effects seem to vary from place to place making comparisons difficult. Social capital is hard to measure.
- It is speculated that there may be different forms of social capital which may in turn have different effects, so much so that some forms of social capital might actually reinforce rigidities within a community and be "bad" and "unsocial".
- Attempts which have been made to uncover empirical evidence of an association between social capital and economic performance at the level of the region or the nation-state have either failed to uncover a statistically significant relationship or their findings have been inconclusive or contradictory.
- The literature has focused on making inter-regional and international

comparisons. And yet there is a general acknowledgment that social capital is an endogenous phenomenon, the manifestations of which are context specific. For that reason there appears to be a growing recognition that social capital is best measured at the local scale.

- The influence of social capital on economic prospects may not be linear. Different communities may respond to circumstances in different ways. Even communities within the same generic cultural group may respond differently depending on the leaders and institutions which they have in place. This suggests that there may be significant intra-regional and even intra-cultural variations in the extent of any association between cultural realm, social capital and economic performance (i.e. economic success), producing a heterogeneity of outcomes. Attempts to identify relationships between social capital inputs and economic success outcomes, at a generic enough level to allow comparisons between areas to be made or to provide a basis for future scenario-building, may ultimately be fruitless. It may be more productive to identify at the local level those conditions which allow social capital to flourish and possibly make a contribution to economic success.
- Social capital historically was more highly developed in Northern Ireland's Catholic community than in its Protestant community. Social capital thus appears to have been a cultural phenomenon in the region. If it is found in this thesis that in 2001 there was an association between the religious/cultural profile of a District in Northern Ireland and its prospects of economic success, the historic relationship between religious/cultural affiliation and social capital would suggest that there should also be an association between social capital and economic success. If such an association were to be identified, in the context of Northern Ireland with its history of intra-regional economic development disparities and conflict between cultural traditions, this would be a very significant finding.

3.2 ACTING COLLECTIVELY

How might the voluntary commitment of time and resources by individuals for the collective benefit of local communities contribute to a successful local economy? Might the prevalence of such activity signify that a local economy had problems and was relatively unsuccessful? Is collective action a response, driven by a sense of injustice, to disadvantage? Or does it signify the presence of a creative and supportive social milieu in which success in commerce is also likely? Does the propensity of people to act collectively vary depending on the geographical, economic and political setting in which they live? In situations of prosperity is there likely to be a greater or lesser propensity for individuals to prioritise their personal aims and objectives? Is the commitment to co-operate by individuals in prosperous communities more likely to be the product of a belief that their ambitions will be better supported through structures such as educational institutions and the kind of social interaction which reinforces privilege and maximises the prospects of self advancement? In situations of economic disadvantage and, in particular, of economic decline, are people more or less likely to act collectively to achieve aims and objectives which are seen to be for the greater good rather than individual enrichment?

Attempts to provide answers to such questions by academics, while rich in speculative logic, have been largely devoid of substantive empirical evidence. Park and Burgess (1924), early commentators on how and why people acted collectively, contended that while men and women might act as individuals they could also be influenced to act collectively by common impulses, the strength of which would be determined by the density of social interaction which they were experiencing. Harfield (1998), on the other hand, argued that how individuals responded to change reflected not just their capabilities, their educational experiences, their family history and other personal variables such as health, but also their assumptions and goals, which were likely to have been influenced by the cultural environment in which they lived. Turner and Killian (1972) similarly argued that people's social behaviour, the aggregate pattern of their individual actions, as well as being influenced by resource availability, locational assets and economic conditions, was influenced by the prevailing culture in the areas where they lived.

Arendt (1973) and Komhauser (1960) suggested that successful societies and communities were characterised by strong class and group solidarities. Such solidarities shaped culture, which in turn shaped not just economic behaviour, but educational objectives, the type of state/institutions which governed and prevailing attitudes to profit. Bowles and Gintis (2002) said that all humans who lived together as families or communities, created norms of social conduct and institutions to regulate that conduct. The particular form which those institutions took was heavily influenced by the ethnic and linguistic heritage of the people who lived together. However, if groups, after bonding, limited membership or excluded interaction with other groups displaying different ethnic markers, highly costly conflict with other groups was likely to be the ultimate result.

It has been suggested that the people who commit time and energy to social movements are often motivated by a desire to restore some form of social stability or cohesion to their communities. In many cases they will be people who are fit, healthy and in the prime of their economic potential. Turner and Killian's theory of collective behaviour (1972) suggested that much of the community and voluntary sector activity in the US after the Second World War had developed where highly motivated leaders had been able to galvanise resentment of perceived neglect by the formal institutions of government of a group, an area or an issue. Social movements were a symptom of a dysfunction in society. In stable societies, such as those in Scandinavia, there had been very few social movements. Turner and Killian suggested that such societies already possessed institutions which facilitated effective social and political participation.

The implication is that in areas in which particular sections of society have experienced straitened economic circumstances, such as in the Catholic community in Northern Ireland, there will be a greater propensity for people to become involved in voluntary sector activity. As will be shown in Chapter Nine, most of the community voluntary sector activity in Northern Ireland in 2001 was indeed concentrated in Catholic communities which had historically been socially and economically deprived and politically disaffected; and most of that activity had been initiated by charismatic leaders who had lived within those communities (examples are: Creggan Enterprises in Derry; Newry Welfare Rights; the Regeneration of South Armagh; the Flax Trust in North Belfast).

Many of those who take on a community leadership role place a high value on self-sacrifice. Such people appear to be motivated by a belief that the success of individuals from within their communities can contribute to a wider sense of collective worth and cultural validation. According to Bowles and Gintis (2002), such individuals are prepared to bear individual costs in lieu of expected benefits in the longer term for other group and especially kin members. Local economies in which such "co-operators" are common are likely, they suggest, to be more successful. In those areas resource striving is a culturally transmitted convention usually governed by institutional structures set up for the purpose.

In the body of literature focused on what motivates humans to commit voluntary time to collective action[3.1] there appears to be a consensus that in economic circumstances which are challenging, necessity can be a more important driver than opportunity, but only where leadership is present. It is suggested that the solidarity which collective action engenders can become a cultural phenomenon, a legacy some of which may be retained within a society, influencing how it structures its future economic and political relations. It is also suggested, however, that at some point as individual wealth increases those cultural pre-dispositions may break down and that the propensity to commit to collective action may decrease. This thesis in seeking to establish if there was an association between the presence of social capital and economic success will in the process determine whether there is any evidence that collective activity was lower where levels of prosperity were higher.

[3.1] Turner and Killian (1972), Alexander (1987), Fukuyama (1999), Lowndes and Wilson (2001), Bowles and Gintis (2002).

3.3 SOCIAL CAPITAL

Hirschman (1978), writing about why some areas had more successfully developed their economies than others, said that it was the capacity of people in an area to locate and exploit resources which in other areas were under-utilised which was more important than having an optimal combination of resources available in the first place. What inspired people to successfully exploit resources and locations was the presence of what he described as a binding agent. Binding agents varied from place to place, but they were usually a variant on the propensity of people to collaborate effectively, to be innovative and outward and forward looking. In 1920 Marshall had claimed that the factors which affected the performance of industrial districts were somehow linked together. Iyer *et al* (2005) described Marshall's insight as:

> *"possibly an early recognition of the importance of social capital"* (Iyer *et al,* 2005, p.1019).

It was Putnam in 1995 who popularised the concept of "social capital" which he described as:

> *"features of social life – networks, norms and trust – that enable participants to act together more effectively to pursue shared objectives.*" (Putnam 1995 pp.664-5)

Social capital, was likened to a virtual currency which was exchanged by people when they co-operated in social networks, families, community organisations, or in any form of collaborative or collective action which was altruistic or in which participation was rewarded by reciprocal support from others. The literature on social capital highlights an important consideration for this research – the suggestion that social capital may take a number of different forms, some of which may have positive consequences in respect of economic success and others of which may exercise a deleterious influence. Putnam suggested that there were two distinct forms of social capital: *"bonding"*, which tended to be exclusive to individuals or groups and *"bridging"*, which was more inclusive. He said that social capital could be further divided into three components: networks (groups of people), norms (rules, formal and informal, governing behaviour within a network), and sanctions (processes which ensured compliance with rules). Norms and sanctions were a feature particularly of bonding social capital.

Iyer *et al* (2005), citing Olson (1982) argued that bonding social capital, which was based on the co-operation for mutual benefit of members of defined groups, could in some circumstances actually hinder growth by encouraging special interest lobbying and preferential treatment; whereas bridging social capital, which was typically less dense because it concerned relationships between groups, might be more important in determining economic performance. They speculated that it was possible for communities to become over-dependent on forms of social capital which could constrain their future economic growth prospects. Ogilvie (2005) referred to a dark side of social capital which took the form of institutions whose activities reinforced discrimination and preserved privilege. Krishna and Shrader (1999 p.5) also argued that what was social capital in one context might be "unsocial capital" in another. They cited churches and unions as two examples of institutions which could either promote co-operation and harmony or in certain circumstances encourage extremism and rigidity. O'Brien *et al* (2005) argued that communities would become backward and non-adaptive if they did not have access to some form of bridging social capital. Bonded social capital, they contended, tended to be a feature of societies where "a moral familialism" prevailed (Banfield 1958 quoted by O'Brien *et al* 2005 p.1043). Such societies tended to be dominated by powerful self-interests, were vulnerable to corruption and had high business transaction costs.

However O'Brien *et al* (2005) also cautioned that bonding social capital was usually a pre-requisite for the future development of bridging social capital; and that bridging social capital could not be imposed from the outside. They cited the example of the forced bridging of Native Americans into the educational structures of European-American culture which had required them to abandon the use of their traditional language, religion and dress and which resulted in their long-term social and personal disorganisation (O'Brien *et al* 2005 p.1043). They concluded that there could in some circumstances be societal benefits from indigenous bonding social capital, although they acknowledged that there was also a risk that local networks could be a source of resistance to the development of the more expansive networks which could bring economic benefits.

Iyer *et al* (2005) concluded from their comparison of social capital across the United States, using a range of indicators,[3.2] that communities highly ranked in terms of civic participation were likely to be highly ranked also in respect of other social capital variables. They claimed that locality was important in determining the form and scale of social capital (as did Di Pasquale and Glaeser 1999). In the US, social capital, especially forms of bonded social capital, appeared to be stronger in communities with a clear sense of belonging. Civic participation more generally was also higher in places where people had lived longest in a community. By contrast, where there was a high level of population turnover social capital appeared to be less well developed.

This thesis will not differentiate between bonding and bridging social capital for the reason that distinguishing between social capital activities on that basis is in practice very difficult in Northern Ireland. Because the region's two communities are in so many respects separated, virtually all social capital is to some extent bonded. By the same token most community and voluntary sector initiatives do not deliberately discriminate or exclude and many actively seek to be cross-community. Voluntary organisations in Northern Ireland whose efforts have been overtly focused on the promotion of the interests of one group over another or which have historically restricted membership on the basis of cultural identity will not be included in this study (the Orange Order and the Gaelic Athletic Association, for example). Instead an attempt will be made to measure collective activity the purpose of which has been social and economic advancement. Beyond the ambit of voluntary activity, an attempt will also be made to measure the level of civic participation among the people living in the districts which make up Northern Ireland; and the role of education will be considered, but only in respect of educational participation and attainment at the level of the wider

[3.2] Indicators whose association with social capital in the US was tested by Iyer *et al* (2005) were: education; length of residency; age; income status; unemployment status; home ownership; ethnicity; urban or rural location; and US region location.

community given what that might suggest about how a community organises itself.

In the literature on social capital a number of claims have been made about its contribution to economic success. These coalesce around the following themes:

- Trust, civic engagement and political stability.
- Institutions.
- Economic prospects.
- Educational attainment.
- Disdvantage.
- Culture.

3.4 SOCIAL CAPITAL, TRUST, CIVIC ENGAGEMENT AND POLITICAL STABILITY

Bowles and Gintis (2002) argued that for social capital to develop there had to be trust between people. This would be manifest in displays of concern for others, a willingness to abide by community norms and a preparedness to sanction punishments for people who did not. Sirianni and Friedland (1997) claimed that successful communities would be created where networks of people existed in which trust had been exchanged, such as sports clubs, community associations or co-operatives. The denser those networks the more likely members of a community were to co-operate for mutual benefit.

Iyer *et al* (2005) suggested that where there were high levels of social trust, the private sector and local economies would also be more likely to prosper; citing the increased costs borne by employers who had felt compelled to institute rigorous monitoring of their employees because of a lack of trust as an example of how trust could directly affect production costs and thus a firm's growth prospects. Putnam (1993) claimed that behavioural norms and civic engagement networks, products of social trust, were a pre-requisite for economic development and for effective government. He suggested that where strong local networks existed, information would be more rapidly exchanged, the cost of transactions (e.g. legal fees) would be reduced and that this would increase organisational and thus community and societal productivity. He also suggested that social capital could lead to more effective public services as people took more responsibility for voting. Comparing high trust societies and cultures with those where there was apparently low trust, Fukuyama (1997) said that high trust societies tended to develop more social capital, and consequently enjoy greater economic growth. He contended that there was a positive relationship between social capital and effective organisations with high trust societies being better able to modify the structures of their organisations, industrial or otherwise, for economic gain; and he concluded that social capital was the glue that helped to keep the otherwise centrifugal structures of the market economy together.

Malmberg and Maskell (1997) and Storper (1997), contended that social capital was more than a "glue" it was also an accelerant which encouraged the transmission and exchange of information and knowledge, especially the tacit knowledge which encouraged innovation. Boschma (1999) lent support to this thesis arguing that because innovation resulted not from the independent actions of isolated firms but from the interaction between actors which grew from trust, high-trust societies were likely to be innovative societies.

Many studies in this field are heavy on metaphor (and sometimes rhetoric), but lacking in hard evidence. While the tangents of causation which they suggest do have an underpinning logic, what cannot be verified is whether they applied in all cases, only some cases or not at all. To be fair to the authors, they did not set out to present empirical evidence. Theirs were intended to be reasoned arguments presenting general principles. Empirical evidence on the scale necessary to support what were a set of general principles on the functioning of human society may simply be unattainable, because human behaviours are so unpredictable and so context specific, and "proof" may not therefore be a realistic expectation.

In the 1980s and 1990s a number of economists began to take an interest in the way that industry had developed after the Second World War in parts of Northern Italy (Brusco, 1986; Camagni, 1991; Harrison, 1992). A group of Italian economists led by Becattini (cited in Boschma, 2000) attributed the growth of this region to the interactions which had resulted from:

> "*localness*" (Boschma, 2000, p.16).

Helliwell and Putnam (1995) measured the economic performance of Italy's regions before and after the reform of Italian regional Government in the 1970s. They concluded that the high reserves of social capital which they had observed in the northern regions of Italy had enabled the new devolved government structures which had been established in those areas to take maximum advantage of their new powers to deliver better public services allowing their communities to better exploit economic opportunities.

Boschma (2000) attempted to assess empirically the role of social capital in explaining the industrial rise of this so-called "Third Italy" area (comprising the north eastern and north central regions of the country), by comparing its development tangent with that of the First Italy (the traditional industrial heartland around Rome and in the north) and the Second Italy (the economically backward south). He used a set of indicators to measure the social capital which had been manifest as "voluntary social solidarity", "civic virtue" and "civic sociability". His conclusion was that these forms of social capital were also in evidence in the First Italy area. However, what seemed to have set the Third Italy apart was that social capital existed alongside other endogenous factors: a tradition of small-scale artisan production, a lack of labour militancy, limited class polarisation, and the important role of the family business. Boschma speculated that trust flourished where such endogenous conditions prevailed. Trust enabled tacit knowledge to be exchanged which in turn encouraged innovation; and trust gave the workforce a sufficient sense of security to be flexible. This was a propitious environment in which to run a business. Social capital had thus helped to create a powerful economic system which by 2000 was characterised by a large number of local networks of small, flexible, often craft-based industries, notably in the clothing sector.

Knack and Keefer (1997) attempted to construct an empirical basis for their social capital study, using a World Value Survey question on "trust" as the basis for an analysis of 29 market economies. They concluded that there appeared to be a statistically significant association between trust and economic growth. However trust is difficult to reliably measure, especially in a way which supports international comparisons. The "generally speaking" survey question approach adopted by Knack and Keefer secured a "generally speaking" response, arguably a dubious basis on which to draw conclusions in respect of the processes which influence economic growth. Knack and Keefer claimed that there was a strong, positive relationship between social and political stability and economic growth; and that the income inequality, land inequality, discrimination and corruption which prevailed where social and political stability was absent were associated with a significantly lower growth in GDP. When they controlled for their measure of trust, the association between these variables became much weaker, suggesting, they concluded, that trust was an important factor; although it was not made clear whether inequality and discrimination, for example, were a symptom of a lack of trust or a cause.

Other cross-country comparisons, however, seemed to generate contradictory findings: Helliwell (1996) contended that trust and group membership had had a significant negative effect upon productivity growth in a sample of 17 OECD countries; whereas Knack (2000) found a positive relationship between trust and investment. Such contradictions, which may be attributabe to the context specific, localised nature of social capital effects (as well as measurement problems and the resultant lack of comparable data), do render as potentially spurious attempts to make international comparisons (certainly based on the extant literature). This thesis will confirm that the variables which influence economic performance can be many, they can be difficult to capture, their interactions can be complex and cause and effect is as a result very difficult to establish.

3.5 SOCIAL CAPITAL AND INSTITUTIONS

Martin (2005) claimed that there was a consensus amongst economists:

> "*that institutional/cultural factors may play a formative role in local economic governance, and as such have a critical bearing on the relative competitive advantage of regions.*" (Martin, 2005, p.19).

Flexible institutions, Hudson (2001) had also argued, though not in the context of social capital per se, were a local economic success pre-requisite; although he warned that there were limits on the scope to transfer institutional tissue from one region to another because governance structures were usually the product of an area's cultural traditions and its economic history.

Iyer *et al* (2005) suggested that communities with high levels of social capital were likely to have in place systems which enabled them to be better administered, in part because:

> "*these communities are more effective at organising public services*" (Iyer *et al*, 2005 p.1019).

Boschma (2000) speculated along similar lines:

> "*social capital may stimulate the effectiveness and responsiveness of institutions of governance, such as government policy*" (Boschma, 2000, p.7).

Saegert and Winkel (1998) argued that whether or not a local government was successful in an area could be attributed in large measure to the presence of pre-existing social capital. Swyngedouw (2000) contended that effective local governance structures contributed to the success of local economies by helping to reinforce core values such as dialogue and negotiation, which in turn encouraged the institutional capacity of the community/voluntary sector, enabling activities to flourish which were innovative and which contributed to economic growth. Bowles and Gintis (2002) contended that on the one hand, institutions could play an important role in making states, markets and communities complementary;

whereas, on the other, if institutions were badly designed they could constrain development.

Referring to Native American communities, Cornell and Kalt (1991) described institutions as the glue which had held some of them together. They claimed that endowments of resources and of human capital, even access to finance, were all virtually useless unless communities were capable of making collective decisions and had the institutional structures to sustain collective action and to provide a hospitable environment for investments of finance or of social capital. They concluded that socio-cultural institutions were crucial to development. They made two suggestions which have direct relevance to this thesis: Firstly, that very disadvantaged minority communities through self-generated "agency" could take some control of their economic destinies; and secondly that within a large disadvantaged cultural group (i.e. Native Americans) different sets of attitudes (i.e. cultural capital) were associated with variable endowments of human capital and these in turn were associated with different success outcomes. This was evident in the variable quality of institutions and leadership between tribes. Cornell and Kalt suggested that a heterogeneity of circumstances would produce a heterogeneity of outcomes. These Native American case studies are discussed in more detail later in this chapter.

3.6 SOCIAL CAPITAL AND ECONOMIC PROSPECTS

There is no shortage of claims that social capital exerts a positive influence on the economic prospects of a community. Putnam (2000), for exmaple, said that, in his view, the question was not whether social capital influenced economic development but rather to what extent. Hudson (2001) cited Massey (1984), Clark and Dear (1984), and O'Neill (1997) to support his claim that there was a reciprocal relationship between economic geography and social capital, whereby patterns of uneven development were a product of the social relations of production and spatial economic differences in turn influenced the ways in which social relationships survived and were reproduced. Shaffer (1995) made a similar statement to the effect that a high level of intra-community discussion and a history of effective implementation of strategic objectives were two characteristics associated with economically sustainable communities. The extent of this apparent consensus is reflected in statements by the World Bank about the importance of social capital:

> *"Increasing evidence shows that social cohesion is critical for societies to prosper economically and for development to be sustainable. Social capital is not just the sum of the institutions that underpin a society – it is the glue that holds them together. The broadest and most encompassing view of social capital includes the social and political environment that shapes social structure and enables norms to develop."* (The World Bank 1999: What is Social Capital? http://www.worldbank.org/poverty/scapital/whatsc.html)

While these appear to be compelling arguments, again there is a lack of empirical evidence to support them. Schneider *et al* (2000), in attempting to carry out a comparative study of social capital across a number of EU regions, found that the influence of social capital was difficult to discern, and that its influence on economic development in particular appeared to have been exaggerated. They concluded that economic factors had been more significant in determining the growth of EU regions than social capital.

Iyer *et al's* (2005) attempt to empirically measure the prevalence and influence of social capital across the USA concluded that the effect of social capital on economic growth was not linear, with relatively small differences in social capital appearing to be associated with very significant differences in economic circumstances (p.1021). They contended that in the USA:

> "*social capital per se has limited value if it is not combined with other kinds of capital – social capital makes the other kinds of capital, such as human capital, more efficient*" (Iyer *et al*, 2005, p.1036);

...... although they accepted that the mechanism by which this might happen and ultimately influence economic growth was not clear. They said that social capital effects appeared to be complex and could vary across time and space.

Beugelsdijk and Van Schaik (2005) attempting to assess the influence of social capital across 54 Western European regions found that there were great differences in the density of social capital stocks between regions. Although some of their analysis did suggest a positive relationship between social capital and regional economic development, they noted that they were unable to answer the question as to whether, if social capital and regional economic development were associated, it was social capital which had led to economic growth or pre-existing prosperity which had led to increased levels of associational activity (i.e. social capital). They concluded that much more research was needed on the different forms of social capital which existed across Europe and on the different ways that social capital might interact with economic development outcomes and other factors in different areas. Because their study had concluded that the ways in which social capital and economic development may have been related were unclear, they said that it would be inappropriate for them to make policy recommendations.

Beugelsdijk and Van Schaik (2005) said that researchers faced a number of methodological pitfalls when trying to progress an economic analysis of social capital: firstly, how to establish whether it was social capital which had led to economic growth or economic growth which had led to social capital (or whether an omitted variable may have exerted an influence); secondly, how to control for region-specific effects, in particular certain types of civic engagement which may have been peculiar to certain areas; and thirdly, how to secure appropriate data, especially to enable different forms of social capital to be measured.

Casey (2004) sought to construct a model to measure the association between social capital and economic development at the level of the region in Britain, in the hope that it might shed some light on the persistence of regional economic differentials. He found a positive, though weak, correlation between variations in social capital (which he defined as a combination of trust and civic association) and the diversity of local economic performance. Some of his indicators of social capital appeared to correlate with economic performance, although others showed no association or even a negative correlation. He speculated that social capital, which was founded on trust might have an influence on productivity by reducing transaction costs and spreading knowledge; although he acknowledged that there was a counter argument that growth was more likely to thrive in communities which valued individualism over collectivism. He also said that the contradictory findings from his study highlighted the shortcomings with current social capital theory. He acknowledged that there was a lack of empirical evidence and knowledge in relation to the link between social capital and the economy and that this created problems for researchers especially those wishing to make comparisons between different territorial settings.

In a study of the association between social capital and industry in the 12 UK regions, Cooke *et al* (2005) sought to test claims (e.g. Saxenian, 1994; MacGillivray, 2002) that the success of local economies which had developed around industrial clusters was determined partly by the strength of contiguous social networks. They concluded that there was a strong association between innovative firms and the presence of networks which facilitated information exchange and collaboration. They also concluded that, while links could be identified between the usage of social capital by firms and the success of those firms, the correlation between regional competitiveness and social capital usage was much weaker. They warned that individual effects at the level of the firm should not be taken to:

> "*imply a determinism in which such firms cannot exist at all in less favoured regions – clearly this is not the case*" (Cooke, *et* al, p.1074).

That note of caution in respect of determinism is an important caveat which must underline the reporting of any findings which may emerge as part of this research.

The weakness with these studies is that a causal relationship between social capital and economic growth was assumed, even when there was little supporting evidence; the authors choosing to describe social capital effects as "complex" rather than to consider the possibility that other factors may have been more important.

3.7 SOCIAL CAPITAL AND EDUCATIONAL ATTAINMENT

There is a substantial body of literature on the link between social capital and educational attainment as an economic success factor (e.g. Iyer *et al*, 2005; Scott, 2003; Narayan and Pritchett, 2000; Hall, 1999; Coleman, 1988 and 1990, Whitely, 2000; Teachman *et al*, 1996). Narayan and Pritchett (2000) argued that social capital exerted a positive impact on human capital by increasing educational attainment. Coleman (1990) contended that in the US there was an association between the prevalence of social capital within families and communities and High School drop-out rates. Iyer *et al* (2005) claimed that, in the US, educational attainment was associated with nearly all indicators of social capital:

> "*there is a strong association between educational attainment and social capital in the USA*" (Iyer *et* al, 2005, p.1026)

They cited Hall (1999) and Putnam (2000) as also having argued that there was a:

> "*strong association between education (human capital) and indicators of social capital.*" (Iyer *et* al, 2005, p.1026).

Scott (2003) suggested that the association between educational attainment and social capital was a self-reinforcing phenomenon, arguing that it was through social networks that people often channelled their aspirations; and it was aspiration which was the engine of education as well as enterprise. Glaeser *et al* (2002) claimed that the association between educational attainment and social capital was a feature in many societies. Education, they speculated, developed skills which sustained social capital; increasing the propensity of an individual to trust in the value of co-operative ventures with others.

However, what distinguishes all of these papers is that they presented little in the way of substantive evidence to support their claims. Although analytical methods were deployed to identify associations between variables in some of the studies (as in Iyer *et al* 2005), there was little attempt to control for other potentially influencing factors or to consider the possibility of co-linearity: a weakness given the size of populations being examined and compared (i.e: US states and cities).

While the arguments presented appear logical, the larger the population groups being studied the more scope there would have been for exogenous factors and/or local contingent specificities to also have exerted an influence. Little allowance was made in this body of literature for alternative explanations. Like so much of the writing in this field, the papers on the relationship between education and social capital appeared to concentrate their efforts on supporting a consensus.

3.8 SOCIAL CAPITAL AND DISADVANTAGE

A theme which seems to be common across the literature is that social capital is more likely to be underdeveloped in communities which have endured long-term deprivation. The economic disadvantage experienced by some areas, this hypothesis suggests, is reinforced because they are denied the economic gains which would accrue if trust and co-operative ventures were flourishing: A depletion of social capital is the result when a cycle of decline has taken hold in a community. Whiteley (2000) suggested that a ready supply of monetary income in a community was likely to encourage the generation of social capital and that, by way of a corollary, diminishing social networks reduced the level of monetary income circulating in communities. Whitely hypothesised that to maintain economic growth in a community, ongoing investments of social capital were required. He asserted that there was an international association between income levels, risk-taking and the trust associated with the existence of functioning social networks. Sirianni and Friedland (1997) supported this contention, claiming that social capital was not a fixed asset but a fluid currency which increased when in use and deteriorated when not.

Improvements in the social and economic environment, according to Iyer *et al* (2005), generated externalities which strengthened social capital and brought benefits to a community. They claimed that in the US an individual's propensity to have a high level of social trust rose as levels of household income rose. They speculated that high-income occupations required higher levels of social contact, especially in the service sector; with the financial costs of joining some networks and associations being so high that they excluded low-income groups from joining them and enjoying their benefits. Areas of the US where social capital stocks were low were more likely to have been areas where levels of poverty were high.

Poorly developed social networks and familial relationships helped to explain, according to Petersen *et al* (2000), why many people living in disadvantaged areas had found it difficult to escape poverty. They suggested that poverty traps were transmitted to children by parents when there was an absence of countervailing positive influences within a community, such as those centred on educational institutions.

Campbell *et al* (1999) observed that communities with better health appeared to also have higher levels of social capital and a broader range of social networks. Better health, they noted, was in turn associated with lower levels of socio-economic deprivation. Davey Smith (1996), Wilkinson (1996), Kaplan *et al* (1997), Kennedy *et al* (1996) and Lynch *et al* (1998) all documented significant empirical associations between mortality rates and income inequality across OECD countries and across the states and metropolitan areas of the United States. Beyond appearing to confirm the detrimental impact of poverty on people's health and on their capacity by implication to be effective economic agents, this body of research also suggested that areas where there were relatively large numbers of socially and economically deprived people were likely also to have over-burdened health systems and be experiencing spill-overs into anti-social behaviour and crime. Poor health and higher than average morbidity in such areas created other economic problems, such as higher rates of absenteeism due to illness, lower levels of educational attainment and recruitment problems. Daly and Duncan (1998) argued that depression, isolation, insecurity and anxiety were associated with a person's and a community's relative economic position. A psychology of inequality in a community dampened the behaviours which reduced stress and anxiety and which by implication might have contributed to the development of a stable society and a sustainable economy, such as participation in voluntary organisations or community groups and investment in ongoing education and training.

Williams (2005) noted that in deprived areas, social capital appeared to be informal whereas in affluent areas:

> "*participatory cultures*" (Williams, 2005, p.1153)

...... were more formalised, more durable and often more effective. Prilleltensky (2001 and 2003) claimed that where communities had access to resources and a sense of empowerment, social and political wellness ensued. Siranni and Friedland (1997) supported this hypothesis arguing that, where social capital reserves were low, highly uncivic communities were likely to result. Bowles and Gintis (2003) argued that a community's ability to solve problems and exploit opportunities could be impeded by income inequality among its members or an historic legacy of division or tension between classes or groups.

Verba *et al* (1995) noted differences in the propensity to participate in social networks between African Americans, Latino and White communities in the US and suggested that this may in part have explained their differential economic fortunes. Research in the US on social capital in the black community suggests that in the 1960s and 1970s the institutions of the church had been important in mobilising Blacks and in harnessing their social capital, as had been their collective sense of grievance, (for example: Jenkins and Perrow 1977; McAdam 1999). Crockett *et al* (2003) commenting on what they claimed was a striking depletion of social capital in black communities in the US during the 1990s, argued that continued discrimination in the labour market and in commerce had contributed to a weakening over time of the black community's sense of mission, creating instead a sense of hopelessness, powerlessness and cynicism, particularly among black men. However, such a conclusion is extremely difficult to validate without testing against other factors which may have been implicated such as the impact of drugs.

It is tempting in studies of populations to speculate that a community was motivated to behave in a certain way by a particular set of conditions, especially when most such studies are initiated in order to, in some way, shed light on the development process. But interpretations of observations in respect of populations, even when they have been submitted to some level of statistical analysis, must be treated cautiously. A population made up of individuals who may be living in different social and economic settings, is likely to have been subject to a multiplicity of potentially mitigating circumstances unique to the various places in which they lived. In the literature on social capital, however, this caveat and the extent to which the conclusions which have been drawn are speculative is rarely acknowledged.

3.9 SOCIAL CAPITAL, A PRODUCT OF CULTURE – THE NATIVE AMERICAN EXPERIENCE

While overall the consensus in the social capital literature seems to be that social capital reinforces and is reinforced by prosperity and that it is at its most effective in settled economically successful communities, studies of Native American communities suggest that in some societies which have been historically disadvantaged, in some circumstances, social capital can be associated with a transformation of economic prospects. That observation is pertinent to this thesis insofar as one of Northern Ireland's two principal communities, the Catholic community, had historically been economically disadvantaged. This thesis will not just seek to identify whether there was an association between social capital and local economic success across the Northern Ireland region as a whole and between the region's two principal communities, the Protestant and Catholic communities, but it will also attempt to determine whether social capital was associated with differential local economic success outcomes *within* the Catholic and Protestant communities, as it appeared to have been within Native American communities.

The dearth of empirical evidence underpinning many of the assertions made in the social capital literature has already been highlighted. An argument can be made in mitigation that statistical modeling of data generated from a census or an attitudinal survey cannot fully capture the complex nuanced ways that different communities behave. The observations recorded by people such as anthropologists or community activists who have had long-term associations with particular communities can be very perceptive. Their accounts of their experiences, while they may be short on correlations or regressions, can provide valuable insights into how populations behave: The computer-generated model arguably can never match the empathetic capacity of the human being.

It is just such underpinning practice experience which sets apart the work of Cornell (1988), Cornell and Kalt (1993), and Cornell and Gil-Swedberg (1993). They observed the differential fortunes of a number of North American Indian tribes during the 1980s and 1990s. Of particular value in building a context for this thesis are their studies of the divergent economic success stories of tribes located in similar geographical settings and affected by similar exogenous forces and structural barriers (such as discrimination and political isolation), but which were differentiated by their cultural practices and the presence or absence of social capital.

American Indians/Native Americans[3.3] had lower educational attainment, lower incomes, higher rates of unemployment, poorer health and higher levels of family breakdown than non-Indians in the USA. Of the five poorest counties in the US at the end of the 1980s, four of them were located on Indian reservations. Cornell and Kalt (1991) found that some tribes had been able to begin breaking out of this cycle by organising themselves to develop their economies, while others had not. They identified culture as the variable which appeared to determine whether or not break-out would occur. Their definition of culture was close to what would later be described by Putnam (1993) and others as "social capital". Culture they said was a paradigm of identity which embraced individuals, their surrounding human and natural environments and the modes of interaction which guided their activities. It was a form of contract binding individuals to formal and informal mechanisms of social control. Culture shaped the capacity of a community's institutions, in that where culture was homogenous institutional actions were likely in turn to be coherent and consistent and to have community legitimacy. Where identity and culture were fragmented, strategies to which groups of individuals could commit appeared to be difficult to develop because of problems identifying and agreeing shared interests. They concluded that ethnic homogeneity, which was manifest in shared cultural allegiances, tended to reduce intra-group conflict and make more likely the development of strong indigenous social organisations.

Cornell and Kalt's 1993 comparison of the experience of three tribes of Native Americans confirmed the important role of such cultural capital in shaping the differential fortunes of those tribes. The presence of cultural capital, when

[3.3] Some studies refer to "Indians" others to "Native Americans".

combined with certain background social conditions, led to agency on the part of actors within those communities and, they argued, contributed to the success of their local economies. Its absence tended to be associated with passivity and a weak local economy. Cornell and Kalt argued that those who designed public agency-led intervention to support local economic development in such areas had to understand that a community's reaction to a policy regime would be influenced by its culture. Culture, they suggested, was a product of relationships within communities and between those communities and the outside world.

Cornell and Kalt noted that economic development appeared to mean different things to different people and that some combinations of culture and institutions seemed to yield different results from others. The type of institutional frameworks which communities developed were important in determining the extent to which people were able to exercise control over the development of their local economies. Communities pursuing economic development to the exclusion of other goals required different institutional arrangements than those pursuing other goals. Institutions could help to bridge together and call forth communities to pursue self-determined local economic development. The interaction between formal organisational structures and culture (including socio-historical factors), would determine the prospects of a successful development outcome. While contemporary circumstances might have imposed constraints in the form of public policy and the macro-economy, community-generated institutions retained the capacity to exert what they described as considerable influence over local economic development outcomes. What seemed to be significant, they concluded, was not so much the technical design of community organisations, or even the skills of the people within them, but rather their legitimacy and their ability to channel community sentiment, to mobilise community energy, to support a community's sense of itself and to support indigenous leadership. Cornell and Gill-Swedberg (1993) described this as collective mobilisation. Reporting on the local economic success achieved by one particular Native American community, they noted the confidence with which that tribe had approached the development challenge which it had faced, with a clear sense of identity and a shared view of how it should approach the wider world.

These studies cautioned, however, that structural factors such as discrimination continued to present a formidable barrier to Native American communities which were seeking to take more control of their economic destinies. Failure to recognise that structural barriers did exist might mean that some communities who had been disempowered by discrimination would be blamed for their fate. However, cultural homogeneity alone did not guarantee economic success. The quality of leadership within the tribe was also important as was the level of understanding and support among Government support agencies. Wider economic circumstances and what was happening in neighbouring Anglo-American communities could also facilitate or block development prospects.

These studies are relevant to this thesis because they present observations drawn from experience at the small area, local economy level. They suggest, in noting the variable performance of a group of small communities and their economies, that culture may be an important differentiating factor. Observers of Northern Ireland have suggested that culture has shaped its politics and its society (Chapter Four). These Native American case studies also suggest that culture influences the way that communities organise themselves through their community institutions and that this in turn affects economic development outcomes. Might this have been the case in Northern Ireland? Might the extent to which communities had established groups to pursue economic development objectives have been associated with the success of their local economies?

Cornell, Kalt and Gill-Swedberg presented observations rather than sophisticated social development theories. They did not empirically test the influence of cultural or social capital against other possible influences. They acknowledged that exogenous influences did exist and that these were potentially complex and difficult to measure. Nevertheless, while their observations pertained only to a small group of tribes, they were in line with the findings of other analysts who were seeking, in a very different context, to understand the differential development trajectories of regions across central and eastern Europe.

3.10 SOCIAL CAPITAL IN POLAND

Although Poland is a different geographical and economic setting from North America, case studies which have examined the differential development of Poland's regions seem to also suggest that it can be possible for some communities to defy national and regional trends and change their putative economic destinies. Social capital in Poland has been identified as being a potentially important contributor to economic success in some districts. It has influenced the way that communities have organised themselves, the institutions that they have created, their preparedness to share information, and their capacity to generate local leadership. Polish studies have also revealed differential economic performance not just between regions within Poland but within those regions. Some districts disadvantaged by a legacy of anachronistic industrial development, rural under-development, and relative distance from the centre of government and commerce in the country, Warsaw, have nevertheless positively altered their prospective development trajectories.

These Polish studies differ from the Native American studies insofar as they were focused on districts and regions which were geographically disadvantaged and which were within a macro-economy in the throes of restructuring; whereas the Native American studies focused on communities which were more socially than geographically disadvantaged. In Poland, communities had to cope with a collapsed economic system as well as, in some cases, geographical peripherality exacerbated by a lack of infrastructure. Given the weight of those structural issues, the trend-altering local economic performances achieved by some districts in south and east Poland was all the more remarkable. Yet the explanations offered in the Polish studies for these trend-altering economic performances are similar to those advanced in respect of the relative economic success of particular Native American communities: institutions were important and leadership was important.

Dornisch (1999) looked at how some localities in Poland which had been confined to their own resources had been able to construct social structures which had apparently bestowed an economic advantage. He concluded that there seemed to have been a strong association between the presence of social capital and a positive local economic development trajectory, observing that the districts (i.e. voivodships) which had the most developed social and institutional infrastructures had also absorbed the majority of foreign investment which had come into the country during the 1990s. In addition, they had recorded the highest rates of new business formation. These were districts, he said, characterised by good educational facilities, strong family networks and strong banks, conditions which he claimed helped entrepreneurship to flourish. He concluded that collective action, once initiated, even in regions which should ostensibly have been failing, showed great vitality and resilience.

In a later study, Dornisch (2002) discussed how the Lodz region in Poland had managed to transform itself economically despite being an old industrial region, with:

> "*high initial industrial, political and institutional inertia and the absence of embedded trust-based patterns of co-operative relations*" (Dornisch, 2002, p.315).

He attributed this transformation to switches in strategy which had resulted from a preparedness to dissolve and re-generate initiatives and projects – what he described as generative capacity – at the heart of which, according to Dornisch, was inter and intra-group social competition:

> "*involving attempts by emergent sets of actors to distinguish themselves not only from previous failed or stagnated projects but also from co-terminus projects*" (Dornisch, 2002, p.316),

...... a feature at odds with the absence of intra-group conflict and the presence of agreed shared interests highlighted as important by Cornell and Kalt (1991 and 1993). Where Dornisch did agree with Cornell and Kalt was in his conclusion that non-governmental, community-led action in the form of an area's social and institutional infrastructure had been important in the economic transformations which he had observed. A well developed social and institutional infrastructure, he said, seemed to be an important factor: It apeared to encourage the emergence of regional innovation systems characterised by high levels of educational attainment and skills and it appeared to be associated also with closely co-operating and mutually learning businesses and organisations which were able to exploit those talents.

Hausner *et al* (1997) made similar claims in respect of the South Western region of Poland (i.e. Malopolska): in a study which focused on the mechanism by which the social capital invested in institutional infrastructure appeared to contribute to a successful local economy. They proposed that the degree of information-sharing and co-operation within a community had been an important variable. Gorzelak (1998) noted that there had also been marked economic development trajectory shifts elsewhere in Poland, particularly in the previously under-developed rural west. Gorzelak found that in a number of localities local governments had autonomously activated both local resources and external support (e.g foreign investment) in what had become, by Polish standards, dynamic and successful local economies. He concluded that skilful leadership had been a very significant positive factor in shaping the economic development prospects of these areas; although to be successful, leaders had to be sensitive to the environment and the communities they sought to represent.

The Polish studies differed from studies of regions in West European settings insofar as the lack of sophistication of the Polish economy in the 1990s had reduced the number of exogenous factors to be controlled for. Infrastructure could not, for example, be advanced as a change factor when it was so widely under-developed. In that sense it was easier to isolate social capital as a differentiating factor.

These Polish studies were, like the Native American studies, primarily based on the observations of embedded practitioners. The similarity of the findings from the Polish and Native American studies, given the difference in their geographical and historical settings, suggests that Polish regions and Native American communities may have both been manifesting something profound: a latent propensity within human communities which could be stimulated by organisation, leadership and motivation to change economic destinies; a propensity which could exist irrespective of ethnicity, economic history, or location.

3.11 SOCIAL CAPITAL IN OPERATION: THE SOCIAL ECONOMY

The "Social Economy" is the aggregate of the many organisations across many sectors which operate to fulfil social objectives using commercial methods but whose directors are non-profit-taking volunteers. Organisations in the Social Economy operate a business model which seeks to achieve financial sustainability alongside a social mission, in a so-called "multiple bottom line". The Social Economy has been described as the:

> "*third system' which sits between ...... public service provision and a private sector*" (Bridge *et al*, 2003, p.158).

The UK Treasury (1999) in its definition of the Social Economy emphasised the independence from the state and the non-profit-distributing status of the organisations (i.e. Social Enterprises) which comprise it

> "*organisations who are independent of the state and provide services, goods and trade for a social purpose and are non-profit distributing*" (HM Treasury, 1999, p.101, quoted in Bridge *et al*, 2003, p.157)

...... although Co-operatives which do distribute profits to individuals are also usually taken to be part of the social economy because they have social purposes.

Because Social Enterprises are not run for financial gain and running them is:

> "*frequently a more complex task than that of running other businesses*" (Bridge *et al*, 2003, p.158)

...... their presence signifies a commitment to the collective good within a community. Bridge *et al* (2003) went so far as to suggest that the presence of Social Enterprises and Community Businesses:

> "*may explain why some communities facing similar economic, social and demographic issues cope better than others*" (Bridge *et al*, 2003, p.159).

"Community Enterprises" or "Community Businesses" are a particular form of

Social Enterprise. Whereas some Social Enterprises can have a social mission which is geographically extensive (e.g. an educational establishment), a Community Business is run on a non-profit-taking basis for the benefit of a specific community usually by people from within that community. Not only is surplus income re-invested in that community but the primary activity of the business is to improve the community through, for example, making improvements to the local environment, serving meals to the elderly, or developing the skills of local people.

The Social Economy sector in the EU emerged in response to two problems:

> "*i) a rising demand for social, personal and community services;*
> *ii) a need to find ways to meet these demands while constraining levels of direct state expenditure and rates of taxation*" (Bridge *et al*, 2003, p.158).

Across the EU organisations which comprise the Social Economy are now found in almost all sectors. There are Co-operatives in fields such as banking, agricultural production, retailing and crafts manufacture; Mutual Societies in the insurance and mortgage sectors; while Foundations are active in providing health and welfare services, support to economic regeneration, environmental management services, education, training, sports and recreation and culture (Bradley and Gelb, 1983). The European Commission's DG Enterprise has suggested that approximately 9 million people are employed in Social Enterprises in the EU. Co-operatives alone have between 78 and 150 million members EU-wide, depending on the definition of co-operative which is used. In 1999 the Social Economy was formally recognised by the European Commission in its Employment Guidelines, as having enormous potential to exploit new opportunities for job creation (Guideline 12), particularly where the traditional investor-driven business model was not viable. Employment creation was the EU's top priority and Member States were urged to promote measures to exploit fully the possibilities offered by job creation at local level particularly in the Social Economy. The Commission's Guidelines for National Employment Action Plans, drawn up in 2001, confirmed the importance of the social economy under its entrepreneurship pillar. Guideline 11 called on Member States to:

> *"encourage local and regional authorities to develop partnership-based strategies for employment in order to fully exploit the possibilities offered by job creation at local level and in the social economy".* (Commission of the European Community 2001 http:/ec.euroupa.eu/enterprise/entrepreneurship/coop/social-cmaf_agenda/social-cmaf_agenda.htm).

The origins of the UK's diverse Social Economy lie in the community development movement of the 1970s (Schumacher, 1973), from which emerged Government initiatives focused on the problems prevailing in certain places and/or among certain groups in society, such as the long-term unemployed (Defourny and Borzaga, 2001; Spear 2001). In the late 1980s the emphasis within Government initiatives had shifted from welfare-based support directed at individuals, to enabling measures which targeted communities. This shift was reflected in a change of terminology, from the community development of the 1970s to the community economic development of the 1980s and 1990s (Birchall, 2001). The importance to an area's prospects of achieving a successful local economy of dynamic, skilled and committed individuals and of leadership was recognised in the late 1980s with the designation of such people as *"social"* or *"community entrepreneurs"* (Johannisson and Nilsson, 1989). It was believed that, motivated by a desire to contribute to the public good they had the potential to change the fortunes of communities by creating jobs and generating economic opportunities. Such people could catalyse social capital. They were the social capital wealth creators of the "third system".

The Social Economy is now a significant part of the UK economy. In the UK by the late 1990s estimates of the size and scope of its three main components – co-operatives, mutuals and non-profits suggested it employed almost 1.7 million people (around 6.5 per cent of those in work, including self-employed people) the vast majority of these (almost 1.5 million) being employed by non-profit-taking social enterprises (Spear 2001). Bridge *et al* argued that these headline figures notwithstanding:

> *"the full extent of its contribution has not been assessed"* (Bridge *et al*,

2003, p.159)

The Social Economy is an explicit manifestation of social capital. The very existence of a Social Economy in a society is evidence that social capital has a substantive form, that it is more than a theory, that it is generating benefits in the form of jobs, the fulfilment of public good functions and the generation of surplus income which can be re-invested in activities which can bring wider community benefit. The Social Economy is a social capital "metric". Its size, form, and impact can all be measured.

While the size of the Social Economy in one community or society relative to another can be compared, the extent to which it contributes to or is a product of the wider economy can be very difficult to determine. Nevertheless, the jobs and incomes which can directly be attributed to the presence of Community Businesses, for example, will be jobs and incomes which would not have existed if the Social Economy had not had a presence. In that sense, whatever contribution those Community Businesses may have made to the wider economy, at the micro-economic level they will have had a measurable impact in respect of jobs and incomes. Thus, at least at the local level, Community Businesses are at the interface between social capital and economic success. This thesis will be seeking to identify those areas in Northern Ireland where the Social Economy, manifest in the number of community businesses and voluntary groups involved in economic initiatives, had been (in 2001) at its most developed; in order to determine whether there had been an association between social capital and the distribution of local economic success across the region.

3.12 EXPLOITING SOCIAL CAPITAL: DELIBERATIVE ASSOCIATIONS

The academic consensus which developed during the 1990s that it was advantageous for there to be stocks of functioning social capital in a community was reflected in a series of policy initiatives at EU and UK level to develop social capital where it was weak and, where it was present, to use it to achieve policy objectives.

In planning to operationalise its structural fund programmes across the European Union the European Commission in the early 1990s had come to the view that there were area-specific factors contributing to economic development disparities which could be most effectively tackled by locally-led action. Hudson (2001) described this as a third way vision of territorial economic development, a partnership of state management and local initiative. This third way broadened the concept of economic success to include social cohesion and social inclusion. According to this analysis, regions which were socially cohesive would have more efficient economies. Hudson concluded that economically successful areas appeared to be those which had established enabling institutions, a plethora of which had sprung up across Europe during the 1990s:

> "*Such local institutions play a decisive role in local competitiveness.*" (Hudson 2001 p.7).

From 1993 the European Commmission focused considerable resources on promoting local development initiatives through its structural fund operational programmes and Community Initiatives.[3.4] Actions were supported which explicitly sought to develop social capital and to build community capacity. These included the establishment of so-called "deliberative associations". It had been hoped that such structures would create circumstances, through the engagement of key influencers, or bell ringers, in local partnerships, which would produce innovative, dynamic, destiny-altering local actions. This sustainable

[3.4] Examples were: Territorial Employment Pacts, LEADER, EQUAL and URBAN.

development perspective regarded local partnerships as being more effective than central government at solving local social and economic problems.

Dornisch (1999) argued that external support was necessary to harness and add value to such local initiatives. He noted the apparent success of this approach in Poland. In 1993 the European Commission had assigned a number of experts under a Local Initiatives Programme to economically depressed areas across Poland to promote the creation of deliberative associations to bring together representatives of Local Government, business, unions and local activists. The result was that in ostensibly economically backward communities local actors had been able to demonstrate great capacity to co-operate and, when facilitated by external support, to think strategically about the economic future of their communities. What seemed to differentiate the areas in which this approach worked was the presence of pre-existing economic re-invigoration initiatives which had already been drawing on the social capital of community members.

The capacity-building support provided by the European Commission in the form of "experts" and the funding of deliberative associations seemed to have had the greatest impact where social capital was already available to be catalysed. Sabel (1995) described this external support as "bootstrapping". He contended that while, on the one hand, intervention seemed to work only if the community it was targeting had the capacity to exploit it, on the other hand local initiative was more likely to yield results if external forces were deployed to aid it. These external forces might be central government, overseas investors, or external consultants who provided expertise. Externally generated initiatives could not of themselves affect the development trajectory of a local economy, but they could invigorate and give cohesion to the efforts of local institutions, with the result that:

> "*substantial numbers of localities*" (Dornisch, 1999, p.29)

...... in Poland had been able to:

> *"break out of their putative negative trajectories onto more positive ones."* (Dornisch, 1999, p. 29).

The importance of these studies and the work also of Lovering (1998, 2001) was that they showed that communities could shift their local economic development trajectories if they had a sense of purpose and were well organised, and crucially it seems, if they were also assisted by outside forces in the form of EU financial and organisational interventions.

Hart and Murray (2000) described as "new localism" a similar approach adopted in Northern Ireland after 1993. Deliberative associations were established in the region under the auspices of the Rural Development Programme (Area Based Strategies), the LEADER and INTERREG Community Initiatives; and the EU Special Support Programme for Peace and Reconciliation (1995-2006), in the form of 26 District Partnerships and their successor Local Strategy Partnerships (LSPs). An evaluation of the impact of the District Partnerships by consultants LRDP (Local and Regional Development Planning, 1999), reported in Hart and Murray (2000), concluded that, by applying local knowledge in respect of problems which needed to be addressed and initiatives which suited local circumstances, the District Partnerships had been able to make durable, effective, value for money investments of EU monies and to apparently make a difference in some communities, more so, it was implied, than central government deploying the same resources could have done. A key feature of these deliberative associations in Northern Ireland was that they had been guided by boards of volunteer directors representing the community/voluntary sector, local government, businesses, social partners (e.g. unions) and the statutory sector. Those voluntary directors were, by way of their voluntary effort, investing social capital in these structures. The District Partnerships which they led had not only been diligent and efficient in allocating public monies but they had also directed considerable financial resources to community development initiatives which were themselves products of social capital.

Like the social economy and the social enterprises which comprise it, deliberative associations are a manifestation, if a somewhat artificially inseminated one, of social capital. Like the social economy, deliberative associations are measurable: they are either present in an area or they are not, and where they are present, their size and level of activity can be measured. Because they are a measurable social capital "trace" and because they represent an interface between policy and social capital, deliberative associations merit inclusion in their own right in any study of social capital and local economic success. The association in Northern Ireland between the investments of EU Peace I funds in such initiatives and the distribution of local economic success will form part of the analysis in this thesis.

3.13 SOCIAL CAPITAL AND THE SOCIAL ECONOMY IN NORTHERN IRELAND

The Social Economy sector in Northern Ireland accounts for some 30,000 jobs,[3.5] comparable in size to the construction or tourism industries in the region. After the establishment of the devolved Assembly following the 1998 Good Friday Agreement social capital, social entrepreneurs, the social economy, and the third way in business took on a greater significance in local economic development policy in Northern Ireland. In 2000 the Department of Enterprise Trade and Investment (DETI) set up a Social Economy Unit of senior civil servants to guide the work of a Social Economy Agency which in turn was charged with supporting a Social Economy Network of some 200 Social Enterprises based in communities across Northern Ireland. Whether there is evidence that the activity of this sector was sufficiently associated with local economic success in Northern Ireland to justify the policy priority which it had been given, will be assessed in this thesis.

The social capital which developed in the Province up to 2001 was a product of the region's very particular pattern of local development. A Government report on "Co-operative Enterprises and Social Development in Northern Ireland" (Office of the First and Deputy First Minister 2001) concluded that in Northern Ireland the propensity to engage in community development had been intimately tied to the way that communities had historically developed. Murtagh (2001) argued that in Northern Ireland social capital had been:

> "*path dependent*" (Murtagh, 2001, p.53)

...... largely reinforcing:

> "*social pathologies, patterns and institutions .... The development of social capital in Northern Ireland is intimately wedded to expressions of national identity and to asymmetrical efforts to survive, protect and grow*" (Murtagh, 2001, p.53).

[3.5] Source: Northern Ireland Economy Minister, Barry Gardiner, in a statement to the Northern Ireland Grand Committee on 29th April 2004.

He cited the GAA and Orange Order as examples of how social capital had developed separately, within and not across what he called the:

> "*two main ethno-religious groups*" (Murtagh, 2001, p.53).

There were few of what Putnam had described as:

> "*the networks of civic engagement that cut across social cleavages*" (Putnam, 1993, p.175)

...... and there was a lack of the commodity which appeared to be the pre-requisite for the creation of bridging social capital: trust. In Northern Ireland bonding social capital was particularly highly developed in the Catholic community whereas bridging social capital overall in the Province was under-developed.

Northern Ireland's Protestant community had been relatively economically advantaged, during the period 1921-1972 when those in power, and the public servants who worked for them, were predominantly drawn from that community. Even in the 1970s and 1980s the Protestant community benefited from a disproportionate share of the Province's industrial investment and employment. As a result social capital in the Protestant community tended not to be invested in the social economy but rather was focused on religious worship, culture (closely related to defence of religious identity) and sport. The legacy of this was a relatively under-developed social economy in Protestant areas. (This will be discussed in more depth in Chapter eight: Measuring Social Capital). By contrast, in a Catholic community a significant proportion of which, at least until the 1990s, felt excluded from the mainstream economy and structures of governance, a tradition of collective self-help developed.

Casey (2004) contended that bonding social capital in corporatist societies would not be conducive to and supportive of efficient liberal market systems. However, a recent study of social capital stocks across Europe by Beugelsdijk and Van Shaik (2005) found that traditionally Catholic regions in the South Netherlands, Flanders, Madrid and Northern Italy all fell into the group of regions with the highest scores on social trust, the building block of social capital, apparently contradicting earlier studies (e.g. by Knack and Keefer 1997 P.1283) which suggested a positive correlation between Protestantism and trust. Intriguingly, this seems to imply that Catholics may have been culturally better disposed, whatever their socio-economic circumstances, to engaging in collective action and in the process generating bonding social capital. This thesis will seek to determine the extent to which social capital in Northern Ireland in 2001 was more of a Catholic than a Protestant phenomenon as part of its assessment of whether social capital was associated with local economic success in the region. If there was an association in which "culture" was implicated that, in the context of a region which has had a history of inter-cultural schism, would be a very significant finding.

The establishment of self-help groups within Northern Ireland's Catholic community gained momentum in the 1960s, largely as a result of agitation by its first generation of young people educated to third level, following the extension of free access to secondary and tertiary education in 1947. Building on an effectively homogenous structure of religious and cultural institutions (i.e. the Catholic Church and the Gaelic Athletic Association, GAA), Credit Unions were established in a number of Catholic communities in the 1960s in an attempt to tackle endemic financial exclusion. The Catholic Civil Rights Association which emerged in the late 1960s crossed class, age and gender boundaries within the Catholic community and became a focus for an extensive community action programme, with local committees being organised in almost every Catholic town, village and housing estate. As the campaign for civil rights, which was focused on intra-Northern Ireland governance, was overtaken by an insurgency which sought to pull down the State and the inter-communal sectarian conflict which that inspired, many who had been involved in the Civil Rights campaign became disillusioned and switched their social capital to organising local community associations. Many of these community associations were focused on trying to mitigate the effects of the "troubles" particularly on young people. Others, however, sought to generate business opportunities and employment, laying the foundations of much of Northern Ireland's current social economy, in which the Catholic community has been more active (this is considered in greater detail in Chapter Eight).

The case history of one such initiative, the "Work In Newry" campaign, is instructive in so far as its trajectory is typical of the evolution of social capital in the Catholic Community in Northern Ireland over the last three decades, from community action in the midst of insurgency, to sophisticated, professionalised, non-governmental direct intervention deploying substantial independent assets. In 1972 founding directors of Newry Credit Union (established 1964) and others formed the Newry and Mourne Co-operative Society. Unemployment at 33 per cent in Newry, a town on Northern Ireland's south-eastern border with the Irish Republic, whose 20,000 population was 85 per cent Catholic, was at that time the highest in Western Europe. Politically-motivated violence in the Newry area was also at its most intense. In 1974 the Co-operative, faced with the closure of one of Newry's largest employers, the Reckitt and Colman "Jam Factory", with the loss of 400 jobs, launched the "Work In Newry" (WIN) campaign. Six months later, with £60,000 raised by the campaign from more than 600 individual donations, the Co-operative bought the vacant factory site. Progressively, slowly at first, the factory buildings were sub-divided into small units which were offered at negligible rent to unemployed trades-people who wished to try to develop their own businesses. Co-operative Directors, with a background in business or finance, offered ongoing advice to their tenants. In 1983, following a visit to Newry by the then UK Government-appointed Secretary of State, Tom King, the Government offered to pilot an Enterprise Agency initiative under the auspices of the Co-operative. This was the first community-based Enterprise Agency established on the island of Ireland. There are now 32 Enterprise Agencies across Northern Ireland and 35 City and County Enterprise Boards in the Irish Republic and they are a focus for the direct investment of social capital by communities in their own economic development (the scale of Local Enterprise Agency workspace assets will be one of the measures of social capital analysed in Chapter Eight).

In Morrisey and Gaffikin's (2001) exploration of:

> "*the connection between the region's current under-development and the historical ethno-nationalist context at the root of the conflict*" (Morrisey and Gaffikin, 2001, p.2),

...... Northern Ireland was described as:

> "*a society with such deep divisions that the term ethnic, rather than civil, society might best describe it*" (Morrisey and Gaffikin 2001, p.35).

They differentiated ethnically grounded social capital from civically grounded social capital cautioning that:

> "*the economic virtues of 'institutional thickness' can be more problematic when such structures are related to keep division*" (Morrisey and Gaffikin's, 2001, p.2).

Ethnic leadership and ethnic social capital could, according to Morrisey and Gaffikin:

> "*generate a hyper-segregation that deepens inter-communal rivalries and compounds efforts to promote cross-community co-operation for overall regional development*" (Morrisey and Gaffikin's, 2001, p.11).

While acknowledging that the social economy may have been important in some areas, they argued that the deep divisions in Northern Ireland society had inhibited opportunities for social capital to make a consistently significant contribution to economic development. They cited Leadbeater (1999) in this regard:

> "*collaboration is the driving force behind creativity. That is why social capital, to promote collaboration, is the third motive force of the new economy*" (Leadbeater, 1999, p.10).

After 30 years of conflict Morrisey and Gaffikin (2001) concluded that overall:

> "*Northern Ireland is lacking in social capital. Certainly, there is ethnic solidarity in abundance, but little in the way of a genuine civic culture*" (Morrisey and Gaffikin's, 2001, p.35).

They drew a significant conclusion in respect of the economic value of much of the associational activity which was in evidence in Northern Ireland:

> "*Crucially, despite an extensive community sector, it lacks the appropriate level of social capital to build a knowledge economy*" (Gaffikin and Morrisey , 2001, p.35).

In their study of social capital across the 12 UK regions Cooke *et al* (2005) concluded that the high scores attained by Northern Ireland across a range of social capital measures, relative to other regions of the UK, was:

> "*almost certainly associated with Northern Ireland's distinct socio-political history within the UK and the heightened role that ethnic-religious societies and affiliations play in everyday economic life*" (Cooke *et al*, 2005, p.1072).

Cooke *et al* ranked Northern Ireland first among the 12 UK regions in respect of 'overall social capital', 'business social capital' and 'informal social capital'; but scored it 11th in respect of the 'bridging social capital' which linked local to non-local networks and which had been identified by Putnam (1995), Iyer *et al* (2005) and Casey (2004) as the form of social capital which was most likely to bring positive economic benefits. Casey (2004) used a set of:

> "*empirical gauges*" (Casey, 2004, P.10)

...... to measure Social Capital: turnout in parliamentary elections, newspaper readership, non voting political participation, measures of social and political trust, and membership of civic associations (as well as trade unions and chambers of commerce). However, he chose to exclude Northern Ireland because:

> "*there are too many extraneous factors shaping the economy of that troubled province to even attempt to isolate the impact of social capital*". (Casey, 2004, pp.100-102).

Casey presented Northern Italy and Northern Ireland as two examples of regions where social capital could have either positive (as in Northern Italy) or potentially negative effects (as in Northern Ireland). He said:

> "*Northern Ireland presents a challenge for social capital theory – an area with extensive associations and deep bonds of intra-community trust – albeit producing negative outcomes. Social capital advocates can explain this via bonding versus bridging social capital, but this seems rather ad hoc*". (Casey, 2004, p.115).

Cooke *et al* (2005) drew the conclusion in respect of Northern Ireland that:

> "*a detailed investigation of the peculiarities of social capital within Northern would be a fruitful and interesting exercise*" (Cooke *et al,* 2005, p.1076).

This thesis is an attempt to rectify the lack of analysis of social capital in Northern Ireland and to take up the challenge set by Casey (2004) and Cooke *et al* (2005) to isolate its impact in shaping the economy of a region whose peculiarities merit more detailed investigation. It will seek to assess whether Northern Ireland was indeed, as Morrissey and Gaffikin (2001) had portrayed it, a hyper-segregated place in which civil society was weak and the social capital which could have made a positive economic contribution was lacking; a place where extensive associationalism appeared to produce negative rather than positive outcomes; a place which, as Casey (2004) characterised it, challenged social capital theory.

This thesis will seek to determine whether in 2001 there was variability in the density of social capital[3.6] across the districts of Northern Ireland and between its two communities; and thereafter to establish whether that pattern was associated with local economic success.

The facets of social capital which will be measured in this thesis will be those which *a priori* stand the most chance of having been positively associated with economic success. Manifestations of ethnic solidarity in Northern Ireland, while they might be strictly defined as social capital, will be ignored. If the social capital measures which will be analysed in Chapter Eight subsequently prove not

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[3.6] Measured by community group members, the efforts of community groups to secure funding, the scale of comunity-owned Local Enterprise Agencies, the numbers of community businesses, the size of Credit Union membership, the level of voter participation and the level of participation in education.

to have been positively associated with economic success and especially if they appear to have exercised a negative influence, then the assertions of Gaffikin and Morrisey (2001), Casey (2004), and Cooke *et al* (2005), will have been given some credence.

If however they have been associated with economic success and that appears to also have been more associated with one community than the other, then that finding will be significant, given that economic development has been and continues to be politically sensitive in Northern Ireland.

3.14 THE CHALLENGE OF RESEARCHING SOCIAL CAPITAL

This review of the literature on social capital has revealed that the definition and measurement of social capital has been ad hoc and lacks consistency:

> "*An effective reliable measure of social capital is still lacking, perhaps because of the multi-dimensional character of the concept*" (Beugelsdijk and Van Shaik 2005 p.1054).

Boschma (2002) noted:

> "*it is remarkable how few studies have been carried out to provide empirical support for theoretical statements concerning the importance of social capital for regional development*" (Boschma, 2000, p.19).

Those attempts at empirical analysis which have been carried out appear to have been unable to adequately quantify the size of the effect of social capital on economic outcomes, suggesting multiple mechanisms of influence and a multiplicity of potential outcomes. Beugelsdijk and Van Shaik (2005) attributed this to what they described as the:

> "*paradigmatic differences in the conceptualisation of social capital*" (Beugelsdijk and Van Shaik, 2005, p.1061)

...... warning that:

> "*a number of methodological pitfalls in the econometric analysis of social capital exist ......*" (Beugelsdijk and Van Shaik, 2005, p.1061)

...... in particular the issue of endogeneity.

How are unique, endogenous manifestations of social capital to be measured? How are instruments of social capital to be isolated from other determinants of economic growth? How are omitted effects to be controlled for? For Coleman (1990) the difficulty was that:

> "*if physical capital is wholly tangible, being embodied in an observable form, and human capital is less tangible, being embodied in the skills and knowledge acquired by an individual, social capital is less tangible yet, for it exists in the relations among persons*" (Coleman, 1990, pp.100-101, quoted in Boschma 2000 p.5)

Iyer *et al* similarly noted that the problem for researchers intrested in social capital was that it could have multiple impacts which were:

> "*difficult to disentangle*" creating "*problems for robust empirical analysis*" (Iyer *et al*, 2005, p.1021).

It was also difficult to clarify the impact which was being tested: Was it the effect on economic growth, innovation, quality of life, human capital and might these not themselves have been interlinked? Not only could such effects be difficult to untangle, they could be even more difficult to measure. The result was that even if an analysis of social capital was restricted to economic growth:

> "*the mechanisms by which social capital may have an effect are relatively unclear*" (Iyer *et al* 2005 p.1021)

.... with the result that:

> "*direct valuation of social capital is not possible – not least because it is not transacted in a market*" (p.1020).

Martin (2000) noted that while there was speculation aplenty in the literature that social capital had been important in contributing to the development of some regions, there was a lack of substantive evidence:

> "*By their nature, the 'soft' aspects of the institutional/cultural capital of a region are not easy to assess, nor do we know much about their dynamics*" (Martin 2005 p.19).

Claims are also made in the literature that social capital can have different impacts in different places. However the evidence presented frequently takes the form of conflated conclusions from studies of social capital at different scales from the national down to the level of the firm or individual; and even when some of the findings of these studies have been contradictory. Social capital effects can occur at different spatial scales, ranging from the community and the sub-regional through to the international. Knowledge transfer is an example: codified knowledge is readily available around the world on the one hand, while tacit knowledge, on the other, is usually only shared between people who have other shared experiences and who interact for other purposes; something which is much more likely to occur at a:

> "*highly localised spatial scale*" (Iyer *et al* 2005 p.1919).

Because of the apparent importance of endogenous factors in shaping social capital and because the impact of social capital seems to vary across both time and space, it is studies at the level of:

> "*individual communities and regions*" (Iyer *et al* 2005 p.1037)

...... which it seems may be more likely to yield an understanding of how social capital influences economic success; more so than comparative studies at the inter-regional or international level.

Social capital is a complex concept. For Fine (2000) (quoted in Iyer *et al* 2005 p.1036) it was "chaotic"; made up of so many interactions and attitudes, that it was difficult to identify what were the key causal factors.

Moving beyond the theory of social capital to empirically test tangents of causation, Casey (2004) had found it very difficult to determine which forms of organisation or activity were likely to have had positive and negative social and economic effects; and thereafter to determine whether social capital had been a cause or an effect of particular economic conditions. Beugelsdijk and Van Shaik (2005) argued that data availability had not allowed them to distinguish between different forms of social capital. They noted:

> "*The lack of data and perhaps even more important the lack of consensus on appropriate measures, has limited the number of empirical studies on social capital and economic development compared with the number of conceptual papers*" (Beugelsdijk and Van Shaik, 2005, p.1057).

While this literature review helps to set a context for the forthcoming research on social capital and local economic success in Northern Ireland, it seems also that there may be limited value in cross-referencing the findings which might emerge in this thesis with those from studies of social capital elsewhere; especially given the lack of consensus as to the:

> "*appropriate metrics of social capital*" (Casey 2005 p.104).

Acquiring data from which can be constructed defensible measures of social capital will be one of the challenges to be confronted in this thesis (see Chapter Six and Chapter Nine).

3.15 IN SUMMARY

A number of themes have emerged from this review of the social capital literature which are relevant to the central hypothesis (that social capital will be associated with the achievement of local economic success) around which this thesis will be constructed.

- The first relates to the influence of culture on the extent of collective activity, and therefore of social capital. Culture shapes social behaviour (Turner and Killian 1972) and the density of social interaction determines the prospensity of people to act collectively (Park and Burgess 1924). Where culture is homogenous, institutional activity is more likely to have community legitimacy, to be coherent and to be successful (Cornell, 1988; Cornell and Kalt, 1990; Cornell and Gill-Swedberg, 1998). The institutions which a community creates will, to a significant degree, determine the extent to which people can collectively mobilise to exercise control over the development of their communities; and a legacy of collective action will remain long after the circumstances which inspired it have changed. The propensity to strive to acquire and exploit resources is also proposed as a culturally transmitted convention (Bowles and Gintis 2002). The relationship between cultural realm social capital and economic success outcomes in Northern Ireland will be one of the principal areas for consideration in this thesis.

- The second is that it is contended that socio-economic deprivation generally suppresses the development and survival of social capital. However, there appear to be exceptions, one of these possibly being Northern Ireland's Catholic community, something which this research will seek to test. Other exceptions seem to include some Native American tribes and some Polish communities. Culture appears to be implicated as one of the factors which differentiates those communities. Another appears to be the extent to which a sense of purpose can be retained within a community, through the efforts of its leaders and through its institutions; although some prospect of change (even if slow) seems to be necessary in order to nurture motivation (it is the relative lack of change in the circumstnces of African Americans in the US which has been proposed as a reason for the decline in social capital within African American communities). And yet another differentiating factor which has been proposed is trust: networks and effective institutions are a product of trust. However, trust is a very difficult variable to measure, making it difficult to corroborate this contention empirically.

- The lack of empirical evidence to support these and other assertions is another theme emerging from the literature. The apparently compelling intuitive reasoning of social scientists is not supported by a body of equally compelling empirical evidence. The evidence of a link between social capital and economic outcomes is, in fact, very thin (Casey, 2004; Sneider *et al* 2000; Iyer *et al* 2005). The reasons suggested for this are that social capital is hard to measure, it is manifest in different forms and exerts different effects in different areas making comparisons difficult. As an endogenous phenomenon it seems that social capital may be most effectively measured at the local scale. The literature, however, has been focused on inter-regional and international comparisons. How to measure social capital in Northern Ireland will be one of the challenges to be faced in this thesis. The measures of social capital which have been selected will be presented and discussed in some depth in Chapter Nine: There will be two measures of institutional associationalism, reflecting the potentially important role suggested in the literature for community institutions (Bowles and Gintis, 2002; Iyer *et al*, 2005; Cornell and Kalt, 1991). There will be two measures of civic participation which is suggested as a key marker for other types of social capital (Casey 2004); there will be five measures of the scale and effectiveness of collective community action, of which two will measure the effectiveness of community-led institutions in taking advantage of external bootstrapping support (i.e. grant aid), (Sabel 1995); there will be a measure of educational attainment and one of participation in education, educational institutions having been suggested as an important part of the endogenous social capital recipe for economic success (Dornisch 1999).

- A further theme which emerged in the literature was that the influence of social capital on economic prospects (insofar as it could be discerned) was not linear: small differences in social capital appeared to be associated with significant differences in economic circumstances (Iyer *et al* 2005); and different communities appeared to respond to broadly similar sets of circumstances in different ways, generating in turn different sets of outcomes. Even when communities were from the same generic cultural group (such as Native Americans) it was suggested that aspects of their local culture, such as the role of leaders or the types of community institutions which had formed, might vary. This suggests that there may not be a uniform pattern of association between a cultural realm, social capital and local economic success and that instead there may be intra-community and intra-cultural variations. Dornisch (1999) contended that intra-community rivalry between community institutions and projects might actually engender a vitality in social capital, a vitality which in turn could contribute to local economic success. The analysis which will follow of social capital in Northern Ireland will be seeking to determine whether there were spatial variations in levels of social capital across Northern Ireland, whether there were variations in levels of social capital between Northern Ireland's two cultural realms, the Protestant and Catholic communities, and also whether there may have been variations in levels of social capital within those communities. Variations which are observed will be cross-referenced with other variables in an attempt to interpret their significance.

- The final theme which comes through from the literature as a substantive consideration in respect of this research is the possibility that different forms of social capital may exert different influences on economic success outcomes. Bonding social capital which tends to be a product of cultural homogeneity can also be a precursor to the emergence of the bridging social capital which is identified in the literature as having greater potential to positively influence the level of economic success. Bonding social capital is proposed (Morrisey and Gaffiken, 2001; Cooke *et al*, 2005) as the predominant form of social capital in Northern Ireland; although because society divides so thoroughly between the

Protestant and Catholic communities, social capital may be defined as bonding by default. The moral familialism which characterises culturally homogenous communities such as those in Northern Ireland it is claimed can engender rigidities within communities and ultimately make them less adaptable to change (O'Brien *et al* 2005). In this research explicitly exclusive social networks will be ignored because of the consensus which there seems to be in the literature that exclusivism can lead to conflict between groups (e.g. Bowles and Gintis, 2002). This thesis will focus instead only on those aspects of social capital which stand the most chance of having a positive influence on economic success, to see, in the context of a lack of substantive evidence generally in the literature of a link between social capital and economic success, whether, at an intra-regional district level, an association may have been evident. If no association is revealed this might suggest that the lack of evidence in the literature was not, as had been claimed (e.g. Casey 2004), the result of a measurement problem but was evidence either that: i) there was no relationship between social capital and economic success outcomes: or ii) the relationship between social capital and economic success varied according to the contingent specificities of each locale.

3.16 THEREFORE ......

Social capital theory has provided a definition of and a rationale for a range of efforts by people whose purpose has been primarily community or societal rather than individual benefit. The value of the concept is that it gives a theoretical form to human group behaviour, a platform from which hypotheses can be launched and tested. Social capital theory has extended the concept of an economy by suggesting that the collective behaviours of communities of people have consequences over and above the mere aggregation of the effort of individuals and that those consequences might be predictable. So compelling has been the analysis presented by social capital theorists that those efforts now have a widely recognised structure and political, social and economic significance as the "social economy" – an alternative economic paradigm, neither public nor private, but the "third way".

Social capital has been proposed as a factor which can contribute, alongside other factors such as financial capital, human capital, infrastructure, location and political stability, to the level of economic success which an area or a community of people achieves. It is of particular interest because it is an endogenous phenomenon which can vary from community to community. The propensity of different groups of people to react to sets of circumstances in very different ways even though they may be located in very similar settings is seen to be of increasing significance as an explanation for the variable economic performance of districts within regions and of regions within nations. It is in circumstances where variations in outcomes cannot be readily attributed to standard economic input factors that the concept of social capital and endogeneity offers great potential to analysts of economies.

However, measurement of social capital, a concept which has been described by some commentators as "chaotic" (Fine 2000) and "difficult to disentangle" (Iyer *et al* 2005), is a challenge. The literature does not provide an accepted measurement schema which allows social capital to be quantified in a standard way. Beugelsdijk and Van Schaik (2005) argue that the endogeneity of social capital means that it can be manifest in very different ways in different places and that the concept does not therefore lend itself to standardisation. This chapter has shown that because social capital effects can be very locally specific they may be best measured and assessed at a local level. Attempts to measure social capital at the large region or at the national level seem to have produced questionable findings. Defining social capital and then finding a means to measure it in a Northern Ireland context will be an important plank of this thesis' attempt to answer the research question: "*The success of local economies – what contribution does social capital make? – The case of Northern Ireland*".

The problem, of course, with analysing variable patterns of human behaviour is that it is usually assumed that there will be a rational explanation for those variations. What this review of the social capital literature seems to have shown, however, is that while there may appear to be propensities among groups to behave in a certain way which may seem to be attributable to factors such as leadership, why some communities generate leadership and a sense of purpose and others don't seems to be less easy to explain. Thus, while one North American tribe might be shown to be better organised and better led than another, how the complex weave of personal and group history and of individual skills works to create those differences remains an open question. Some communities appear to endure embedded delinquency while others, which are apparently similar in virtually all respects, don't. The reasons why might be partly genetic (if it is accepted that there is a genetic component to addictive behaviour, for example) or they might be the result of inter-generational destructive learned behaviours. What can be said, however, is that this is an area requiring much more research.

In this thesis differences in the presence of social capital between districts and between groups from different (and from the same) cultural and religious traditions may be shown to be measurable and they may be shown also to be correlated with particular economic outcomes. But explaining why Catholic areas, for example, might generate more social capital than Protestant areas will be beyond the scope of this research, and in fact, because that is a much more extensive, longer-term research challenge may be beyond the scope of any piece of individual research at doctoral level.

What this thesis can attempt to do, however, is to identify whether there are inter and intra-cultural differences in the propensity of areas to generate social capital and to present those findings to the community of social scientists and anthropologists who have the tools of theory and the research resources to carry out a behavioural study on the scale required to be meaningful.

CHAPTER FOUR

NORTHERN IRELAND – PROFILE AND CONTEXT

4.1 INTRODUCTION

Northern Ireland, is a UK region on the island of Ireland; a relatively small territory with a distinctive political, social and economic history. It has been chosen as the focus for this study because it is a part of Europe in which there are two indigenous populations (i.e. Protestant/Unionist and Catholic/Nationalist) which have had quite different economic development experiences (one of which was apparently, at least until the early 1970s, a greater beneficiary of Government-directed investment than the other) and because one product of its high profile history of internal conflict is that it is a place for which a lot of good quality socio-economic monitoring data is available. Northern Ireland had not until very recently been subject to infusions of immigrants who might have brought to bear exogenous social influences. As a result, its two communities constitute two discrete control groups, which have lived in areas populated predominantly by either one community or by the other.

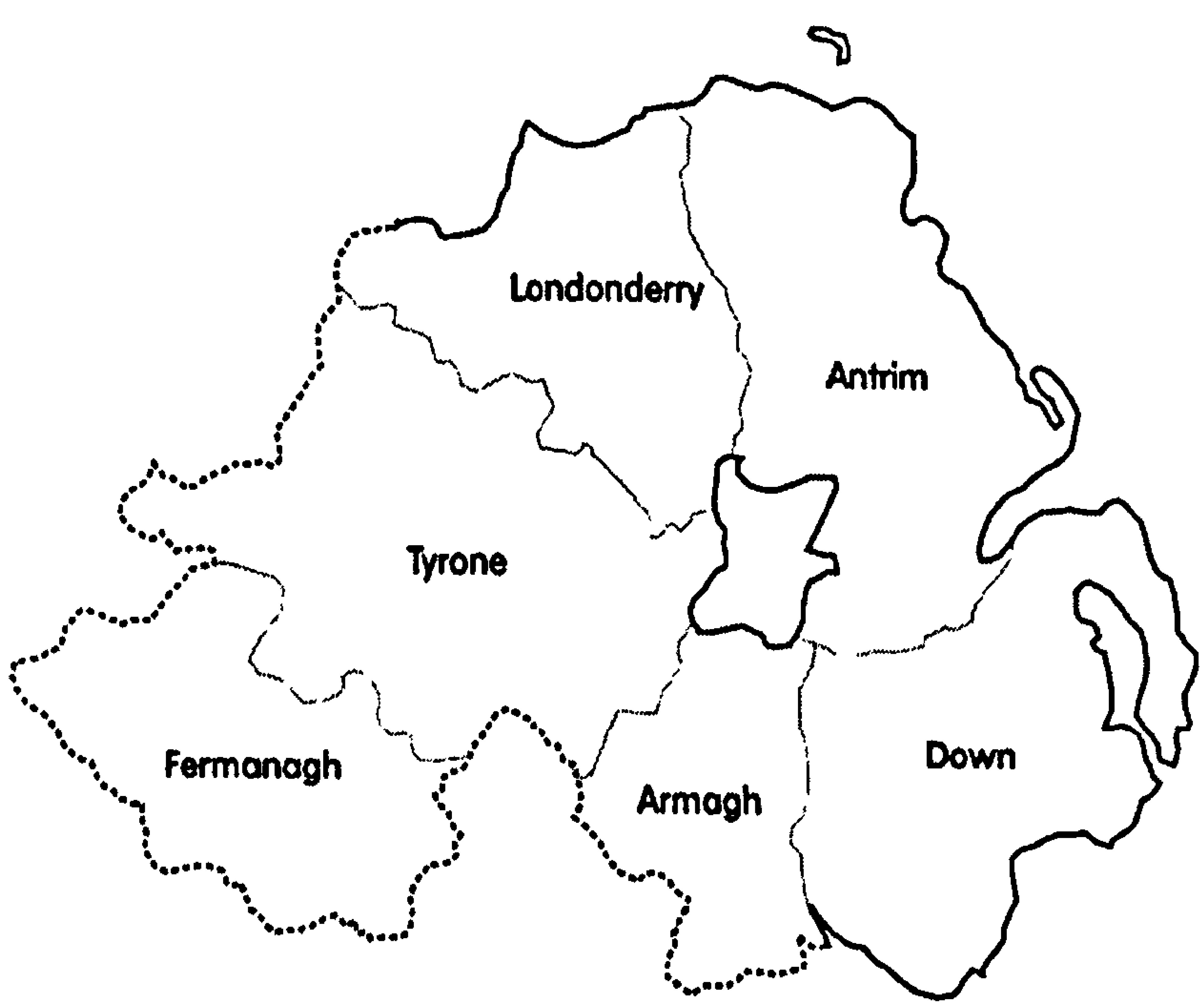
This chapter profiles Northern Ireland, its history as a semi-independent state within the UK, its local government structure of 26 District Council Areas, and its two principal communities which largely live apart in different areas of the region. Northern Ireland's history of intra-regional development disparities and the more recent development of its economy are examined to set the context for the analysis which will follow in Chapters Six through to Twelve. That analysis will be seeking to determine whether within Northern Ireland in 2001: there were discernible territorial or inter-community differentials in the distribution of local economic success; religious/cultural affiliation was associated with the propensity of some communities and areas to generate social capital; the presence of social capital had been associated with local economic success; and whether the pattern of local economic success had been associated also with other factors.

This chapter will show that:

- there were stark intra-regional disparities in employment and incomes between the Catholic and Protestant communities and between areas West-of-the-Bann, and areas East-of-the-Bann (especially around Greater Belfast);
- during most of the twentieth century, religious/cultural affiliation (or ethnicity) and economic development were closely associated, with Catholics being at a significant disadvantage relative to Protestants;
- the position of Catholics improved in the 1990s;
- the corollary of this improvement in Catholic areas was a decline in the fortunes of some formerly advantaged Protestant areas;
- the improvement in the economic position of Catholics paralleled major policy initiatives which were taken by Government in an effort to address social and economic inequalities in the region.

4.2 NORTHERN IRELAND – PROFILE

Northern Ireland is constitutionally a part of the UK but physically separate from Britain, as a geographical region of Ireland. Belfast is Northern Ireland's main settlement. It is connected to Dublin, 100 miles due south, by air, road and rail and trains also connect Belfast with Derry, in the north west, and the ferry port of Larne, north of Belfast, which links with Stranraer in Scotland. The main M1 motorway runs west from Belfast as far as Dungannon and there are dual carriageway trunk roads to Derry and almost as far as Newry on the border with the Irish Republic. Outside Belfast and Derry, Northern Ireland is predominantly rural.



Map 4.1. *Northern Ireland's traditional County boundaries (Source: NISRA)*

Northern Ireland was formed in 1922 following the decision in 1921 by the British Government to partition Ireland. It comprised six of the nine counties of the "Province" of Ulster: Fermanagh, Tyrone, Londonderry/Derry, Armagh, Antrim and Down (see Map 4.1 above). These were the six of the nine Ulster counties which had the largest Protestant populations. They had been selected to ensure that the Northern Ireland State would have an in-built Protestant majority which would guarantee its long-term loyalty to the British State and prevent it seceding from the United Kingdom like the rest of Ireland. That majority, however, never rose above 65%. Steadily from 1921 the size of the minority population grew as did its disaffection with one-party rule by the Protestant Unionist Party. That disaffection chrystallised around a campaign by the Catholic community for civil rights in the 1960s, the attempted suppression of which led to an insurrection which deteriorated into what came to be euphemistically called "the troubles" which lasted from 1969 until a final round of ceasefires by all factions in 1997.

The six counties which were brought together to form the Northern Ireland State have never been administrative units. Nevertheless they are a territorial nomenclature which continues to be widely used in the description of locations. In 1973 26 District Councils were established as part of a radical reform of public administration by a British Government which had the previous year prorogued the Northern Ireland or "Stormont" Parliament. Those District Councils (see Map 4.2 overleaf) had remained in place up to 2007, although by then their demise was anticipated: By 2009 it was planned to replace them with a smaller number of larger and more powerful local authorities.

District Councils have had economic development powers since 1995 and within their boundaries there have also been operating other bodies with a local economic development remit, such as Local Enterprise Agencies. The 26 District Council Areas marked on Map 4.2 will be defined as "local economies" for the purposes of this research. The rationale for that and its implications will be discussed in Chapter Five. The District Council Areas described in Map 4.2 will frequently be referred to in the course of this thesis.

Map 4.2. *Northern Ireland's 26 District Council Areas.*
(Source: NISRA)

Fothergill and Guy (1990) observed that unlike southern England, where there had been considerable population mobility, almost all of the people who lived and worked in Northern Ireland came from Northern Ireland. As of 2001 there were no significant ethnic minorities in Northern Ireland. The region had its own daily newspapers, its own political parties and its own government ministries. It was a society that, to a large extent, had looked in on itself. Northern Ireland's population was much younger than the UK average. Participation in further and higher education was high. 79 per cent of young people continued their schooling past the age of 16 and examination attainment levels were good. Around 30 per cent of Northern Ireland's pupils who stayed on at school after the age of 16 gained two or more A levels, the highest attainment level in the UK. That notwithstanding, however, 25 per cent of Northern Ireland's workforce were unqualified compared to a UK average of 18 per cent.

Partly as a result of its political history and its relative physical isolation, the role of social and cultural tradition is distinctive and discernible. Northern Ireland has a small population of 1.7 million occupying the second most sparsely populated part of the UK after Scotland. That population is made up almost entirely of two large communities, the bigger traditionally described as Protestant or Unionist, and the smaller as Catholic or Nationalist – although it is worth noting that people who live in Northern Ireland who may not wish to describe themselves as being of one or other community, are nevertheless attributed in many Government-sponsored studies to one or other community on the basis of the primary school which they attended.

4.3 THE TWO COMMUNITIES

Religious affiliation is the most effective proxy to identify the two principal cultural realms, the so-called "two communities", which exist in Northern Ireland. Protestants are in the main Unionist (i.e. pro-the union of Great Britain and Northern Ireland within the UK jurisdiction), and Catholics are usually Nationalist or Republican (i.e. for the unification of the two States in Ireland within one all-island jurisdiction). Protestants outnumber Catholics although there has been significant inter-marriage. In the 2001 census, 40.26 per cent of the population declared themselves to be Catholic (up from just under 38 per cent in 1991), 45.57 per cent to be Protestant or "other Christian" (down from 50.6 per cent in 1991), while 13.88 per cent professed no religion and/or refused to say (up from 11.1 per cent in 1991). Only 0.3 per cent of the population in 2001 declared that they were adherents of other religions or philosophies. Protestants in Northern Ireland in 2001 were overwhelmingly Presbyterian (i.e. 45 per cent of the Protestant community) and many had strong religious, cultural and familial links with Scotland.

Hart and Murray described a:

> "*geography of intra and inter-settlement apartheid*" (Hart and Murray, 2000, p.37)

...... in Northern Ireland. Map 4.3 (page 117) shows Catholics in the majority in some parts of Northern Ireland: Derry city, in the north west; the Glens of Antrim, in the north east; County Fermanagh, County Tyrone, County Armagh, and South Down, in the west and south of the Province; and in parts of Belfast; while making up less than 10 per cent of the population in other areas: Larne and the south County Antrim coast, North Down, Ards and east Belfast. Hart and Murray suggested that in Northern Ireland this separation of the two communities had economic development consequences:

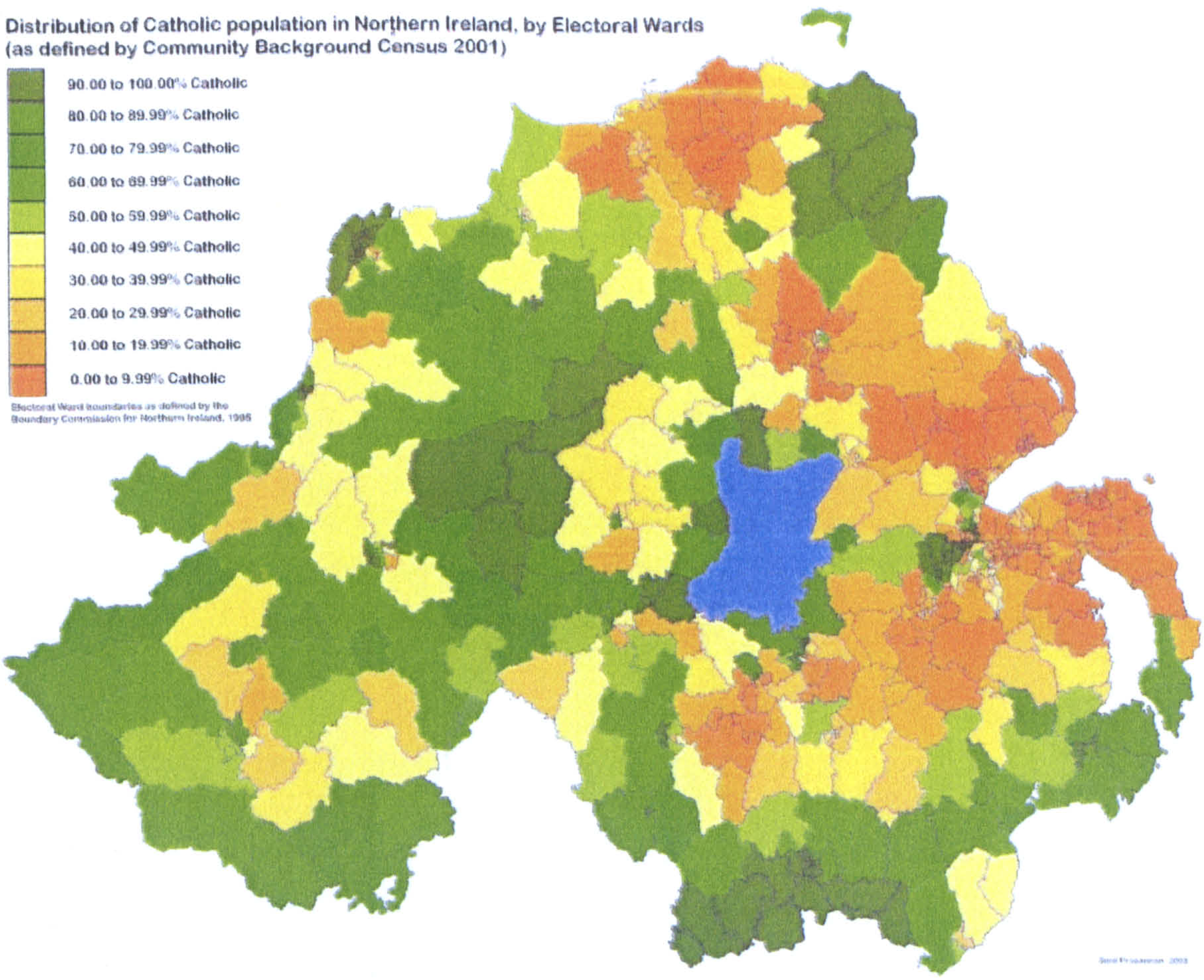
> "*Local development in Northern Ireland is located, therefore, in a context of societal division which is significantly different from other parts of the United Kingdom*" (Hart and Murray, 2000, p.37)

...... and Morrisey and Gaffikin claimed that Northern Ireland was:

> "*burdened with a legacy of its conflictual history that continues to impair local development*" (Morrisey and Gaffikin, 2001, p.4)

Martin (2005) argued that in regions where embedded intra-community networks (of the kind which were so prevalent in Northern Ireland) had influenced relationships between suppliers and producers, labour and communities, economies were often inflexible. Such was the concern within Government about the potentially long-term economic consequences of societal division in Northern Ireland that it launched an initiative in 1997, "Doing Business in a Divided Society", to offer good practice guidance to the business community on managing people and doing business with suppliers and customers in a divided community.

It is the extent of the contiguity between the distribution of Northern Ireland's two communities, the distribution of social capital and other inputs, and the distribution of economic success across the districts which make up the Province which will be the primary focus of this thesis.



Map 4.3. *The distribution of Protestants and Catholics in Northern Ireland. (Source: Derived from the work of Prasannan, Imperial College London, made available by the QUB/UU ARK Project)*

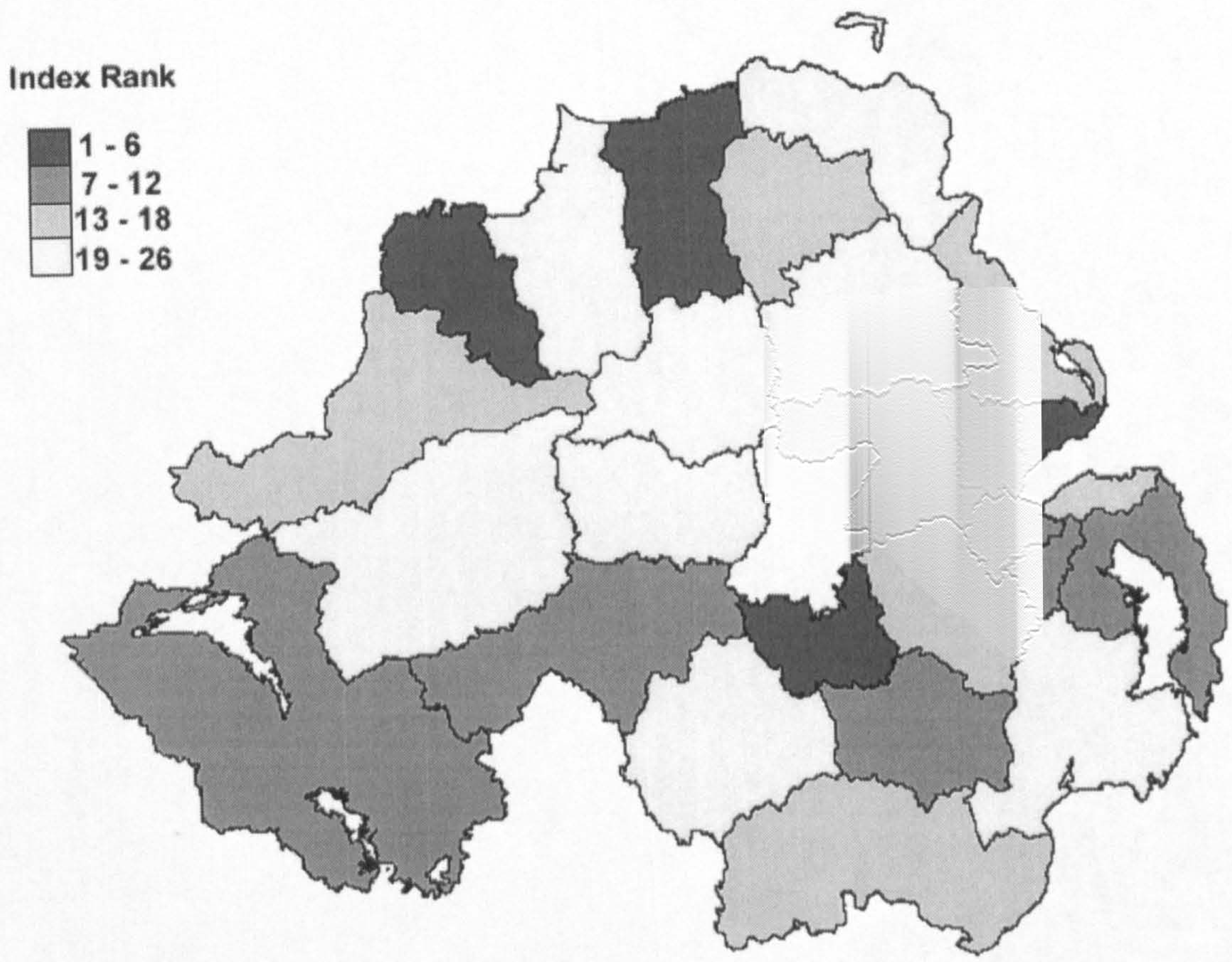
4.4 THE ECONOMY

The structure of Northern Ireland's economy in the latter decades of the 20th century was shaped by its dependence on financial support from the UK Government to fund welfare benefits and a complex array of public sector services and to assist the set up of Multi National Company (MNC) branch plants. The attraction of Foreign Direct Investment (FDI) was a central plank of industrial development policy in Northern Ireland from 1945 when Selective Financial Assistance was first introduced by the UK Government. Consistently between the early 1970s and 2001, Northern Ireland was the beneficiary of the highest per capita transfers of public assistance in the UK. By 1980 virtually half of all manufacturing employment in Northern Ireland was in externally-owned plants employing more than 50 people and 52 per cent of the Province's GDP was accounted for by the Westminister exchequer – funded public sector compared to under 40 per cent in the UK as a whole (Gaffiken *et al* 2001). Gaffikin *et al* claimed that by 1996 industrial assistance was accounting for 5 per cent of manufacturing GDP in Northern Ireland compared to 0.3 per cent in Britain and was generating 9 per cent of average weekly earnings compared to 0.5 per cent in Britain. At the other end of the socio-economic spectrum, by 1998 one-fifth of household income in Northern Ireland was derived from social security benefits (Gaffikin *et al* 2001 p.15).

During the 1980s and 1990s many of Northern Ireland's Multinational Company (MNC) branch plants closed, despite having secured generous incentives. The social and economic impact of these closures was significant. Of the 134 companies that had moved into the region before 1973, 69 had closed by 1986, representing a loss of two-thirds of the 52,000 jobs that had existed in these firms in 1973 (Gudgin *et al* 1989).

A further 12,000 jobs were lost in the closure of plants that had become externally-owned as a result of acquisition before 1973. Between 1973 and 1986 the job losses due to the closure of externally-owned plants represented almost a quarter of Northern Ireland's total manufacturing employment. The Northern

Ireland Economic Council (1995) estimated, using the Republic of Ireland as a comparator, that if Northern Ireland had been able to attract foreign direct investment (FDI) against a background of peace and political stability, it would have attracted four times more jobs than it did and mitigated the impact of the closures which had taken place.



Map 4.4. *Distribution of job losses as a result of MNC Branch Plant closures during the 1980s per 10,000 adult resident population – ranked by District Council Area.*
Note: The District Council Areas with the heaviest job losses are ranked here between 1 and 6 and those with the fewest job losses between 19 and 26.
(Source: Derived from Fothergill and Guy, 1990, p.21).

Map 4.4 highlights the extent to which the job losses which resulted from MNC branch plant closures during the 1980s had been concentrated in particular parts of Northern Ireland, notably in the outer Belfast region (especially in Carrickfergus, Newtownabbey and Antrim) as well as in Craigavon, Coleraine and Derry. The impact of the closure of manufacturing plants was particularly devastating in the communities where they had been the main employers. In Carrickfergus, for example, a predominantly Protestant town of 20,000 inhabitants, almost 5000 jobs were lost following the closure during the 1980s of plants owned by Courtaulds, Carreras Rothmans and ICI.

Yet despite the decline in the number of MNC branch plants and the loss of manufacturing jobs which resulted, Hart and McGuinness' study of Small Firm Growth in the UK Regions (2003) showed that between 1994 and 1997 Northern Ireland had become the fastest growing region in the UK in terms of change in total employment and that its manufacturing output had actually grown faster than the UK average during this period: making it the fastest improving regional economy in the UK. This finding was later supported by Cambridge Econometrics (cited in Martin 2005) which showed that among the 12 UK regions, Northern Ireland had had the third highest level of growth in gross value added per capita over the twenty-three years between 1980 and 2003, bettered only by London and the South East. Northern Ireland had also experienced significant employment growth during this period. By the end of the 1990s production and manufacturing output were both increasing by over 6 per cent per annum (Gaffikin *et al*, 2001, quoting the Northern Ireland Economic Council, 2000).

The heavy job losses in foreign-owned manufacturing branch plants had been concentrated in particular areas during the 1980s; and Hart and Murray (2000) found that employment growth and the corresponding fall in unemployment had similarly benefited some District Council Areas more than others. Hart and McGuinness (2003) argued that some of the improvment in the employment situation had been attributable to the creation and expansion of firms in the rural west and south of the Province, areas which in earlier decades had not attracted significant MNC investment. By the mid-1990s, they concluded, the jobs and prosperity which were being generated from within Northern Ireland by indigenous actors were making a significant contribution to the region's overall economic performance, offering in the process the prospect that Northern Ireland might have been able to reduce its internal economic development disparities. A scenario was presented whereby, on the one hand, some areas within Northern

Ireland which in the 1960s and 1970s had benefited from the location of MNC branch plants had subsequently suffered large-scale job losses when many of those plants had closed; while, on the other, substantial employment had been created in the 1990s in small firms in the service sector (as well as in the public sector) much of it concentrated elsewhere in the Province in areas which had not had a legacy of significant Foreign Direct Investment. The uneven distribution within Northern Ireland of economic success outcomes such as new employment and new business formations will be a focus of this research.

Frenkel, Shefer and Roper (2003) suggested that spatial economic development patterns had been changing also in the Irish Republic. They argued that by 2001 locations in Dublin were no more propitious as locations for innovation than other areas of the country, suggesting that the metropolitan advantage and agglomeration economies of classical regional development theory might have been weakening. Hart *et al* (2001) noted that rural areas in Northern Ireland had exhibited faster rates of growth in total employment between 1995 and 1999 than urban areas and that net employment growth had been much higher in District Council Areas in the rural west and south of Northern Ireland than in both the urban centres of Belfast and Derry and the rural areas in the east and north east of the region. They also found that all of Northern Ireland's rural areas, but particularly those in the west and south, had managed to achieve and maintain above average business birth rates. Hart *et al* said that the positive economic growth dynamic which seemed to prevail in the rural west and south of Northern Ireland merited further investigation. Acknowledging that what they had reported might only have been a partial view of what was happening, they concluded that datasets were needed which would provide a more accurate measure of enterprise capacity across the region. Identifying datasets which will help to clarify the extent of Northern Ireland's intra-regional heterogeneity is another objective of this thesis.

The concern of the Department of Enterprise Trade and Investment (DETI) in 2000 was that too few of Northern Ireland's small firms, wherever they were located, were growing into larger export-orientated businesses; and that, while there had been substantial improvements during the 1990s in its employment situation, Northern Ireland's productivity, measured by GDP per capita remained below the UK average (Gaffikin *et al* 2001), while that of the Irish Republic by this time had exceeded the UK average. DETI's analysis was that the Northern Ireland region as a whole did not have a sufficient number of indigenous, world-class manufacturers able to confront the challenges of global economic change. Gaffiken *et al* suggested that the employment growth and productivity improvements which had taken place during the 1990s were likely to have been in part attributable to the regularising effect of Northern Ireland's having been largely freed of the shackles of political violence. While there had been improvements, Gaffikin *et al* argued that the Northern Ireland economy remained, in a UK context, relatively retarded, with much of the output of its small businesses servicing a local consumer market which was being artificially buoyed up by a large number of well-remunerated public sector jobs retained in the region at the expense of the UK exchequer.

4.5 INTRA-REGIONAL ECONOMIC DEVELOPMENT DIFFERENTIALS

The disproportionate number of jobs lost in some District Council Areas during the 1980s and early 1990s are in large measure attributable to the disproportionate concentration of overseas MNC branch plants in those areas, reflecting a pattern of socio-economic advantage and disadvantage within Northern Ireland which was well established by the 1980s. The Catholic community had since the 1920s been more economically disadvantaged than the Protestant community (Bradley and Hamilton 1999). Areas in which Catholics were concentrated, in the west and south of Northern Ireland and in particular quarters of Belfast (e.g. West Belfast) had higher unemployment, fewer overseas employers and more social deprivation than areas in which Protestants were the predominant community, in the Greater Belfast area and the north east of the Province (O'Dowd *et al*, 1980, Rowthorn and Wayne 1988, Whyte 1990, Melaugh 1995, Roper 2001, Osborne and Shuttleworth 2004).

These disparities were exacerbated between the second world war and the 1980s by inward investment location decisions, investments by Government in infrastructure and by the distribution of public sector employment. The sharp differentials in unemployment and in earnings between the two communities which resulted from this uneven distribution of investment fuelled a sense of injustice within the Catholic community which led to the creation of the Civil Rights Association and thereafter almost three decades of civil conflict. In the midst of that conflict the differentials persisted into the 1990s.

Bradley and Hamilton (1999) said that what made the situation in Northern Ireland in respect of economic development different from other parts of the UK or Ireland was that the socio-economic differentials which existed were between two distinct cultural traditions rather than between different socio-economic groups. The result was that within Northern Ireland there were what Gaffikin *et al* described as:

"*extreme concentrations of deprivation*" (Gaffikin *et al*, 2001, p.15).

As an example, almost 90 per cent of the most deprived quintile of census enumeration districts in Belfast were concentrated in the predominantly Catholic North and West of the city.

Melaugh (1995) showed that the differential in male unemployment between the two communities had remained almost constant between the early 1960s and the early 1990s. In 1991 those differentials were still stark. The 1991 census showed that Catholic male unemployment was 28.4 per cent compared to 13.9 per cent for Protestants and others; and unemployment among female Catholics was 14.5 per cent compared to 8.8 per cent for Protestants. Melaugh attributed this to a cycle of disadvantage which affected the poorest section in both communities but which was particularly pervasive in the Catholic community. That cycle was the product of a number of inter-related factors including education, employment, income, housing, wealth, social class, and health. Those differentials had been slow to break down, even in the face of comprehensive fair employment measures and targeted public sector-led economic development intervention. He cited evidence from the Northern Ireland Continuous Household Survey based on samples of the population taken between 1988 and 1991, which showed that 52 per cent of Catholics had no formal educational qualifications compared to 46 per cent of Protestants; and while differences in educational attainment did not explain all of the differential in employment opportunities being experienced by the two communities, Melaugh contended that they were an important factor in determining the job prospects of individuals, irrespective of their cultural or religious affiliation. The Continuous Household Survey showed that in the late 1980s and early 1990s Catholics were over-represented in the crafts sector, among plant and machine operatives and on unemployment and training schemes. In all other occupational groups, Protestants were over-represented. As a result, income levels in Catholic households were consistently lower on average than Protestant households and significantly larger proportions of Protestants were in the top of income bracket.

In 1991 a Targeting Social Need (TSN) policy was introduced by direct rule ministers in an attempt to address these politically damaging socio-economic disparities. TSN in the early 1990s took the form of a principle which was to guide public expenditure allocations by Government. The stated objectives of the policy were to reduce social and economic differentials and to promote equality of opportunity for all sections of society. However, Quirk and McLoughlin (1996) suggested that up to 1995 the implementation of TSN had:

> "*been ineffective in changing the spending priorities of departments ad agencies*". (Quirk and McLoughlin, 1996, p.183).

The policy's implementation was changed after 1995, drawing heavily on the methodology of area-based targeting which had been recommended in the Robson *et al* study of relative deprivation in Northern Ireland (1994).

Nevertheless, Murtagh (2001) contended, one result of the:

> "*violent crises of the late 1960s and early 1970s*" (Murtagh, 2001, p.52)

...... was a legacy of:

> "*closed, corporatist and centralised nature of decision-making*" (Murtagh, 2001, p.52)

...... with civil servants:

> "*negotiating with the private sector in order to deliver economic, urban regeneration and commercial objectives*" (Murtagh, 2001, p.52).

This excluded whole sections of Northern Ireland society. In effect, the establishment in 1998 of the devolved Assembly, public policy decision-making authority in Northern Ireland had for two-and-a-half decades rested with un-elected civil servants and Westminster-appointed ministers who had no electoral constituency in the Province. Northern Ireland had become what Hart and Murray (2000) described as:

"*a quango state*" (Hart and Murray, 2000, p.21).

With cross-community acceptance in 1998 of devolved Government came a new approach to resolving the problems of economic dysfunction which were widely acknowledged by then to have beeng a result of the civil unrest in the Province, if not a contributor to it. In 1998 the Department of the Environment in Northern Ireland published "Shaping Our Future – A Regional Strategic Framework for Northern Ireland", which highlighted three change factors: technology, economic competitiveness and social trends. In 1999 the Department of Economic Development in Northern Ireland separately launched a major strategy to drive forward the economic development of Northern Ireland over the following 10 years: Strategy 2010. The theme of competitiveness ran through the Strategy; but there was also a recognition that:

> "*competitiveness depends on a wide range of factors, many of which would not be regarded as 'economic' in the traditional sense*" (Gaffikin and Morrisey, 2001, p.31).

This was reflected in the three "pillars" within the Strategy:

-Facilitating social cohesion, based on equality and social inclusion.
- Promoting new forms of participative and effective economic governance.
-Achieving international standards of competitiveness

Strategy 2010 did mark a shift in Government thinking insofar as it acknowledged that intra-regional disparities were having a deleterious effect on the functioning of the economy of the region as a whole. Its vision for a successful Northern Ireland was that it should be a region which had:

> "*a more even spread of economic welfare*" (Strategy 2010, 1999, pp.129-130).

The Strategy endorsed the following as "*essential*":

> "*any new Strategy should be based upon the principles of equality of opportunity and social inclusion. It is important that all the people in Northern Ireland not only have an equal chance of sharing in its increasing prosperity but also instinctively know that they do*" (Strategy 2010 1999, p.143).

Gaffikin and Morrissey (2001), reviewing Strategy 2010, argued that the deficiencies of past economic development strategies had, however, still not been accepted and that in particular the effect of ethnicity and conflict on the economic development of Northern Ireland had been downplayed.

In 2001 an initiative was taken by the cross-party Northern Ireland Executive (i.e. the governing "Cabinet" within the devolved Northern Ireland Assembly) to tackle the differential experience of unemployment on a community and geographical basis with the establishment of a Taskforce on Employability and Long-term Unemployment. Gaffikin and Morrissey (2001) acknowledged that by 2001 a consensus was beginning to emerge within Government that:

> "*there is an interconnection between, on the one hand, economic under-development, social exclusion, issues of equality and, on the other, the grievances which fuel the conflict – addressing the former may not be sufficient, in itself, to create peace, but it is a necessary part of the process*" (Gaffikin and Morrissey, 2001, p.65).

The Taskforce noted that by 2001 there had been an improvement in respect of inter-community unemployment differentials. Nevertheless differentials did remain. The report of the Taskforce recommended that there should be targeted initiatives in areas with high levels of deprivation and low levels of employment. This was followed by a Joint Declaration by the British and Irish Governments which reaffirmed their commitment to progressively eliminating the differential in unemployment rates between the two communities.

Reflecting on the differentials between the Catholic and Protestant communities, the Northern Ireland Statistics and Research Agency (NISRA) in a report to an Office of the First and Deputy First Minister (OFMDFM) Taskforce on

Employment and Long-term Unemployment (2002), noted that the 1990s had been a decade of change within the economy of Northern Ireland which had resulted in a structural shift in the economic fortunes of the Catholic community. The substantial growth of employment in Northern Ireland during the 1990s had helped to improve the relative labour market position of Catholics on all indicators. In the 10 years between 1991 and 2001 the differential between Catholic and Protestant unemployment rates fell from a ratio of 2.4 to 1.8. However, while Protestant unemployment fell by 42 per cent from 7.8 per cent in 1991 to 4.5 per cent in 2001; Catholic unemployment fell by 56 per cent from 18.4 per cent in 1991 to 8.1 per cent in 2001. Estimates of changes in the labour force between 1990 and 1998,[4.1] suggested that the number of Catholics in employment had risen by 20.8 per cent (45,000) during that period while the number of Protestants in employment rose by just 7.7 per cent (28,000). The improved position of Catholics in the Labour Market appeared to be attributable to the higher uptake by Catholics of new jobs created during the 1990s, in the retail sector, within the micro-business sector and in the public sector (helped by the implementation of fair employment legislation). There had also been an increase in part-time employment to which greater numbers of Catholics (and especially under-employed Catholic women) had been attracted. The effect of this was to increse the social mobility of Catholics and create a new:

> "*mixed-religion middle class*" (Murtagh 2001 p.52).

The change in the unemployment situation within Northern Ireland's Catholic community between 1991 and 2001 was reflected in economic improvements more generally in Catholic areas and particularly in the predominantly Catholic areas West-of-the-Bann. The marked demarcation between economic circumstances West-of-the-Bann and East-of-the-Bann began to break down.

[4.1] Derived from the Labour Force Survey (LFS) which collected economic data on a random sample of 3200 households (6500 adults) each year

Unemployment fell in Northern Ireland overall and in every one of its District Council Areas between 1991 and 2001,[4.2] but the fall was proportionately greater in Catholic District Council Areas, in all of which unemployment in 1991 had been substantially higher than in predominantly Protestant District Council Areas. Measuring the level of unemployment in each District Council Area relative to the prevailing Northern Ireland average both in 2001 and in 1991 highlights how dramatically the balance of advantage had shifted during that decade. A number of predominantly Catholic District Council Areas West-of-the-Bann had experienced sharp falls in their relative unemployment rates: Magherafelt's unemployment rate fell from 108 per cent of the Northern Ireland average in 1991 to 76.32 per cent of the Northern Ireland average in 2001; Dungannon's rate fell from 121 per cent of the Northern Ireland average to 86 per cent in 2001, Cookstown's from 104 per cent to 84 per cent, and Armagh's from 102 per cent to 88 per cent; whereas relative unemployment rates rose in predominantly Protestant District Council Areas in the east of the region in North Down, from 48 per cent of the Northern Ireland average in 1991 to 75.6 per cent in 2001; in Larne from 86.71 per cent to 90 per cent; in Ards from 60.6 per cent to 77 per cent; in Carrickfergus from 75.38 per cent to 83 per cent; and in Coleraine from 94 per cent to 100 per cent.

Despite these changes, by the 2001 census, the long-term unemployed continued to be disproportionately Catholic and Catholics were still at greater risk of experiencing multiple deprivation than Protestants, with incidences of health problems in the adult population, for example, higher for Catholics than for Protestants. Catholics in 2001 were also disproportionately represented in the social housing sector. The OFDFM Taskforce (2002) concluded that in areas such as health and housing, inter-community disparities between the Catholic and Protestant communities persisted. This was attributed to the interplay of demographic and social needs factors, although it was suggested that these were being ameliorated in some areas by public provision. NISRA attributed the

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[4.2] Definitions of unemployment did change between 1991 and 2001. However, contemporaneous comparisons show how the relative unemployment situation in Northern Ireland's District Council Areas had shifted during the 1990s (for a more detailed discussion of the provenance of the unemployment figures referred to here see Appendix 5).

continued differential in unemployment rates between Protestants and Catholics to a legacy of demographic and socio-economic factors. Those factors included personal characteristics such as age, marital status, number of children, family experience of unemployment, housing tenure and educational qualifications; geographical factors such as area of residence; Northern Ireland specific issues (including the size and composition of the security forces); demographic factors such as labour force growth and migration; cultural factors such as the 'chill' between the two communities acting as a constraint on the free movement of labour; and the legacy effect of historically higher levels of disadvantage in the Catholic community. However, the situation in respect of educational attainment among Catholics had markedly improved. By 2001 there was, broadly, parity between the two communities on a range of educational indicators, including levels of qualifications achieved by school-leavers, proportions attending grammar schools, and progression to further and higher education.

Dolton's (2002) analysis, submitted as evidence to the OFMDFM Taskforce was that the economic conditions faced by job seekers in Northern Ireland had changed from the early 1990s and that in particular changes in the demand side of the economy had not been evenly distributed across Northern Ireland. Given that the two communities were not evenly distributed across Northern Ireland, changes in the pattern of demand for goods and services had in turn affected the demand for skills and labour across the region, generating differential rates of employment growth between the two communities. He also suggested that Government policy intervention in the form of affirmative action, anti-discrimination legislation, labour market and economic development policies had been important in extending employment opportunities to the Catholic community and that intervention of this kind had a continuing role to play in ameliorating differentials between the Catholic and Protestant communities.

Wadsworth (2002), in his evidence to the OFMDFM Taskforce, said that a number of questions about the shift in employment patterns during the 1990s remained unanswered: had the relative gain in Catholic employment during this period occurred because fewer Catholics had lost their jobs in the 1990-93 recession or because relatively more Catholics were hired in the post-1993 recovery, from a relatively larger pool of unemployed? How much of the Catholic improvement had been due to changes in demand within Northern Ireland and how much was due to less economic inactivity during the 1990s especially on the part of Catholic women? To what extent might the economic boom in the Republic of Ireland have had a beneficial effect on the Northern Irish labour market and had Catholics disproportionately benefited? And might there have been other factors which explained the changes?

The improvement in the Catholic employment situation was characterised by the OFMDFM Taskforce as a process of "catching-up" alongside a counterveiling reduction in the relative advantage enjoyed by Protestants, which was attributed to the pattern of job losses during the 1980s and 1990s. However, the OFMDFM analysis was to lay the emphasis on structural changes in the economy and in the labour market, rather than on endogenous characteristics, such as the propensity to start a business or to invest social capital in self-help regeneration initiatives. This thesis will attempt to assess whether there were endogenous factors which were co-terminus with (and by implication may have been influencing) the pattern of differential economic success within Northern Ireland in 2001.

4.6 IN SUMMARY

There are a number of themes which emerge from this profile of Northern Ireland which are important in setting the scene for the forthcoming analysis.

- The first is that intra-regional disparities in employment, incomes and levels of socio-economic disadvantage had existed in Northern Ireland for decades after the Second World War.

- The second theme is the apparent association in Northern Ireland historically between the ethnicity of a district (referred to here as cultural/religious affiliation) and its relative economic status. The perceived link between cultural/religious affiliation and economic outcomes was so controversial that it was the principal driver of the civil unrest in the late 1960s which descended into the three decades of the 'troubles'. Whether there continued to be in 2001 an association between economic success outcomes and ethnicity would have considerable political significance given the attempts by government in the 1990s to address intra-Northern Ireland disparities. This is an important question for this thesis because, given that culture is intertwined with ethnicity and that culture (and thus ethnicity) appears to have the capacity to influence the propensity of a community to generate social capital, if ethnicity and social capital is found to be associated with economic success outcomes a number of questions will have to be considered: Was there something in ethnicity, such as a resource-striving tradition, which determined the level of economic success in various parts of Northern Ireland? Was social capital a product of ethnicity? If so, was social capital the medium through which the influence of culture and ethnicity was exerted or did it just coincide with the presence of culture, with it being culture and not social capital which directly exerted an influence? Might it have been the case that the factors which influenced economic success had coincided with both ethnicity and social capital and that it was neither of those factors which had directly exerted an influence? Such questions of cause and effect will within the parameters of this research be almost impossible to answer. However, if this research gives rise to questions such as these, that in itself will be a significant finding.

- The third is the improvement in the economic situation, and especially the employment situation, of Catholics during the 1990s.

- The fourth theme is the change in growth trends in particular districts and sub-regions within Northern Ireland during the 1990s, notably the higher concentration of new employment and new and emerging businesses in the predominantly Catholic west and south of the Province, and the countervailing increase in unemployment and lower than average share of new and emerging businesses in predominantly Protestant districts in the east. These changes of themselves could simply reflect a "topping-out" in districts which had enjoyed embedded success and the growth of low wage employment in historically less advantaged areas in sectors which were no longer viable in more successful areas. Growth measures on their own can misrepresent the status of an economy which is why in this thesis economic success will be measured as a multi-variate achievement.

- The fifth theme is the persistence of socio-economic disadvantage. Even though in predominantly Catholic areas during the 1990s levels of employment had risen, unemployment had fallen and educational attainment had reached the Northern Ireland average, Catholics were still more likely to be unemployed and multiply deprived than Protestants. The most disadvantaged areas in the region at small area level remained the same as they had been for decades and they remained largely Catholic.

- The final theme is the extent to which Government policy sought during the 1990s to address socio-economic disadvantage and spatial and inter-community development disparities. Some commentators during this period[4.3] criticised Government economic development policy for not giving sufficient acknowledgment to intra-regional development disparities and for not

[4.3] Notably Bradley and Hamilton, 1991; Gaffikin *et al*, 2001; Gaffikin and Morrissey, 2001.

recognising the opportunity costs which differential employment and business creation trends presented. Social capital featured in Government policy only in respect of the social economy and the benefits which it might bring specifically to deprived areas; and Northern Ireland's contiguity with the dynamic economy of the Irish Republic had not been given any significant priority. Policies such as Strategy 2010 were characterised as being Belfast-centric.

The Targeting Social Need (TSN) initiative was significant, however, in two respects: firstly, it did raise the profile of intra-regional disparities; and secondly, it promulgated an objective approach to the analysis of the problem of deprivation. In 1993 the Government appointed an independent team of researchers in the Policy Planning and Research Unit, led by Robson, to consider what socio-economic disadvantage was, how it was manifest and how it could be measured in a robust enough way as to be defensible in the face of potential criticism that resource allocations were being skewed to the disadvantage of one community or the other. The subsequent Robson *et al* report (1994), highlighting a number of measurement problems, argued that the most effective way to measure deprivation (although every method had its problems) was to combine measures of individual dimensions of deprivation in a synthesised index of multiple deprivation.[4.4]

The variability of economic success across Northern Ireland will be measured in this thesis using a Robson-like methodology. The Robson method has proved to be a durable policy tool which has survived intact for more than a decade as the most objective means yet devised to measure deprivation differentials in Northern Ireland. This will be reflected upon in Chapter Five as part of a wider consideration of the challenge faced by researchers seeking to measure and compare socio-economic circumstances across territories. That chapter sets the scene for the analytical path which will be adopted in this thesis (which is rationalised in Chapter Six). In Chapter Seven economic

[4.4] Levels of each dimension of deprivation were measured for small areas (i.e. wards and enumeration districts) across Northern Ireland. Each small area was ranked according to the level of each dimension of deprivation which it had recorded. Those rank scores were then added together to generate a combined multiple deprivation rank score for each small area. Small area scores were then added to provide district-level rank scores also.

success within Northern Ireland in 2001 will be analysed in some depth. One of the conclusions of that analysis will be that success, like deprivation, is a multi-variate phenomenon which is most effectively measured by a multi-variate index. Chapter Eight will deploy a methodology modelled on that of Robson *et al* (1994) in which a set of unweighted outcome indicator rank scores for each District will be added together to form a success index.

The analysis which will then follow in Chapters Nine through to Eleven will effectively update the profile of Northern Ireland which has been set out in this chapter (and which has been based on the extant literature). It will bring into much sharper focus the intra-regional distribution of economic success and the factors which are associated with it.

PART TWO

A LOCAL ECONOMIC SUCCESS MODEL

- **The analysis challenge – Developing an appropriate methodology – Chapter Five.**
- **The approach to measuring local economic success in Northern Ireland – Chapter Six**
- **Local economic success outcomes – Chapter Seven**
- **The composite Northern Ireland Local Economic Success (LES) Index – Chapter Eight**

PART TWO: A LOCAL ECONOMIC SUCCESS MODEL

CHAPTER FIVE

THE ANALYSIS CHALLENGE – DEVELOPING AN APPROPRIATE METHODOLOGY

5.1 INTRODUCTION

The forthcoming analysis, from Chapter Six to Eleven, will seek to discern the association between a composite of success outcomes synthesised into a local economic success index, and indicators of social capital. The significance of social capital's association with local economic success will also be considered in the context of the association between local economic success and other potentially influential factors (education/skills, the labour market, social characteristics, and economic development policy). The following analysis of the complexities of Northern Ireland's local economies will be:

> *"more about fuelling .... debate about important policy issues ...... than ...... about predicting anyone's future".* (Carley, 1980, p.152)

This chapter will highlight some of the challenges facing the researcher, from whether to adopt a quantitative or qualitative approach (or a combination of the two) to issues associated with definition and measurement. In so doing this chapter will identify the caveats which should underscore the findings reported in this thesis. The chapter begins by rationalising the adoption in this thesis of a quantitative analytical approach to answering the research question. Following that the challenge of definition is considered (two specific definitional challenges have already been discussed in this thesis: the challenge of defining and measuring social capital in Chapter Three; and the challenge of defining and measuring economic success in Chapter Two). There is then a reflection on a number of general challenges which face researchers: discerning cause and effect, designing appropriate indicators, the problem of assumption and bias and how to model the "real world". A common problem faced by analysts of social and economic systems (and one which will be a particular challenge in this research) is to establish a timeframe for which data can be secured. The analytical techniques which will be deployed as part of this research are also considered: cluster analysis, the synthetic index and multiple regression. The chapter concludes with a reflection on the caution which should be exercised when interpreting the spatial distribution of data, followed by a rationale for the spatial frame adopted for the purposes of this research: District Council Areas in Northern Ireland.

5.2 ADOPTING A QUANTITATIVE APPROACH

When gathering evidence to answer a research question, among the decisions which have to be made by the researcher is whether to base explanations of circumstances which have been observed on the perspectives of individuals or on quantitative statistical evidence.

In this thesis the approach which has been adopted is a quantitative one, in part in an attempt to show how subjective the research question in this case might be - "*The success of local economies: What contribution does social capital make? The case of Northern Ireland*". It will be demonstrated that if the definition of "*success*" is changed the areas and communities which experience it in Northern Ireland will change also.

What is lacking in the literature on local economic development, not just in Northern Ireland, but across Britain, Europe and the US, is the substantive statistical analysis of "*social capital*". Chapter Three forcefully makes this point: there is much opinion based on apparently plausible argument, practice experience or observation (and this is reported in some detail in Chapter Three) but there is relatively little quantitative demographic and economic out-turn data to support these claims. What limited attempts there have been to gather statistical evidence have all been at the large region level or at national level; and these findings have tended to be weak and often contradictory. A judgment has been made by this researcher that the best contribution which this thesis can make to this field of research is to attempt to quantify the relationship between social capital and economic success by carrying out a comprehensive statistical analysis at the intra-regional, local economy level.

A methodology will be presented in which a *success* rank is attributed to a geographical area based on a set of success indicators. A weakness with this approach is that the choice of indicators may itself be subjective, a point which is acknowledged in this thesis. Another is that it is areas which are defined as "*successful*" rather than people, although the point has been made in Chapter Four that in Northern Ireland areas do tend to be closely associated with particular groups of people.

The decision to focus this research effort on gathering and analysing statistical evidence is not just because there is already a large body of qualitative research in this field and a dearth of quantitative research. The principal reason for constructing this thesis around gathering and interpreting statistical evidence rather than qualitative material is the concern that attitudinal research, interviews and surveys carried out in a conflicted society such as Northern Ireland, might not be wholly reliable. Social scientists have always found the gathering of objective perspectives and attitudes in Northern Ireland, even when deploying substantial human resources, problematic. The mantra which came to be adopted by both communities in the region was: "*whatever you say, say nothing*!" Many felt that a misinterpreted opinion could brand an individual and lead to his/her exclusion from opportunity. As a result, radical analyses tended to be avoided, especially by practitioners delivering Government-funded economic development programmes or engaged in economic research much of which is Government-funded, in favour of pre-tested orthodoxies. There was thus the strong possibility that the researcher would be told what an interviewer thought he/she was expected to say, rather than his/her true feelings on a particular matter.

There has also been a concern that in a divided society key terms might be interpreted differently by survey subjects: "*trust*", for example, might mean something very different to different people. In fact potentially any theme under consideration might be subject to different interpretations. In addition to the problems of definition and selection bias discussed later in this chapter, there is also the fact that this researcher is a Northern Ireland resident, an embedded practitioner working for a social enterprise which harvests social capital to invest in local economic development.

The focus and organisation of the research will draw on this researcher's work over almost two decades with social capital practitioners in the region, a point made in the rationale for proposing the research question set out in Chapter One.

That practice experience has influenced the selection of the metrics around which the analysis of social capital and economic success will be framed, although the choice of those metrics has also been constrained by the availability of data, a point which is discussed later in this chapter and in Chapter Six.

Direct reference has not been made to other practitioners because of a concern that any vested interests or attitudinal bias which they might have would be difficult to uncover because of the capacity of people in Northern Ireland to mask their true feelings. The perspective of this researcher and its influence on the choice of indicators is set out later in this thesis in the rationale presented for each indicator. In that sense the provenance of the methodology on which this thesis is based is transparent.

So a judgment has been made that the research question will be answered most effectively by adopting an approach which focuses on analysing spatial differences within Northern Ireland and which uses available data collected for a range of purposes (eg: census; policy impact measures; deprivation monitoring; organisational memberships). Bringing qualitative interview-based survey material alongside such statistical analysis might detract from it by imposing a pre-emptive (and in the case of Northern Ireland, a potentially unreliable) subjectivity on the analysis.

What follows in this Chapter are the challenges which have had to be faced in designing the methodology for this kind of analysis.

5.3 THE CHALLENGE OF DEFINITION

All socio-economic research should define its *purpose*, its *scope* (its subjects, its spatial and temporal frames), and thereafter justify the data which it will use. In a 1991 paper *Designing Evaluations,* the Program Evaluation and Methodology Division of the US Government's General Accounting Office suggested that how an issue was defined would influence directly how variables or dimensions were selected and examined and how far an analysis was able to test the strength of the relationship between a cause and its expected consequence.

Definitional considerations are particularly pertinent where the research subject is a divided society such as Northern Ireland and the issues which might emerge are likely to be politically sensitive. Demonstrable comprehensiveness and a clear rationale as to why particular variables have been deployed are at the heart of this thesis' "credibility strategy". For policy-makers, the credibility of research findings will depend on whether they have been the product of a transparent process which has identified clearly what is being measured, why it is being measured, by whom it is being measured, how it is being measured, where it is being measured and when it is being measured. This is an important part of a research project because the why, by whom, how, where and when questions can affect measurement outcomes: something which should be acknowledged when presenting what are, in actuality, inferences. As Carley (1980) said:

> *"Value judgments enter into problem definition, indicator choice and locality or client group selection".* (Carley, 1980, p.184)

5.4 THE CHALLENGE OF CAUSE AND EFFECT

Establishing cause and effect in socio-economic research is problematic. While powerful computational aids can enable associations between variables to be identified and the strength of those associations and the influence of other variables to be established, it may not be possible to definitively determine which variables exerted a causal influence on others. Which variables are causing or influencing and which are being done to normally has to be imputed on the basis of *a priori* reasoning which suggests that, based on an accepted understanding of other processes, a particular scenario was most likely to have occurred.

The difficulty with attempting to suggest directions of influence, however, is that associations between variables can be complex, perhaps, for example, taking the form of an interaction in which two variables have been changed together because of a mutual relationship with other unidentified variables. Even if an initiating change in one variable were to be established as a causal factor, the related change in another variable might in turn have effected further change in the initiating variable, in a tic tac of cause and counter-cause. Establishing initiation does not necessarily mean that greater importance can be attached to one variable: striking a match, for example, may initiate an event which destroys the initiator, with the effect rebounding to have an enormous influence on the cause, changing it entirely. In this sense the effect may be of greater significance and carry more weight in empirical terms, than the cause. The value in identifying associations may, therefore, be more in the situations they suggest, than in their interlocking cause and counter cause.

This research will have to be sensitive to the possibility that an outcome may have been associated with a combination of variables which were interacting with each other to produce a combined effect; and it will have to consider whether it is likely that an association between two variables was exclusive or whether other variables might have been interacting and influencing their relationship. The analysis of each association between variables will have to consider whether exogenous influences might have been exerted on those variables, individually, in combination, or not at all.

Attribution is problematic because even very complex equations, designed to identify multivariate associations, risk missing other influences. A caveat will therefore underpin this research, as it should all socio-economic studies, to the effect that conclusions have been made, imputations suggested, *a priori*, all else being equal, on the balance of probabilities. The empirical exercises deployed as part of this research's investigations will not be advanced as proof. Rather they will form part of a chain of reasoning from which inferences will be drawn.

5.5 THE INDICATOR CHALLENGE

Studies of local economic development usually deploy indicators, statistics which measure situations at defined times for the purpose of making reasoned conclusions. The range of publicly available indicators which a researcher can draw upon is limited. Moreover, the statistics they generate do not, in fact, definitively indicate anything; rather they only suggest or infer. Carlisle (1972 p.26) described three types of indicator:

> Information: which described society and the changes taking place within it: i.e. social statistics which were regularly produced and able to be disaggregated into variables (e.g. census data).
>
> Problem solving: which related to particular problem situations (e.g. deprivation data).
>
> Problem evaluation: which monitored the progress and effectiveness of policy (e.g. Government Programme out-turn data).

Edwards (1975) added a fourth:

> Discriminating indicators: which identified areas or groups towards which policy was directed (e.g. Northern Ireland's Targeting Social Need groups and areas).

Carley (1980) suggested that in some cases the value of an indicator could be in its apparent power of estimation, where it might be used to test how close an actual outcome had been to a predicted outcome. Baker (2000), said that, researchers faced a challenge not just in justifying their choice of indicators but also in securing robust data:

> *"Validity ...... depends on how well the model is specified. ...... the strength of the model is entirely dependent on the validity of the assumptions. This can be problematic as databases are often incomplete."*
> (Baker, 2000, pp.5 and 11)

In the introduction to the 1994 Robson *et al* study of Relative Deprivation in Northern Ireland, which became the basis for Government's Targeting Social Need (TSN) programmes in Northern Ireland in the late 1990s, it was stated that a research project's value depended on the choice of indicators which were used, but that this was dependent on:

> *"the robustness and interpretability of the data"* (Robson *et al,* 1994, p.111)

To that end, Robson *et al* based the selection of the individual variables which ultimately comprised their multivariate analysis of deprivation on the degree to which each indicator reflected the dimension being studied, on the availability of robust data at an appropriate scale, on the extent of identified pre-existing correlations between variables and on the lack of ambiguity for those who were going to want to understand what the indicator was measuring. While statistical tests were applied by the Robson team to assess the robustness of the data, their report acknowledged that in the end it would be the interpretability and presentability of any findings which would be important for policy-makers.

The Northern Ireland Economic Council (NIEC), in its 1998 Response to New TSN, commented that the direction of causation and the nature of the interaction between the indicators which comprised the Robson *et al* (1994) synthetic deprivation index could not always be detected. But the NIEC agreed with Robson *et al* that it was the interpretability of such analyses which was important. The NIEC report concluded that:

> *"The challenge for policy is to unpack this (i.e. the relationship between indicators) so that purposeful intervention can take place."* (NIEC, 1998, p.22)

...... and that is the intention of this thesis, to identify associations between variables and to attempt to unpack them so as to provide insights of interest to the economic development community in Northern Ireland and beyond.

5.6 THE CHALLENGE OF ASSUMPTION AND BIAS

Why a piece of socio-economic research is being undertaken, how it is hoped it will make a contribution to policy, what value judgments have underpinned its interpretation and which methodology has been used to generate and interpret data should, Carley (1980) advised, be made clear in reporting. Researchers need to be aware that the tools which have been used to measure circumstances or situations and to generate the data from which indicators are constructed, such as questionnaires (e.g. the census), may themselves have been subject to mishandling or misunderstanding, by either the measurer or the measured. Some who answer census questions, for example, might interpret them differently from others. In fact, most surveys acknowledge that their findings are subject to a margin of error.

Appreciating the potential fallibility of data is important because most social or economic measurement schemas work with samples of given populations rather than assessments of every individual population member. Such samples are either randomly selected or based on a microcosm model which reflects an interpretation of the structure of a population at a particular point in time. In Northern Ireland, for example, if it was understood that Catholics made up 40 per cent of the population, a sample of 100 people from Northern Ireland would seek to ensure that 40 of them were Catholic. Both sample methods, however, present problems for the analyst: the random sample because it may not in actuality reflect the make-up of the population it is drawn from, with the timing of the survey and the age of the surveyors being factors which might conspire to affect the participation of sample subjects – How the sample was specified and whether there were assumptions which underpinned that procedure can also affect the validity of its subsequent analysis. The microcosm sample might also be subject to bias exerted by the individual(s) responsible for its design. Even though that bias might have been subconscious, it nevertheless can result in a survey being skewed. The models of society used to guide the make-up of the microcosm sample in the first place might themselves have been based on earlier sample surveys which were shaped by conscious or unconscious bias or sampling error.

Carley (1980) said that the selection of some data and the exclusion of other data should be recognised as a normative act. Whether or not it was based on a theory about human systems, the process by which data was selected had to be subject to the same scrutiny as any other value judgment. Brown and Harding (2002) advised researchers to make their value judgments explicit and to acknowledge that their interpretations were being made within the limitations of a model.

One of the challenges to be addressed in this research will be the spatial segregation of Northern Ireland's two communities, of its two distinctive cultural realms, and the extent to which that may or may not have been associated with the spatial distribution of other variables. The interpretation of any apparent co-terminosity between the distribution of Protestant and Catholic populations and other variables will have to be handled with great caution. Social capital data, for example, cannot be directly tagged as either Protestant or Catholic because information as to the religious/cultural affiliation of those involved in social capital-related activites was not collected. The attribution of a Catholic or Protestant hue to a group because it was located in a predominantly Catholic or a predominantly Protestant area is therefore an *a priori* assumption. That caveat will have to accompany any inference that there was apparently more of "this" which was Catholic or more of "that" which was Protestant.

5.7 THE MODELLING CHALLENGE

Krugman (1994b) said that while models were metaphors designed to simplify complex systems and provide an insight into why those systems behaved the way they did, they remained constructs, approximations of a much more intricate reality. How skeletal those constructs were would be determined by data availability, as well as the limits of measurability and time. Some of them would be richer in detail than others. Manetsch (1967) warned that the sheer complexity of social and economic systems forced simplifying assumptions to be introduced into models.

Goertzel (2002) said that the real test of a model's value was in its capacity to predict. If a model could predict significantly better than random guessing then, in his view, it was useful. However, all prediction was, he said, speculation. The further into the future one tried to speculate, the more variables which might exert an influence had to be considered and the greater the potential margin for error. Krugman (1994b) said that using a model as a basis to predict a future outcome could be fraught with dangers and that in his experience in econometrics attempts at prediction more often than not got it wrong. The best that could be expected from a model was that it would help events to be understood and the likely consequences of various actions to be considered; but prediction per se, especially in the context of the social sciences, was more likely than not to be wholly unreliable.

Societies are so complex with so many unpredictable features that it can be perilous to attempt predictions which claim any degree of exactitude about their future development. Gilbert and Troitzsch (2005) highlighted the limitations of what they called the classic strategy of the reductionist physical sciences, whereby the behaviour of a complex system was partitioned in the hope that by understanding the behaviour of its separate parts, the whole could be better understood. One reason, they said, that human society was so complex was that there were so many interactions between people which were, non-linear and essentially unpredictable.

Individuals are constantly engaged in action of some sort, they are dynamic, all of them changing, not least as they move through their life cycles altering the environment around them. The people who make up societies vary in their capabilities, their knowledge, their needs and desires. Rarely, though, does survey data reflect the diversity of people's interactions with each other. While social systems may be simply too complex to allow systematically correct prediction, where models can be helpful is in exploring with stakeholders their understanding of phenomena – to allow them to consider scenarios which might have the potential to change their understanding. Models have value where they can be reviewed, their outputs compared to observed outcomes, and then refined. Analysing economies and societies is, however, an enormous challenge, involving the measurement of multiple variables and then modelling aggregates of choices often in multiple settings. But from this process a body of theory can be developed built upon identified comparable phenomena. Gilbert and Troitzsch (2005) said that the assumptions on which such theories were built should be made explicit by researchers in order that the information provided by models based upon those theories could be contextualised. That is the rationale for having reviewed in some detail, as the preface to developing a model of local economic success, the literature on social capital, theories of territorial development and local economic success (in Chapters Two and Three).

The attributes of variables which are being investigated, along with the environment within which they are located, should be specified in a model. A model constructed iteratively in this way is likely to be easier to interpret because there will be a clear rationale for the inclusion of each variable which makes it up. Analysing the interactions between individual variables can add a further dynamic dimension which helps to guide the further refinement of the model. The challenge in constructing a model is that there may be variables which should be included but which either have not previsously been comprehensively measured, or which have been measured at different spatial scales or in different time-frames from other variables in the model. In that regard, identifying and controlling for the impact of exogenous forces on the functioning of the model presents a particularly difficult challenge. For models which have a potential policy application, there may not, moreover, be data available which links directly to the policy, particularly where the policy's objectives have not been quantified. A model which is robust enough to be of predictive value to policy-makers thus is likely therefore to be:

"*very time consuming, cumbersome, and expensive.*" (Baker, 2000 p.11)

...... to construct. Models, however inaccurate they may in practice be, are popular with policy-makers because they can provide them with *what if* scenarios and a rationale for prioritising the allocation of public funds. Policy models tend, therefore, to concentrate on identifying and calibrating interactions between variables, using mathematical tools, as a basis for constructing a policy rationale, and for simulating expected outcomes against which the impact of planned interventions can be measured.

Goertzel (2002) said that all models should be presented with health warnings. Policy-makers in particular had to be careful not to make too much of analytical techniques; although this was difficult when they were being advised by econometricians who too often had a tendency to become so immersed in their models that they lost track of how arbitrary they were.

The problem is that correlation is not causation. Correlations can be spurious because variables which were exerting an influence are often overlooked. Many modellers try to overcome this by including as many potentially influencing variables as possible in a multiple regression equation. Too often, however, some of these datasets are so inadequate or so inappropriate that they can undermine the value of the overall model.

The more heterogeneous the population or system being investigated the more complex the model required and the more its outputs risk being fallacious. The Robson *et al* (1994) study of multiple deprivation in Northern Ireland, for example, chose only to measure aggregate spatial relationships, judging that it would not have been practical to measure inter-relationships at the scale of the individual or the household. However, it was acknowledged that such area-based analyses posed difficulties. They could be blunt instruments, classifying people in some areas as either "X" or "Y" when that may not have been appropriate; while perhaps missing out other areas which, though not designated, did, in fact, contain Xs or Ys. For that reason the Robson team cautioned policy-makers about the danger of making inferences about households or communities on the basis of aggregate data.

"Complexity theory" contends that the complexity, the sophistication and the adaptability, of social systems make effective modelling of them at the grand scale a practical impossibility. Easterby-Smith, Thorpe and Lowe (1991 p.24) said that, rather than searching for fundamental laws to explain people's actions and experiences, researchers should aim to reflect as accurately as possible, using techniques such as multiple regression, the patterns of those behaviours and identify whether they were different in some settings and not in others. This perspective stresses the value of identifying local interactions and from them advancing some *a priori* imputations which can contribute to a body of knowledge. This is a much more pragmatic and therefore arguably a more realistic approach which can provide an:

> "*understanding and a feel for a sequence of events*" (Carley, 1980, p.151)

...... and an "*appreciation*" of policy. It is an approach which facilitates informed speculation rather than prediction.

5.8 THE CHALLENGE OF TIMING

Comparative studies of populations of people often take the form of cross-sectional snapshots which identify associations between variables within the same timeframe. This approach has the advantage that while there may have been unidentified exogenous factors exerting an influence, they will have been extant at a time shared by the objects which are being observed and compared, increasing the likelihood that any associations uncovered will have been analagous.

When co-variation between a set of observations is uncovered it is often taken to infer a causal relationship. However, speculation as to cause and effect on the grounds of cross-sectional co-variation at a fixed point in time can be highly spurious not just because of uncertanties as to the influence of exogenous factors but also because observations in the same time dimension may have been affected by what Worrall and Pratt (2004) called:

> "*temporal autocorrelation*" (Worrall and Pratt, 2004, p.36).

...... whereby events occurring at the same time were part of a larger event (which may or may not have been identified).

While Carley (1980) acknowledged that cross-sectional snapshots of relationships between variables were useful in helping to increase understanding as to how a particular set of circumstances had functioned, he also cautioned that there were limits on their value:

> *"These techniques cannot begin to predict contextual changes, turning points or discontinuities, which influence, upset or overthrow trends* (Carley, 1980, p.146)

The capacity of a cross-sectional snapshot study to facilitate informed speculation can, however, be strengthened by setting it in a dynamic, change context. Martin (2005) said that studies of regional development should seek to take account of change factors. Huggins (2003), reflecting on his attempt to measure comparative regional development by constructing a UK regional competitiveness index, recommended that future researchers in the field should seek to develop the:

> "*dynamism of the metrics*" (Huggins, 2003, p.95)

...... by measuring change. Setting appropriate time parameters, however, can be a problem when the subjects for study are spatially defined units, because data at the relevant spatial scale is often limited in its range and collected at different times. In Northern Ireland most of the data which is disaggregated to the level of the District Council Area is collected only during census years. This presents a problem when the definition of a dataset has changed between census years; or when over the long intervening period of ten years there have been significant changes in exogenous circumstances, an example being the ending of widespread politically motivated violence in Northern Ireland between 1991 and 2001.

This problem of datasets covering a range of time periods is common in economic and social studies. It was highlighted notably by social scientists such as Carley (1980), Stimson (1985), Worrall and Pratt (2004), Beck (2001), and Hicks (1994). Carley (1980) noted that in policy analysis in particular it was difficult:

> "*to maintain a clear time dimension distinction*" (Carley, 1980, p.38)

...... because policies were often initiated at different times or covered different periods.

Stimson (1985) said that because a dataset which could provide valuable insights was not contemporaneous with others should not be a reason for it being excluded from an analysis. Those insights, he said, might:

> "*make it sometimes worth its price*" (Stimson, 1985, p.943).

.... the price being the caveats which would have to preface the analysis of data; and which would place:

> "*limits on valid inference*" (Stimson, 1985, p.916)

Stimson suggested that in some circumstances there might be value in pooling what he called:

> "*quantitative sub-fields*" (Stimson, 1985, p.914).

...... those sub-fields being cross-sectional analyses across space and dynamic analyses over time. Often, he said:

> "*the one can be understood only with explicit reference to the other*" (Stimson, 1985, p.915).

Such an approach was particularly helpful, Stimson suggested, in situations where the number of units which were being systematically compared were limited. It was often the case, he said, in inter-territorial studies that the number of observations was small. In those cases he said that:

> "*the opportunity to be wrong is considerably enhanced when the design is two-dimensional*". (Stimson, 1985, p.916).

...... because of the risk of temporal auto-correlation and because a causal relationship between circumstances would almost certainly have developed over a time period. Adding a dynamic time dimension to a model helped to shed light on:

> "*both process and result at the same time*" (Stimson, 1985, p.917).

The analytical approach which will be adopted in this thesis in an attempt to do just that and shed light on the process (i.e. the inputs) which may have led to the result (i.e. local economic success) will be a variation on the "*time-series-cross section*" (TCSC) method proposed by Worrall and Pratt (2004) which sought to add:

"*time to the traditional cross sectional research design*" (Worrall and Pratt, 2004, p.35).

...... and had the potential to produce:

> "*some of the best designs for the study of causation next to a purely random experiment*" (Worrall and Pratt, 2004, p.36).

...... because:

> "*one is better able to control in a more natural way for the effects of missing or unobserved variables*" (Worrall and Pratt, 2004, p.36).

The model which will be constructed in this thesis will combine a cross-section of 2001 data with a set of multi-annual datasets. 2001 will be the focus of the cross-section because, as well as being census year, a key source of data on social capital in Northern Ireland, the NICVA survey of community and voluntary organisations, was carried out in 2001. This 2001 snapshot will be placed in a change context to provide some sense of the extent to which the one-year patterns represented trends which had been established over a longer period. This approach allows maximum use to be made of available data to extend the breadth and reliability of the model. Ultimately, however, the model's value will only be as good as the interpretation of it. That will depend on the context in which findings are set both in respect of practitioner experience and the perspectives of other analysts (which in this thesis have been summarised in Chapters Two through to Four).

5.9 MEASURING LOCAL ECONOMIC SUCCESS INPUTS – CLUSTER ANALYSIS

Robson *et al* (1994), commenting on their attempt to analyse the distribution of deprivation in Northern Ireland, said that, because of the degree of overlap and inter-relationship between them, the variables in their study would have to be examined in clusters, the formation of which would be based on patterns of interaction and structures of influence suggested by correlation analysis. Blocks of related variables would ultimately be analysed as synthesised, multi-variate units which simulated the interactions which had already been identified.

Carley (1980) suggested that when indicators were being analysed together in sets they should reflect the "component parts", the "institutional arrangements", of a society such as employment, religion or health (Carley 1980 p.179). Clustering related variables in this way provided an opportunity to delineate spatial typologies, to identify geographical areas which shared a number of characteristics. Babbie (1992) said that cluster analysis was of value particularly when researchers were trying to handle large numbers of variables and analyse complex systems. Mazzocchi and Montresor (2000) advocated the use of cluster analysis, in particular when more subjective social indicators were available alongside census data, because it provided a framework which allowed maximum use to be made of the data available using simple readable tools.

In considering what variables to aggregate, cluster or combine together in a model, Manetsch (1967) proposed that two conditions should be fulfilled: The variables should, he said, be subject to similar external influences and they should exert similar influences upon their environment. Zapf (1975), commenting on the value of clustering variables, stressed the importance of defining the purpose of including each variable in turn, as well as justifying the system of analysis which would be used. In choosing independent variables to be entered into a cluster analysis framework, the potential that there could be co-linearity between some of them whereby variables, rather than being independent, might in fact be interdependent, had to be considered. He recommended multiple regression as a means of controlling for such co-linearity. In this research variables which may have had an input into the achievement of local economic success will be grouped into clusters of influence, the principal cluster of influence for the purposes of this thesis being "social capital". To help put any association which may emerge between indicators of social capital and local economic success in 2001 into context, the influence of other clusters of influence will also be considered: education and skills, social characteristics, the labour market, and economic development policy. The number of variables in each cluster will be limited by the constraints imposed by the ordinary least squares regression method: given that there are 26 observations the maximum number of variables which will be entered into individual regression equations will be capped at ten. This approach will be discussed in greater detail in Chapter Six.

5.10 MEASURING LOCAL ECONOMIC SUCCESS OUTCOMES – THE SYNTHETIC INDEX

In the early 1980s the European Commission began to experiment with various multivariate techniques with a view to designing a defensible method for allocating Structural Fund budgets to Member States. In 1984 it published a synthetic index of regional economic disadvantage. A revised version appeared in 1987. The latter was based on four variables:

a) GDP per head of population,
b) GDP per person employed,
c) The unemployment rate adjusted to take account of hidden unemployment, and
d) An estimate of the demand for new jobs.

The resultant "synthetic index" was a weighted average of these standardised variables, expressed as a percentage of the European Community average. In 1992 Copus and Crabtree published a more sophisticated model which was focused on measures of peripherality and what was described as "rural fragility". They acknowledged that the outputs from this and from other earlier such procedures would be influenced by the choice of variables which were entered into the model and by the method used to weight the variables. They therefore advised that such schemas should be no more than an aid to (rather than the determinant of) decision-making. Carley (1980) also advised researchers to be realistic about what they could achieve and not to over-value the explanatory power of their systems:

> *"it is beyond the state of the art to expect a policy-oriented social indicator system to present a complete causal model"* (Carley, 1980, p.185)

How are the variables which are selected to form a synthetic index then to be combined together? The method adopted by Copus and Crabtree (1992), was to weight individual variables in terms of their policy significance. The problem with this approach is that the result, as well as being influenced by the subjective weighting applied to individual variables, does not record the multiplicative effects, the compound influence, of the variables in the model. Robson *et al* (1994) argued that weighting systems involved a degree of arbitrariness, with different methods of combining indicators producing different results. The "principal component analysis" method of weighting variables, for example, produced results which differed depending on the variables which were used and the factor analysis method which was employed. If values were multiplied together one or two extreme values could distort the outcome. Because of this, Robson *et al* chose to construct their synthetic indices from the added unweighted rank scores of all the variables in their model. It is this approach which will be used to create the local economic success index which will be at the core of this research.

Martin (2005) noted the increasing popularity among regional development agencies of regional competitiveness indices, scorecards and league tables: the International Institute for Management and Development had annually since 1994 published a world competitiveness yearbook, analysing the competitiveness of 49 countries under eight headings, using both quantitative and qualitative data; the OECD had developed a Science Technology and Industry Scoreboard (1999) comprised of separate synthetic indices relating to different aspects of competitiveness; De Vol (1999) had constructed a new economy index for the USA which was a composite index constructed from the mean average of the scores recorded by each area against a set of individual indices; Atkinson and Gottlieb's 2001 Metropolitan New Economy Index had weighted, somewhat arbitrarily, a set of variables within an overall composite index structure; and Huggins (2003) had attempted to assess the competitiveness of regions and localities of the UK by constructing an index reflecting:

> "*the measurable criteria constituting 'area competitiveness*" (Huggins, 2003, p.89).

Huggins (2003) had been influenced by the World Economic Forum's Global Competitiveness Report (1999). It had used both quantitative and qualitative (i.e. survey) data. Huggins, however, cautioned that a problem with such approaches was that:

> *"they potentially fail to identify other factors driving economic growth and competitiveness"*. (Huggins, 2003, p.90).

Huggins noted that another potential weakness of the synthetic index was the possibility of double-counting due to multi-co-linearity between variables:

> *"This possibility is common to all those approaches that seek to gain a composite and comparative view of economies based on aggregating a number of variables which to some extent will portray a level of association"* (Huggins, 2003, p.96).

This could be avoided, he said, by identifying distinctive:

> *"core factors"* (Huggins, 2003, p.96).

The methodology which will be used in this thesis will, having identified a set of such "core" economic success outcomes, adopt the approach used by Robson *et al* (1994 p.5) to bring them together by adding their unweighted rank scores to create a composite Local Economic Success Index (this will be described in more detail in Chapters Six and Eight). By avoiding the disputable subjectivity of weighting, this method has the advantage of being transparent. However, care has to be taken in constructing such a "synthetic index" to ensure that the model, in attempting to be as comprehensive as possible, does not become so multi-dimensional as to be difficult to interpret. While a synthetic index can provide an overall summary perspective it cannot shed light on whether some of the variables within the index may have been exercising more influence as drivers than others. For that reason this thesis will also analyse separately the association between each individual economic success outcome and the potential economic success inputs. This will help to determine whether the process of synthesising the individual outcome indicators in the composite index might have homogenised what were in actuality a heterogeneous set of circumstances, i.e. the cancelling-out effect.

5.11 ASSESSING THE ASSOCIATION BETWEEN A DEPENDENT AND A SET OF INDEPENDENT VARIABLES – MULTIPLE REGRESSION

Multiple regression is a powerful statistical tool very widely used in socio-economic research[5.1] to isolate associations between individual inputs and particular outcomes, while controlling for the influence of other possible inputs, allowing qualified inferences to be made in respect of the independent contribution of each input to the achievement of the outcome. These "input" variables are sometimes referred to as "independent", "predictor" or "controlling" variables; while the "outcome" (in this case local economic success) is variously referred to as the "dependent", "criterion" or "controlled" variable.

Because multiple regression assumes that variables will not be entirely independent of each other, co-variance is controlled for (in contrast to a correlation equation in which co-linearity cannot be controlled for). Iyer *et al* (2005, p.1029) used regression in their study of social capital, economic growth and regional development in the USA, to evaluate the significance, relative to other factors, of the association between social capital and economic development.

The regression technique which will be used as part of this analysis will be the "ordinary least squares regression". This method involves calculating a line of best fit against a plot of variables from which a set of values will be generated which can confirm, reject or amend a set of expectations postulated in an hypothesis (such as: social capital is associated with the distribution of local economic success). The independent input variables whose association with local economic success might be plotted include measures of social capital. The difference, the deviation, between the actual values generated by these independent variables and the values predicted by the dependent variable is then measured. By measuring the deviation between the line of best fit and each of the independent variables, the proportion of the total predicted variation in the

[5.1] As noted by Cohen *et al* (2003); also Tabachinck and Fidell (1996).

dependent sample which can be explained by the independent variables in the equation is calculated. This technique allows outliers, i.e. extreme values, to be identified. The line of best fit minimises the sum of the squares of the vertical distances between the estimated line and the actual value (i.e. least squares). The less variability there is around the regression line relative to overall variability the greater the explanatory potential of the model. The total sum of those individual variable measures, the Adjusted R-Squared, is taken to indicate the extent to which variance in the dependent variable is explained by the independent variables in the model. The strength of the individual association between each independent variable in the model and the dependent variable is also measured and this is recorded by a "t-score" and a "co-efficient of significance".

Regression generates statistical findings which can provide a basis for discussion and suggest directions for further research. However, Freedman (1991) advised researchers to be cautious when interpreting regression equations. The limitation with all regression techniques, he said, was that they only allowed the strength and significance of relationships to be ascertained; they could not explain underlying cause. Interpretation of the outputs of regressions deployed in this research, therefore, will have to be rationalised in the light of other experience, from direct practice and studies carried out elsewhere.

5.12 SPATIAL ANALYSIS: A NOTE OF CAUTION

The research in this thesis will be constructed around the interpretation of territorial patterns within Northern Ireland and the variables associated with them. The Northern Ireland Economic Council (NIEC) in its response to the Government's New TSN Strategy in the Province (1998) noted that in Northern Ireland the spatial units which were used in socio-economic analyses (such as District Council Areas) were not very self-contained. Their boundaries could be porous. People moved across administrative boundaries to work, for example; and in respect of the location of industry:

> *"When plants are located in or near deprived areas, the vast majority of better paid jobs are taken by non-deprived area residents."* (NIEC, 1998, p.23)

What the NIEC was highlighting is a problem which affects almost all comparative analyses of datasets relating to small contiguous spatial units defined by a tier of administration (in this case local government) rather than by patterns of connection between populations or industries. The activities defined by administrative units are unlikely to have existed in isolation from the rest of Northern Ireland, the rest of Ireland or beyond: Influences will almost certainly have been exerted on those administrative units by neighbouring administrative units.

Keeble, Walker and Robson (1993) contended that this was an issue which had been widely ignored in econometric literature:

> *"including most previous work on spatial variations in new firm formation."* (Keeble, Walker and Robson, 1993, p.34)

Lembo Jnr (2005) said that studies using spatially defined data should be cautious in drawing conclusions because of this phenomenon, which he described as "spatial auto-correlation", i.e. the correlation of a variable with itself through space. Lembo Jnr argued that an assumption could be made that all things were in some way related, but that near things were more related than far things.

Neighbouring areas which were alike in some way were, he contended, likely to have been to some degree spatially auto-correlated. The extent of the spatial auto-correlation depended on the variable as well as the degree of connectivity between the neighbouring areas. Noting that analytical tools such as Pearson's rank correlation method and the Ordinary Least Squares Regression assumed that the value of each observation entered into an equation was independent, Lembo Jnr advised that researchers should acknowledge the possibility that samples taken from nearby areas may have been spatially auto-correlated when reporting results, in particular where research was, as in the case of this thesis, seeking to uncover the prevalence of certain conditions in contiguous areas, in order to highlight the existence of intra-regional spatial typologies, in this case zones of economic success. Van Stel and Storey (2004) said that in inter-regional and inter-district studies spill-over effects between neighbouring areas were to be expected and should be acknowledged as having probably occurred when reporting research findings.

5.13 THE RESEARCH SAMPLE: NORTHERN IRELAND'S LOCAL ECONOMIES – DISTRICT COUNCIL AREAS

Notwithstanding the note of caution just discussed, it has been assumed in this thesis that in Northern Ireland's divided society, the administrative units which defined locality in 2001 have more validity as constructs which demarcated patterns of behaviour than would administrative units at a similar spatial scale in other parts of the UK. Hart and Murray (2000) contended that:

> "*within Northern Ireland, place, culture and identity do matter*" (Hart and Murray, 2000, p.12).

Of course, many of Northern Ireland's businesses in 2001 were trading extra-locally and exporting as vigorously as businesses in other parts of Britain and Ireland. Nevertheless, given that localities in Northern Ireland could be defined as either predominantly Protestant or Catholic, and that movements of population and travel to work patterns within Northern Ireland were still influenced by its geography of separate living; and given that the majority of young people in Northern Ireland in 2001 continued to be schooled separately, restricting inter-cultural contact even further; a case can be argued that Northern Ireland in 2001 had greater potential than many other regions to provide potentially interesting insights into what might explain intra-regional differentials in the success of local economies.

The territorial units in Northern Ireland designated as local economies for the purposes of this research will be District Council Areas. They have been chosen for three reasons: Firstly, their status as formally defined local economies; secondly, the availability of data at the District Council Area spatial scale (NUTSIV); and thirdly, the principle of subsidiarity, elaborated upon in this respect by Stanyer (1997), whereby the unit designated as the most effective for comparative analysis should be that which is most appropriate for achieving that objective, in this case the analysis of the role potentially played in local economic success by social capital.

The political violence which erupted in Northern Ireland in the late 1960's was in part a response to a perceived abuse of power by local councils. Part of the British Government's subsequent package of institutional reforms in response to the crisis was the restructuring of local government. The Government's intention was to maximise representativeness while at the same time placing limits on the functions of the 26 newly formed District Councils. New central government departments became responsible for much of the delivery of public policy in Northern Ireland from the mid-1970s. Some of the functions, which in other parts of the UK would have been undertaken by local authorities, were in Northern Ireland in 2001 still the responsibility of central government departments or agencies; although in drawing up policy to guide the delivery of those functions, the views of the District Councils were usually sought.

From the mid-1990s, however, District Councils began to take on a more significant governance and service delivery role in respect of local economic development. The Department of Economic Development in 1995 designated Northern Ireland's 26 District Councils as the primary conduit for co-ordinating local economic development in the region. Also in 1995 District Council Areas were adopted as the platform for the establishment of the 26 District Partnerships which were set up as deliberative partnerships by the EU to manage at local level substantial funds under the Special Support Programme for Peace and Reconciliation. Local Enterprise Agencies (LEAs), also worked within the established District Council Area boundaries; as did other bodies involved in facilitating local economic development programmes: the twelve Leader Action Groups, the three Interreg Partnerships and the four Natural Resource Rural Tourism Partnerships. All of these bodies were provided with District Council support either in the form of direct staffing or the provision of match funding. District Council Areas in Northern Ireland thus constituted 26 formally defined local economies each of which had by 2001 its own budget and its own structures for supporting local economic development. LRDP (1998) in a report for the Northern Ireland Single Programme Monitoring Committee, described District Councils as leading efforts for economic and social development in their areas; and Hart and Murray (2000) described District Councils as the:

"*crucible for local development ...... through direct delivery, brokerage and collaborative practices*" (Hart and Murray, 2000, p.27).

Map 5.1:. *Northern Ireland's 26 District Council Areas.* (referred to also in Chapter Four as Map 4.2)
(Source: NISRA)

In 2001 582 Councillors served within the 26 District Councils in a region which, in population and area, would have merited between 3 and 5 Local Authorities in Britain. The size of those District Councils varied considerably in terms of population served and spatial extent. Belfast City Council, for example, the largest District Council in Northern Ireland (population in 2001: 1,685,267), served a population of 277,391 people while covering a geographical area of just 11,488 hectares; whereas Moyle, the smallest Council in respect of budget, served a population of just 15,933 people while being responsible for an area of some 47,976 hectares. In respect of population served, fifteen of the Councils were in the range 20,000 – 60,000 people, seven of the Councils were in the range 60,000 – 100,000; three served populations greater than 100,000, including Belfast, and only one, Moyle, served a population of less than 20,000. Because of the substantial variation in the size of District Council areas all of the data presented in this thesis will have been standardised per 10,000 adult resident population.

Another legacy of the response by the British Government to civil/political unrest was the establishment of rigorous procedures to monitor public expenditure at local level and to analyse demographic and other trends so that the impact of strategies to ameliorate perceived discrimination and disadvantage could be measured. As a result, Northern Ireland offers researchers local-authority-level datasets the range and reliability of which is among the best in the European Union. These data-sets provide an opportunity to measure the association of social capital with economic success at the level of theDistrict Council Area local economy while controlling for a comprehensive range of demographic, policy and other factors.

5.14 DISTRICT COUNCIL AREAS: A NOTE OF CAUTION IN RESPECT OF SAMPLE SIZE

Using District Council Areas will place limits on the design of the Northern Ireland Local Economic Success model because the 26 District Council Areas can only generate 26 observations in respect of each of the indicators of social capital, the other potential economic success input variables and the local economic success outcomes. This will place restrictions on the use of the Ordinary Least Squares Regression technique, the preferred analytical method in studies which are seeking to measure the independent association between each one of a multiplicity of possible input variables and a dependent variable (in this case, local economic success). When regressions are used within the physical sciences, claims of robustness are made only if there are substantially more observations than there are independent variables in the model. Casey (2004) noted, in respect of his study of the association between social capital and economic prosperity in Britain, that confidence intervals would be affected by sample size: the smaller the sample size the larger the potential margin of error. However, he defended using social capital data even where sample sizes were smaller than ideal, as in comparative studies of regional economic performance in a territory such as Britain, on the grounds that:

> "*there is no more accurate data available. Rejecting the use of these data precludes the possibility of empirical research in this area.*" (Casey, 2004, p.115).

...... and while methodological standards should be maintained by carefully selecting variables to be entered into a model, they should not, he said, be:

> "*a straight-jacket* (sic) *limiting research to statistically valid yet uninteresting subjects. It is better to use the available data and recognise their limitations*" (Casey, 2004, p.115).

Robson *et al* had also cited sample size as a caveat in respect of their 1994 Northern Ireland Deprivation Study:

> *"for Districts, while the denominators are larger and the correlation coefficients more robust, there are only 26 observations and each covers relatively large populations so that there can be considerable hidden variation within each District. This means that the substantive meaning of associations between indicators at a District scale can be interpreted with much less confidence."* (Robson *et al*, 1994, p.3)

Sample size is the significant constraint in this thesis. Having just 26 District Council Areas as an observation pool has the effect of limiting the number of variables which can be analysed together in clusters of influence using regression. This issue and its effect on shaping the methodology which will be used in this thesis will be discussed in the next chapter.

5.15 LOOKING AHEAD

The next chapter will chart the analysis path which this thesis will take. It will describe how the challenges identified in this chapter will be dealt with in this thesis. The constraints which have influenced the pooling of cross-sectional and time-series datasets and the formation of clusters of variables around which the analysis will be constructed will be discussed. Separate chapters (Chapter Seven and Chapter Nine) will be set aside to examine in more detail both the economic success "outcome" measures and the social capital "input" measures.

CHAPTER SIX

THE APPROACH TO MEASURING LOCAL ECONOMIC SUCCESS IN NORTHERN IRELAND

6.1 INTRODUCTION

The principal hypothesis being tested in this thesis is whether an association was evident between social capital and the attainment of local economic success in Northern Ireland. In order to test the hypothesis, measures which adequately capture social capital in a Northern Ireland context will have to be identified and the pattern of local economic success in the Province established. To do that a way of measuring local economic success will have to be found. Local economic success is a complex concept. It is a multi-dimensional outcome and this has to be reflected in any attempt to analyse it. But how comprehensive is it practical to be in defining economic success and the variables associated with it? How comprehensive will the data at an appropriate spatial and temporal scale allow the definition and subsequent analysis to be?

However comprehensive the range of variables which are ultimately used to construct it, any model of local economic success can only ever be an approximation of reality because individual businesses and individual households can act unpredictably and because unforeseen exogenous shocks can change an outcome. This thesis is for that reason seeking to identify patterns of association which might be of interest to policy-makers and other analysts rather than attempting to design a definitive, predictive model.

Local economic success will be defined as a series of outcomes. Social capital will then be defined as a series of potential economic success inputs. Other potential economic success inputs will also be identified. These may interact with social capital in being associated with economic success or they may be more strongly associated in their own right with the prevalence of economic success, something which will be important to establish in order to set the significance of social capital as an economic success input in context.

Before analysing the association between social capital and local economic success at a Northern Ireland level there will be a detailed examination of the way in which economic success and social capital manifest themselves within Northern Ireland. The objective of this part of the research (Chapters Seven and Nine) will be to establish to what extent heterogeneity within Northern Ireland should be a caveat which prefaces the analysis at the Northern Ireland-region level. At the time of writing this was the first time such a comprehensive analysis had been carried out of social capital, local economic success and other potential local economic success inputs within the contested territory of Northern Ireland.

6.2 THE LIMITATIONS OF THE DATA

What constitutes the "success" of an economy is a subjective judgment and as was clear in Chapter Four there is no agreed definition of social capital. Part of the judgment which will have to be made in this thesis when proposing definitions of these concepts will be to determine how they are to be measured, particularly if data is not consistently gathered for that purpose by the bodies responsible for producing national or regional statistics (in the case of Northern Ireland that principally is NISRA – The Northern Ireland Statistics and Research Agency). Potential sources of data will have to be assessed for their capacity to produce statistics and measures which are relevant to these definitions.

Data harvesting is constrained by the extent to which the objects being studied (in this case District Council Areas in Northern Ireland) have been objects for the measurement of particular phenomena; and by the timing of those measurements (i.e. whether they were in census years only). The range of data which is disaggregated down to the level of the District Council Area is limited (as an example, output measures such as GDP per capita are not calculated below NUTS III level in the UK); and from the data which is available there are only so many measures which can be justified as economic success "outcomes" or economic success "inputs". Of those inputs only a few can be appropriately defined as manifestations of social capital.

Most of the best data available at the level of the District Council Area in Northern Ireland pertains only to census years, although there are other potentially useful datasets covering other periods of varying lengths, ranging from ten years to five years. In Chapter Five an analytical method was described which could accommodate such a situation, *time-series cross-sectional* (TSCS) analysis. In this thesis a variant of that system will be constructed to allow as much of the data available within the constraints set by the subject of the study (local economic success and social capital) and the object of the study (District Council Areas) to be used.

Datasets will be organised into clusters of influence, depending on whether they measure economic success outcomes or potential economic success inputs, including social capital. As was discussed in Chapter Five this approach is intended to maximise the descriptive potential of the limited data available. The remainder of this chapter looks at what datasets are being selected, the time periods which they cover, how they will be organised into clusters of influence and the analysis path which the thesis will follow in its attempt to assess whether social capital was associated with local economic success in Northern Ireland.

6.3 POOLING CROSS-SECTIONAL AND TIME SERIES DATA

Thirty-eight datasets have been identified for analysis. Twenty-nine of those are snapshots of 2001, three comprise 2001/2002 data, three are multi-annual aggregate datasets and three measure change, two over five years and one over ten years. A description of each variable in turn, is set out in Appendix one.

2001 has been chosen as the reference year for this analysis for two reasons: firstly, because a key dataset, the NICVA survey of community groups and voluntary organisations in Northern Ireland, was completed in 2001 and secondly because 2001 was census year and a more comprehensive stock of data at District Council Area level was available for analysis for this than for any other year since 1991. The decision to focus the analysis on spatial units at NUTS level IV, i.e. District Council Areas, does though mean that some economic performance data are not available for analysis, notably Gross Domestic Product per capita; although the absence of this data has been far outweighed by what is available.

A decision has been made to provide a change context for this 2001 local economic success snapshot by establishing the extent to which the economic situation which prevailed in each District Council Area in 2001 was an improvement on that of five and ten years earlier. Three of the nine local economic success outcomes which will form part of this analysis will be measures of change: one measuring change between 1991 and 2001 (population), and two others measuring change over the five years between 1997 and 2001 (employment change and business stock change – both generated using the shift share method). The rationale for the 1997-2001 timeframe is that after 1997 (when the re-institution of paramilitary ceasefires launched the all-party talks which led to the Good Friday/Belfast Agreement) data was less likely to have been corrupted by the impact of politically motivated violence.

In an attempt to confirm a consistent picture in respect of community group activity (as an important manifestation of social capital) and of levels of business start-up and expansion (the most widely accepted economic success outcome), three multi-annual datasets have also been constructed for inclusion in the analysis: One aggeregates data over seven years 1995-2001 (applications by community groups to the National Lottery Community Fund from its inception), one aggregates data over six years 1996-2001 (grants from the Peace I Programme to community/voluntary sector groups from its inception), and one aggregates data over five years 1997-2001 (the number of businesses newly registering for VAT each year in each District Council Area from 1997, when paramilitary hostilities officially ended, to 2001).

6.4 CLUSTERS OF INFLUENCE – OUTCOMES AND INPUTS

The thirty-eight variables which will feature in the forthcoming analysis fall into two groups, nine local economic success "outcomes" and twenty-nine potential economic success "inputs".

The nine local economic success outcomes measure quality of life, the labour market, industrial and commercial structure and demography. Each is an accepted indicator of economic success and each has featured either in the DTI competitiveness index (2001), the Huggins competitiveness index (2003), the Dunford and Hudson schema (1996), or the De Vet success matrix (2004). The rationale for the choice of each will be discussed in greater detail in Chapter Seven.

The economic success inputs are grouped under five headings, or "clusters of influence": social capital, social characteristics, the labour market, education and skills, and economic development policy. The correlation between all twenty-nine inputs in these five clusters and the nine success outcomes will be analysed in Chapter Seven in an attempt to unravel the complex array of associations which underpin the functioning of Northern Ireland's local economies. Northern Ireland is a complex place with a history of social and economic asymmetries and political violence. It is not a region of homogeneous characteristics and experiences. It is a subject which may not therefore generate straightforward linear associations between variables. The purpose of Chapter Seven is to determine the extent of the intra-regional heterogeneity within Northern Northern, to establish a context for the assessment of the association between social capital, and other factors, and local economic success across the region as a whole in Chapters Eight, Ten and Eleven.

A conclusion from the detailed examination of each success outcome in Chapter Seven will be that no one outcome measure alone can adequately represent the multi-dimensional complexity of local economic success. This will be the rationale for combining the individual success outcomes into a composite Local

Economic Success Index (Chapter Eight) based on the approach used to measure performance across anumber of variables by Storey (1994) and Robson *et al* (2004). Each District Council Area will be allocated a Local Economic Success Index ranking which will be a measure of its relative local economic success status.

The nine variables which make up the key "social capital" cluster, whose association with local economic success is the principal focus of this thesis, will be separately analysed in Chapter Nine with a view to shedding some light on the complex functioning of social capital across Northern Ireland's heterogeneous local economies. The rationale for adopting each of these nine social capital indicators will be set out in that chapter.

In Chapter Ten regression will be used to identify associations between District Council Area rank scores in respect of each of the social capital indicators, as well as a measure of religious/cultural affiliation, and the Local Economic Success Index, controlling for potential co-linearity. The relationship between the four other clusters of variables and local economic success will be separately analysed (Chapter Eleven) so that any association which is uncovered between social capital and local economic success can be set in context.

The number of variables in each cluster is arbitrary insofar as it is a function both of data availability and the restriction which the small number of observations in the sample (i.e. the 26 District Council Areas) places on the number of variables which can undergo effective regression analysis. The upper limit for the number of variables in each cluster has been set at ten because beyond that the degrees of freedom would be such as to make any findings questionable.

6.5 RANK SCORES – A METHODOLOGY TO FACILITATE COMPARISONS BETWEEN SPATIAL UNITS

In order to measure associations between different types of data and make comparisons between the spatial units which are the focus of this study, every one of Northern Ireland's 26 District Council Areas will be allocated a rank score out of 26 in respect of each of the outcome and input indicators used in the analysis. This will allow data which measure very different things (examples being: proportions of people, numbers of businesses, scale of industrial property) to be analysed together. A score of one will denote the highest concentration of each input (e.g. number of Catholics, number of IDB jobs) or the greatest level of success in the case of each success outcome.[6.1] It is the District Council Area rank scores which will be the subject of the correlation and regression analyses presented in this thesis. When a correlation is reported in this thesis between a variable X and a variable Y, for example, it will be a correlation between the distribution of District Council Area rank scores in respect of variable X and those in respect of variable Y which will have been measured.

In order to control for the variable size of the 26 District Council Areas in the sample, before they are ranked the data which isn't already in the form of a percentage of the adult resident population (which most of the census data is) will be standardised per 10,000 adult resident population.

[6.1] A rank score of one will denote the lowest deprivation score, the highest average earnings, the highest job density score, the lowest redundancy score, the highest proportion of business services, the highest percentage population increase, the highest business stock change competitiveness differential, the highest employment change competitiveness differential and the highest aggregate number of VAT-registered businesses.

6.6 THE SPATIAL GRAIN

Although the sample of 26 local economies on which this research will be focused is a relatively small one, it will be shown that in 2001 the performance range between the most successful and least successful District Council Areas in respect of each of the economic success outcomes was very significant; which given the relatively small geographical size of Northern Ireland is a striking finding. This suggests that the distance in aggregate economic performance terms between an overall Local Economic Success Index score of 1 and an overall score of 26 is likely to be very considerable. The implication of that would seem to be that the benefits of economic success were distributed very unevenly within Northern Ireland in 2001. This will be discussed in greater detail in Chapters Ten and Eleven.

6.7 ECONOMIC SUCCESS OUTCOMES

6.7.1 Introduction

The nine local economic success outcomes have been selected for analysis on the basis that they are the facets of economic success identified by the literature and in economic development policy practice in Northern Ireland for which data at District Council Area level can be secured. Each relates to a set of economic development policy objectives in Northern Ireland – some implicit: limiting the level of redundancies, creating increased demand for labour and attracting people to live in an area; and others more explicit: achieving an absence of multiple deprivation (an overarching objective of the Targeting Social Need policy in Northern Ireland from 1991) and increasing average weekly earnings, the numbers in employment and the registration of new businesses (identified by DETI as measures of success in its *Strategy 2010*).

Five of the nine outcome indicators will be static 2001 snapshots of the situation pertaining to labour market demand, redundancies, deprivation, earnings, and business stock in that year. One other will measure aggregate business formation data over five years, 1997-2001. These six static outcome measures will be augmented by three dynamic indicators of change. A more detailed rationale for the selection of each of these variables as economic success outcomes is set out in Chapter Seven.

6.7.2 The economic success outcome variables

Two indicators have been selected to measure **quality of life** outcomes:

> Outcome one *(depriv)*: A measure of **low deprivation** derived from the index of multiple deprivation in 2001 produced by the Northern Ireland Statistics and Research Agency (NISRA) to designate priority Targeting Social Need (TSN) areas. This residence-based indicator is an index synthesised from seven deprivation domains: income; employment; health

and disability; education, skills and training; access to services; social environment; and housing stress.

Outcome two (*meanearn*): **Average gross weekly earnings** by District Council Area in 2001. As a workplace-based measure this measure will not take into account movements of commuters across District Council Area boundaries.

Two indicators have been selected to provide an insight into the performance of the **labour market** in 2001:

Outcome three (*jobdens*): **Job density** in 2001, a measure produced by the Department of Enterprise Trade and Investment in Northern Ireland. As a ratio of jobs in an area against the number of people resident there, it is a proxy measure of demand for labour in each District Council Area

Outcome four (*redund*): The number of **redundancies** per 10,000 adult resident population in each District Council Area in 2001, will measure the extent to which a District Council Area in 2001 was having to bear costs associated with business restructuring. While it is recognised that redundancies may be necessary for a firm to modernise, this indicator is included because redundancies bring with them costs. Areas which have to bear those costs will be disadvantaged at that point in time relative to other areas which don't.

Two indicators have been selected to provide comparative measures of **industrial and commercial structure.**

Outcome five (*servbus*): The **stock of financial, property and business services** in 2001 as a proportion of the total stock of VAT registered businesses in each District Council Area per 10,000 adult resident population. The *prior* here is that the presence of financial, property and business services in an area will have been an advantage. Not only would the sector have provided relatively highly remunerated employment, but regional development theories postulate that it would have been associated with agglomeration economies and as such is a proxy for competitive advantage.

Outcome six (*vatreg*): The aggregate number of **new VAT registrations** per 10,000 adult resident population between 1997 and 2001 in each District Council Area. This indicator measures how many businesses emerged in total between 1997 and 2001 to reach the VAT registration threshold and become wealth generators as well as employers in each District Council Area. This five-year dataset (1997-2001) is an attempt to identify a consistent post-ceasefire pattern of small business formation across Northern Ireland.

Three indicators have been designed to measure **change**, in population over ten years, and in industrial/commercial structure and employment over a five-year post-ceasefire period:

Outcome seven (*popchange*): **Population change 1991-2001** is an indicator of the extent to which an area had become attractive as a place to live. New people in an area would have represented a new reserve of demand for goods and services.

Outcome eight (*stockcompchge*): The **business stock change competitiveness differential** measures change over a 5-year period (1997-2001) in the stock of businesses in each District Council Area, over and above that which would have been expected if the Northern Ireland average rate of change by sector had been applied. This is an important measure because it identifies the residual change in the stock of businesses in each District Council Area which cannot be attributed to that area's sectoral structure or Northern Ireland sectoral trends. It is hypothesised that this residual will describe a performance *differential* which will in effect be an indicator of *competitiveness* (and, as discussed in Chapter Two, by implication of economic success). By measuring the association between potential economic success inputs and this differential it may be possible to shed some light on what constituted competitiveness in Northern Ireland in 2001, and to determine in particular the extent to which social capital was associated with the phenomenon.

Outcome nine (*empcompchge*): The **employment change competitiveness differential** measures change between 1997 and 2001 in the numbers in employment in each District Council Area controlling for sectoral trends. Like the business stock change indicator this measure attempts to identify the "differential" which, because it cannot be explained by sectoral trends, might be attributable to the other factors, such as social capital.

A caveat in respect of the outcome indicators which measure jobs (job density, jobs lost through redundancy, and job growth by sector over five years), is that these are work-place based datasets and as such they will not be able to confirm how many of the jobs attributed to each District Council Area were indeed filled by people who were resident and spending their wages in those District Council Areas. For the purposes of this research, an assumption is being made that while there may have been some degree of impact leakage across District Council Area boundaries, particularly in respect of areas close to Belfast, most people in Northern Ireland would have lived in the same District as they worked;[6.2] and that, therefore, the income and employment benefits accruing from business operations, be they newly formed or existing businesses, would have been enjoyed principally in the District Council Areas in which they were based.

[6.2] This is an assumption based on practice experience. However it is accepted that "most" is an elastic, imprecise concept. There is no data to verify how many people worked in their home areas.

6.8 ECONOMIC SUCCESS INPUTS

6.8.1 Introduction

Five clusters of variables which may have had an input into the attainment of economic success have been identified. They are: social capital, education and skills, the labour market, social characteristics, and economic development policy. The variables in each cluster will be described in this section. In the case of the "social capital" cluster, the cluster whose association with local economic success is the focus of this thesis, an entire chapter (Chapter Nine) has been set aside to analyse each social capital indicator individually.

6.8.2 Social capital

In the literature on social capital assertions were made by Hall (1999), Putnam (2000), Narayan and Pritchett (2000), Teachman *et al* (1996) and Bowles and Gintis (2002) that social capital, educational attainment and the formation of institutions were inter-related and that in some circumstances social capital, especially where it had an institutional form, could exert an influence on economic performance. However, there have been few attempts at the level of the local economy to empirically measure the association between social capital and economic success; and Casey's (2004) attempt to measure the influence of social capital on economic performance at the level of the region in Britain was inconclusive. He found that, while people in more prosperous regions were more likely to participate in civic organisations and to display higher levels of trust overall across Britain, engagement in public affairs appeared to have had no economic payoff. In Casey's study the association between economic associations (i.e. voluntary/community groups involved in economic development) and economic outcomes was actually found to be an inverse one; something he described as:

> "*surprising*" (Casey, 2004, p.109).

Iyer *et al* (2005) recommended that researchers should concentrate their efforts on identifying what they described as "revealed", or measurable social capital. They suggested that the choice of data sets should depend on the type of impact which the institution or activity was expected to have; suggesting that an imputation from an association between variables was a more realistic objective for researchers than the establishment of causality.

Nine measures of "revealed" social capital have been selected in an attempt to represent those facets of social capital identified in Chapter Three (eg. Boschma 2000; Iyer *et al* 2005) as potentially being significant contributors to economic outcomes: collective voluntary action, community commitment to education and civic participation.

Five indicators have been selected to measure the scale and effectiveness of collective community action:

- The number of active community groups involved in economic and business development per 10,000 adult resident population in each District Council Area in 2001 (*eccdevbus*)
- The number of community businesses receiving development support per 10,000 adult resident population in each District Council Area in 2001 (*commbus*)
- Applications to the National Lottery Community Fund per 10,000 adult resident population 1995-2001 in each District Council Area (*CommFund*)
- Grants to community/voluntary sector groups from the EU Peace I Programme per 10,000 adult resident population 1996-2001 in each District Council Area (*PeaceIFund*)
- The square footage of workspace provision by local enterprise agencies per 10,000 adult resident population in 2001 in each District Council Area (*LEAsqft*)

There are two indicators which measure a community's commitment to education:

- The percentage of people aged 16-74 holding 5+ GCSEs at grades A-C in 2001 by District Council Area (*qualnew*)
- The percentage of people aged 16-74 who were full-time students in 2001 by District Council Area (*studsall*)

..... and there are two indicators which measure of the level of civic participation in each District Council Area:

- The number of Credit Union members per 10,000 adult resident population in 2001 (*Credit Union*)
- The number of people exercising their franchise in District Council elections per 10,000 adult resident population in 2001 (*voter particptn*).

The rationale for adopting each of these measures of social capital will be set out in some detail in Chapter Nine.

6.8.3 Education and skills

Seven education, training and skills related variables have been derived from the 2001 census to form an education, training and skills cluster. The education measures are relatively straightforward: the percentage of people with or without qualifications, the percentage qualified at GCSE level and the percentage qualified at degree level. Skills, on the other hand, are not directly measured; rather they are implied by three proxy indicators which capture the number of people in each District Council Area studying in 2001 to acquire engineering skills, information and technology skills, and science skills. The level of skills in engineering, information technology and science within a population was proposed by Huggins (2003), the Department of Trade and Industry (2004) and Invest Northern Ireland (2003) as an important contributor to an economy's development prospects. An assumption has been made that the quantum of people developing engineering, IT and science skills at an FE College will have been both a function of the demand for those skills in each local economy and an indication of the number of people likely to have already been living in District Council Areas with those skills. It has also been assumed that the percentage of people already holding GCSEs in each District Council Area provides an insight into the level of analytical and communication skills embedded in the population of each area.

There are three educational attainment measures in this cluster:

- The percentage of people aged 16-74 with 5+ GCSEs at grades A-C in 2001 by District Council Area (*qualnew*).
- The percentage of people aged 16-74 holding a degree or equivalent qualification in 2001 by District Council Area(*degree*).
- The percentage of people aged 16-74 without formal educational qualifications in 2001 by District Council Area (*noquals*).

...... and there are three measures focused on technical and vocational training:

- The number of people studying engineering at Further Education College standardised per 10,000 adult resident population in 2001 by District Council Area (*FE eng*).
- The number of people studying information technology (IT) at Further Education College standardised per 10,000 adult resident population in 2001 by District Council Area (*FE IT*).
- The number of people studying science at Further Education College standardised per 10,000 adult resident population in 2001 by District Council Area (*FE science*).

In addition, the percentage of people aged 16-74 who were full-time students in each District Council Area in 2001 (*studsall*) has been added to the cluster as a means of measuring the overall level of uptake of further and higher education provision across all disciplines. Widening the participation by people of all ages in further and higher education was a key plank of the UK Labour Government's policy from 1997.

6.8.4 Labour market

A labour market-related cluster of five variables has been created with the intention of testing the association between local economic success and the following factors:

- The level of self-employment.
- The level of female entrepreneurship.
- The level of female participation in the labour market.
- The quality of employment.

Three measures have been derived from the 2001 census to form part of the labour market cluster:

- The percentage of people aged 16-74 in each District Council Area who declared that they were self-employed in 2001 (*allslfemp*).
- The percentage of females aged 16-74 in each District Council Area who described themselves to be small employers in 2001 (*smlempfem*) – a proxy for the level of female entrepreneurship.
- The percentage of females aged 16-74 in each District Council Area who stayed at home and were not economically active in 2001 (*femaleshome*) – a proxy for the level of female participation in the labour market.

Two other measures have been derived from the 2001 Department of Enterprise Trade and Investment New Earnings Survey for inclusion in the labour market cluster:

- The average hours worked per employee by District Council Area (*allhrsworked*) – a proxy for the quality of employment.

- Average gross weekly earnings in the private sector by District Council Area (*wagepriv*) – a proxy for the quality of employment.[6.3]

6.8.5 Social characteristics

Are populations with certain characteristics more likely to be associated with economic success? To test that question five measures which profile the population of each District Council Area have been brought together to form a Social Characteristics cluster. Four of those measures have been derived from the 2001 census. They are:

- The percentage of people stating their religion as Catholic in the 2001 census, a proxy for cultural/religious affiliation (*Catholics*). This variable is discussed in some detail in Chapter Nine.
- The percentage of females aged 16-74 staying at home and not economically active in 2001 (*femaleshome*), as a measure of the extent of direct female participation in the economy.
- The percentage of people aged 16-74 who were long-term sick or disabled in 2001 (*all sick-d*), as an indicator of the number of dependents who would not be economically active and would need to be supported at a cost to communities.
- The percentage of people who were born outside of Ireland and Britain in 2001 (*foreignall*); as a proxy indicator of the attractiveness of the economy of each District Countil Area to people from overseas. People resident in an area who had been born overseas may also have brought with them skills and energy which could positively contribute to an area's economic prospects.

The fifth measure which has been added to the Social Characteristics cluster is:

[6.3] Earnings can be both an economic success outcome and a contributor (or input) to economic success (as a source of investment and consumer spending). The" mean earnings" indicator which has been defined as a success outcome incorporates public sector wages. Private sector wages have been identified as a potential economic success input because they are more likely to have varied in line with and been related to other local economic success inputs. The intention in creating this variable is to determine whether variable private sector wage rates across Northern Ireland were associated with the distribution of local economic success.

- The total number of offences recorded by the police in 2001 in each District Council Area standardised per 10,000 adult resident population (*crime*).

Might crime have been associated with a lack of economic success? Might a lack of economic success have been associated with a breakdown in social harmony, one manifestation of which would have been crime? Might there have been a link between the costs of crime and local economic performance? A caveat which has to underscore these 2001 crime figures, however, is that in 2001, the reformed Police Service of Northern Ireland (which had been created in Norember 2001 to replace the Royal Ulster Constabulary) was still not accepted by a significant section of the Catholic community and this may have led to some under-reporting of crime in predominantly Catholic areas.

6.8.6 Economic development policy

6.8.6.1 Selecting the indicators

Any association between a variable measuring policy outputs and local economic success at a fixed point in time has to be treated with great caution because the task facing policy-makers who are trying to alter economic development trajectories:

> "*is an extremely challenging one, and is almost certain to be a lengthy undertaking*" (Martin, 2005, p.33).

Nevertheless, a study of local economic success which did not take account of policy would be deficient. Martin (2005) was of the view that analyses of regional development had to consider the impact of policy because:

> "*the reason policy can matter so much is the processes that promote regional growth and success – or alternatively relative decline – tend to be self-reinforcing. Thus a small push in the right direction at the right time can have cumulative effects on regional productivity and growth*" (Martin, 2005, p.38).

Six economic development policy variables along with a locational advantage measure (*airport*) have been selected to form an economic development policy cluster. While this is a small sample of policy-related variables it has been assembled in the hope that it may nevertheless uncover whether there was an association between the geographical distribution of some policy out-turns and the distribution of local economic success rankings; accepting that six variables cannot encompass the breadth and complexity of economic development policy in Northern Ireland. The six economic development policy variables are:

- IDB/INI industrial property assets per 10,000 adult resident population in 2001/2002 (*totlandhold*)
- The number of jobs promoted by the IDB per 10,000 adult resident population in 2001 (*IDBjobs*)
- The provision of financial assistance from the IDB per 10,000 adult resident

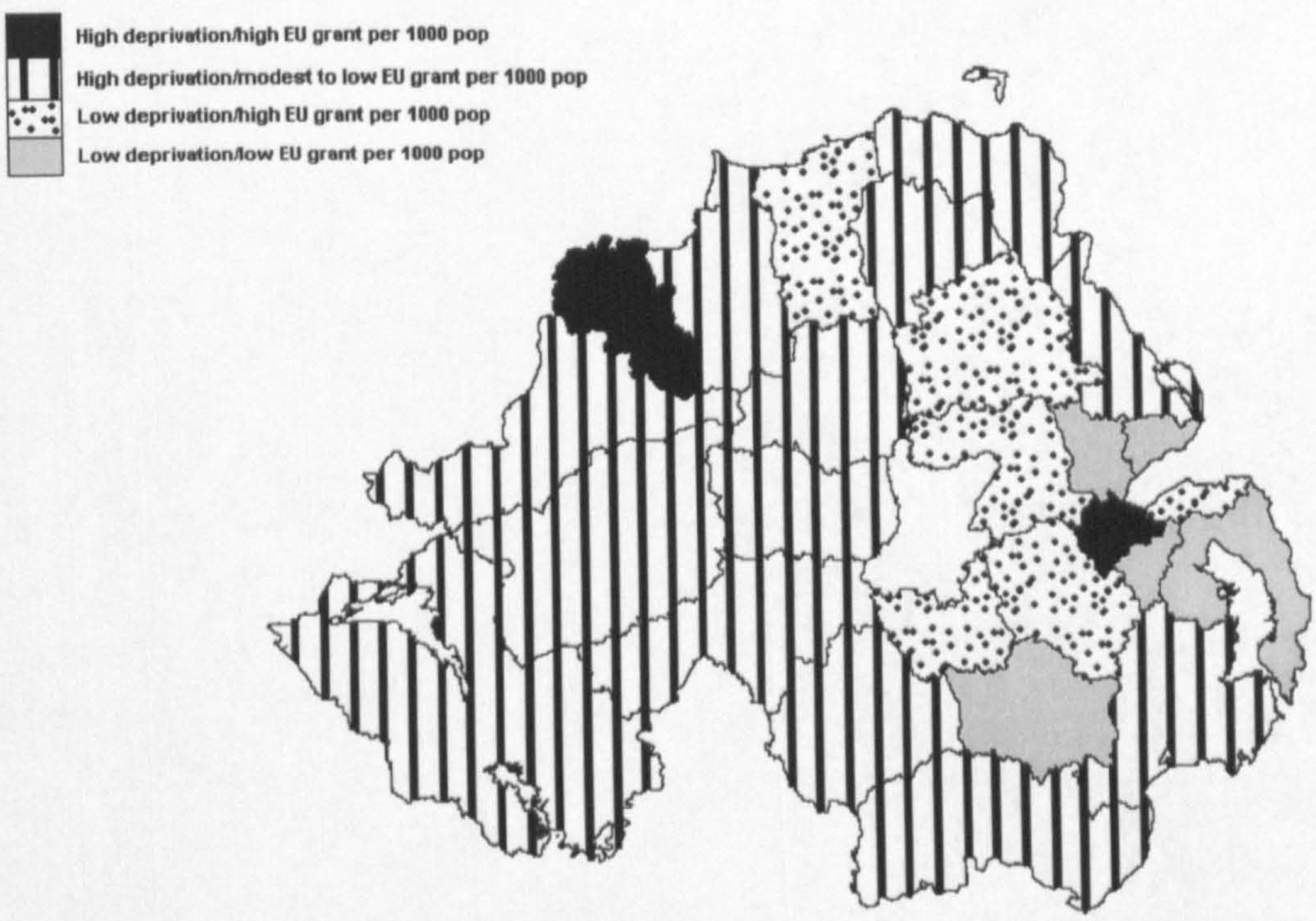
population in 2001 (*IDBass*)

- The number of INI client companies per 10,000 adult resident populationin 2001/2002 (*INIclientcos*)
- The number of IDB sponsored inward investor visits per 10,000 adult resident population in 2001 (*visits*)
- Peace I funds allocated to community/voluntary sector projects 1996-2001 per 10,000 adult resident population (*peaceIfunds*).

From the end of 2001 the primary agent for the implementation of economic development policy in Northern Ireland was Invest Northern Ireland. It had been formed as a composite of previously separate Government bodies in an attempt by the recently established Northern Ireland Assembly to better co-ordinate the delivery of economic development policy in the region. Those bodies were the Industrial Development Board (IDB), the Local Economic Development Unit (LEDU), the Industrial Research and Technology Unit (IRTU) and parts of the Training and Employment Agency (T&EA)). The mix of INI and IDB datasets in this cluster reflects the fact that 2001 was a transition year. Where data was available for IDB activity in 2001 it has been used. Where INI's First Annual Report (2002/2003) referred to activity in 2001, as in INI client companies in 2001/2002, and land and premises provision inherited from the IDB, these figures have been used. Because these data do not all refer to calendar year 2001 and are not wholly contemporaneous with other 2001 data, the interpretation of findings involving this data will have to note this timing caveat.

In addition to these variables, which relate to the direct delivery of central government economic development policy, another variable has been included in an effort to capture an important intervention in support local community development at this time, allocations made under the EU Peace I programme to community development projects across Northern Ireland between 1996 and 2001. This is a significant measure because the funds allocated under the Peace I programme were additional to central government exchequer funding. The other source of EU funds for local economic development during this period, the Local Economic Development Measure was distributed by the Department of Enterprise

Trade and Investment to District Councils. It has not been included in this study because it was a contentious policy programme, for two reasons: its additionality was questioned, and the size of the financial allocation made to each District Council was a function of the size of the rate support grant which each had been allocated from central government. The distribution of these EU funds could not, therefore, be directly associated with the level of economic or community development activity in a District Council Area.



Map: 6.1: Deprivation and EU grants per 1000 population allocated under Phase 2 of the Local Economic Development Measure, 1995-1998.
(Source: Derived from Whyte et al, *2000)*

Map 6.1, which is derived from an assessment of the role of District Councils in economic development under the EU Single Programme Local Economic Development Measure by White *et al* (2000), illustrates how "hit and miss" the distribution of those funds were in respect of the needs of a District Council Area. EU funding allocations could only be drawn down if they were matched by a locally raised contribution of up to 5p in the £1 from the District rate levied on householders and businesses. This meant that the capacity of a District Council to secure funds was a direct function of its capacity to generate increased funds from local rates. As a result many areas which had high levels of deprivation and a low rateable value had a limited capacity to draw-down the EU funds which had been designated to target social need (those areas are indicated by heavy vertical lines on the map above). Incongruously, there were other areas with low levels of deprivation which had secured relatively high levels of EU grants, the purpose of which had been to address inequality and local market failure, because they had the capacity locally to raise increased contributions from the rates. In two other areas, Belfast and Derry, though deprivation was high, so were the rates which could be secured from commercial property and so the draw-down of EU grant aid was relatively high. *Ergo*, higher EU funding activity was a product of each District Council's capacity and willingness to raise local match funding, something which was too unpredictable and too tangential to the presence or otherwise of economic opportunities or weaknesses to be considered as part of this research.

6.8.6.2 The locational advantage index (airport)

Traditional economic development theory places a heavy emphasis on the economic importance of location in respect of proximity to centres of population and markets for goods. However, popular amongst some policy-makers in Northern Ireland in 2001 was the notion that the new economy facilitated by advanced telecommunications and information and computer technology might render location as a less significant variable in determining an area's prospects of economic success. In an attempt to test whether the success of local economies in Northern Ireland was associated with geographical location, not just within Northern Ireland but also taking into account the other economic jurisdiction on the island of Ireland, the Irish Republic, an indicator of locational advantage has been devised. That "locational advantage index" is derived by calculating the combined road distance from each District Council Area's administrative centre to Belfast and Dublin international airports, weighted to take account of Dublin's greater size and significance.

Between 1995 and 2001 the economy of the Irish Republic was the fastest growing economy in Europe and one of the fastest growing economies in the world; with Irish GNP growing annually by an average of 8 per cent. In 1999 the OECD said:

> "*The Irish economy has notched up five straight years of stunning economic performance. No other OECD member country has been able to match its outstanding outcomes in a variety of dimensions*". (OECD, 1999, p.9)

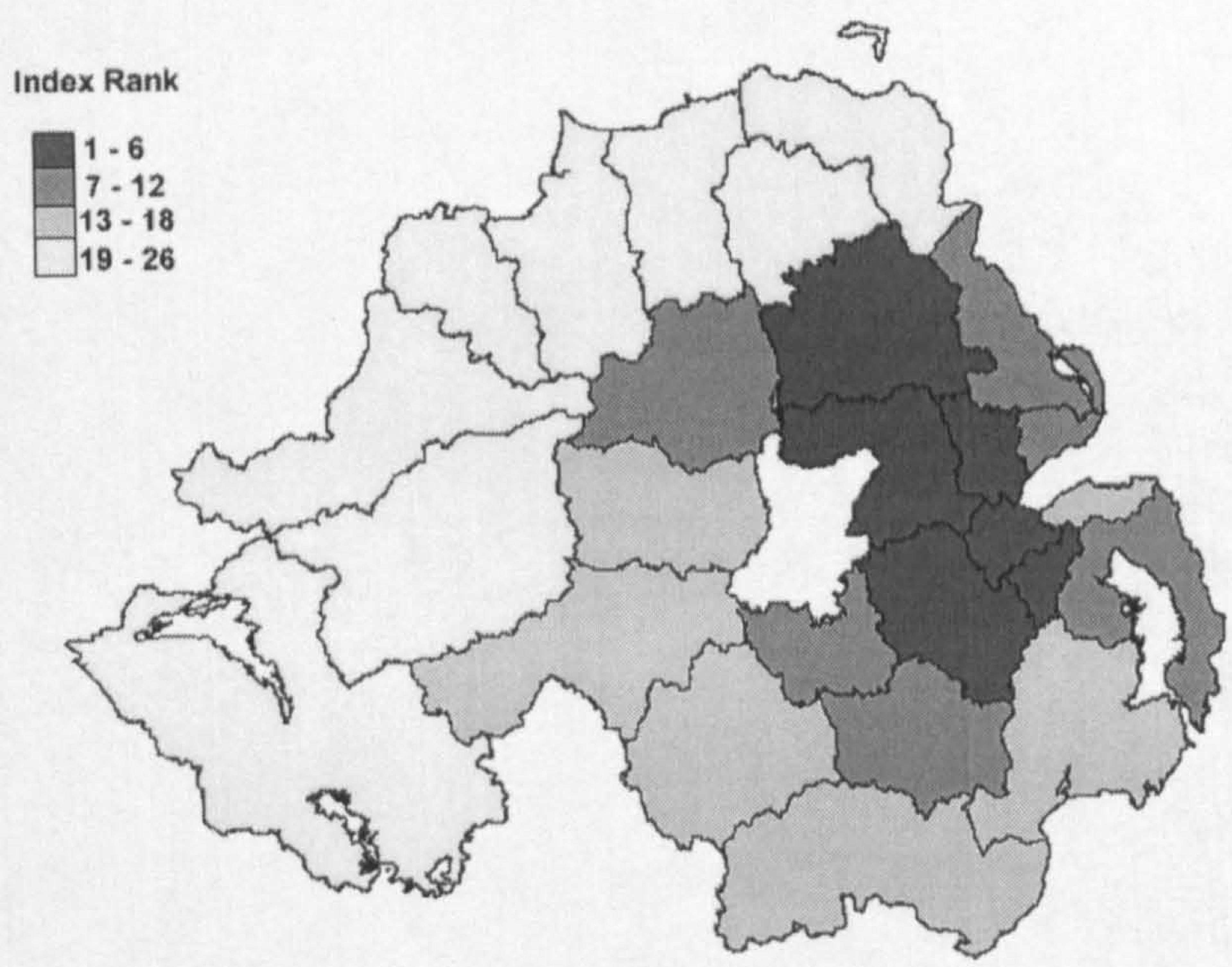
By 2001 the border between Northern Ireland and the Irish Republic was becoming less of a barrier to trade than it had been historically. The possible effect on the pattern of local economic success in Northern Ireland of geographical proximity to the economic opportunities which the Irish Republic undoubtedly offered at this time cannot be ignored.

The locational advantage index seeks to measure whether distance from Belfast and Dublin international airports was associated with variations in local economic success within Northern Ireland. In essence a gravity model, the locational advantage index is based on Copus and Crabtree's (1992) peripherality index, in which an assumption was made that the influence of an important economic activity, in this case an international airport, upon an area would be directly proportional to the size of that activity (the airport) and inversely proportional to the distance separating it from the area in question. International airports were chosen because they were a means of access and egress for imports, exports and for investors and decision-makers; and because their presence would be linked to the provision of other services which were part of the agglomeration economy associated with the metropolitan regions of which they were a part, Greater Belfast and Greater Dublin; and because businesses located in District Council Areas in Northern Ireland had unrestricted access to both airports. In 2001 Dublin airport was the more significant of the two international airports in terms of numbers of passengers by a factor of 4:1. It has been assumed that this also reflected the larger size of metropolitan Dublin's agglomeration economy. In the index, a higher weighting has therefore been given to accessibility to Dublin Airport.

The AA-registered road distances between the administrative centre of each District Council Area and both Belfast International Airport and Dublin International Airport have been measured. Distances from Belfast International Airport to the administrative centres are un-weighted, with the actual mileage figures being entered into the model. The distances from Dublin, however, are weighted by dividing the distances in miles by the gravity weighting applied to Dublin Airport, i.e. four. For each District Council Area the two mileage figures are then added. The District Council Areas with the lowest composite figures are deemed to be those in the most advantageous locations in respect of access to Ireland's international airports and the agglomeration economies of which they are a part.

As examples: Strabane is 64.1 miles from Belfast International Airport and 131 miles from Dublin Airport. The Dublin figure entered into this model is $131 \div 4 = 33$. Strabane's total weighted mileage figure is therefore $64.1 + 33 = 97.1$ which ranks Strabane as the 24th of the 26 District Council areas in respect of locational advantage. By comparison, Banbridge is 31 miles from Belfast International Airport and 75 miles from Dublin International Airport. The weighted Dublin mileage figure in this case is 19 and the overall Distance Index is 50 which ranks Banbridge as the 10th most advantaged location among Northern Ireland's 26 District Council Areas in respect of access to an international airport.

Map 6.2 below shows that, even when access to Dublin is taken into account, the most advantaged District Council Areas are still those within the Greater Belfast Area, although North Down, Ards, Larne and Carrickfergus have their advantage diluted somewhat by their relative distance from Dublin. District Council Areas in the north and west of the Province are doubly disadvantaged by their relative distance from both Belfast and Dublin. District Council Areas along Northern Ireland's southern border with the Irish Republic, while they benefit from their proximity to Dublin, nevertheless remain, in relative terms, locationally disadvantaged in that they are not sufficiently well located in relation to Dublin to compensate for their distance from Belfast International Airport.



Location advantage ranks	
1.	Antrim
2.	Newtownabbey
3.	Lisburn
4.	Ballymena
4.	Belfast
4.	Castlereagh
7.	Carrickfergus
8.	Larne
8.	Magherafelt
10.	Craigavon
11.	Ards
12.	Banbridge
13.	Cookstown
13.	North Down
15.	Down
16.	Armagh
17.	Dungannon
18.	Newry & Mourne
19.	Ballymoney
20.	Coleraine
21.	Limavady
22.	Omagh
23.	Derry
24.	Strabane
25.	Fermanagh
26.	Moyle

Map 6.2: *District Council Areas ranked by locational advantage*

6.9 THE ANALYSIS PATH

6.9.1 Stage One

The first stage on the analysis path which will ultimately lead to an assessment of the association between social capital and local economic success in Northern Ireland is represented diagrammatically in Figure 6.1 below. The nine local economic success outcome indicators will be mapped and their correlation with all of the economic success input variables, including the social capital indicators, will also be measured.

The intention at this stage is to highlight how the different facets of economic success were manifest in Northern Ireland and to assess the extent of Northern Ireland's intra-regional heterogeneity. What will be demonstrated is that the patterns displayed by some of the individual economic success outcome measures (e.g. business creation) were not aligned with those of others (e.g. earnings). Each success outcome will be shown to represent a distinctive dimension of local economic success with no one alone able to adequately describe its multi-faceted reality. This will be the rationale for combining the individual success indicators into a synthetic Local Economic Success Index.

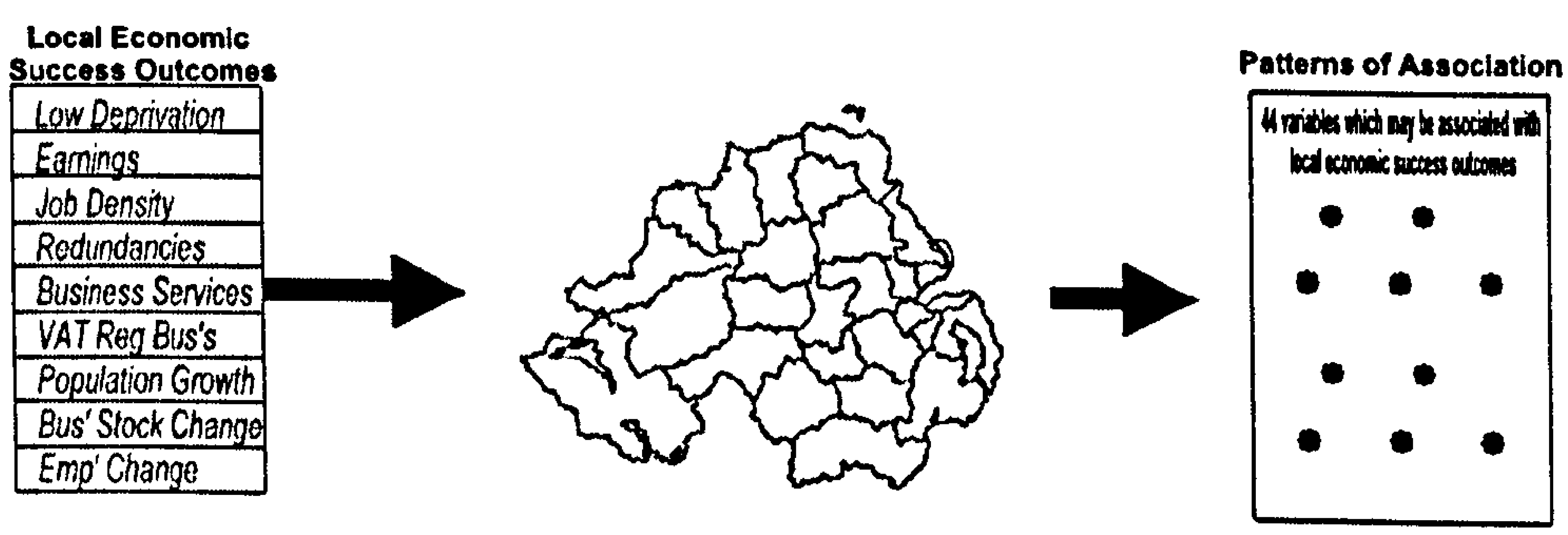


Figure 6.1: *Stage one: Mapping individual success outcomes and measuring their correlation with other variables.*

6.9.2 Stage Two

Huggins (2003) had said that an area's economic performance could only be assessed on the basis of a multi-variate measure. An area's competitiveness, he said, was the result of a:

> *"complex interaction of factors"* (Huggins, 2003, p.90).

He attempted to reflect this in his measure of regional competitiveness in the UK by constructing a composite index of competitiveness outcomes. In this thesis each District Council Area's overall local economic success achievement will be measured by creating a Local Economic Success Index made up of the nine individual local economic success outcomes. The rank scores attained by each District Council Area in respect of each economic success outcome will be added together to create the composite index. By combining District Council Area rank scores in this way (as represented diagrammatically in Figure 6.2) the most successful and least successful areas overall across the range of economic success outcomes can be identified. The areas which will be deemed to have been most comprehensively successful in 2001 will be those which were ranked as successful in respect of most success outcomes.

The index will be constructed in four stages to highlight how the map of success can change as its definition is extended from being a measure of quality of life, to one which also measures the status of the labour market, the commercial structure of an area, and then its experience of change (i.e. growth). This approach makes transparent the effect which adding each new wave of outcome measures has on the intra-regional distribution of success. The point of the exercise is to demonstrate that if success is narrowly defined in one direction or the other a very different set of conclusions can be reached.

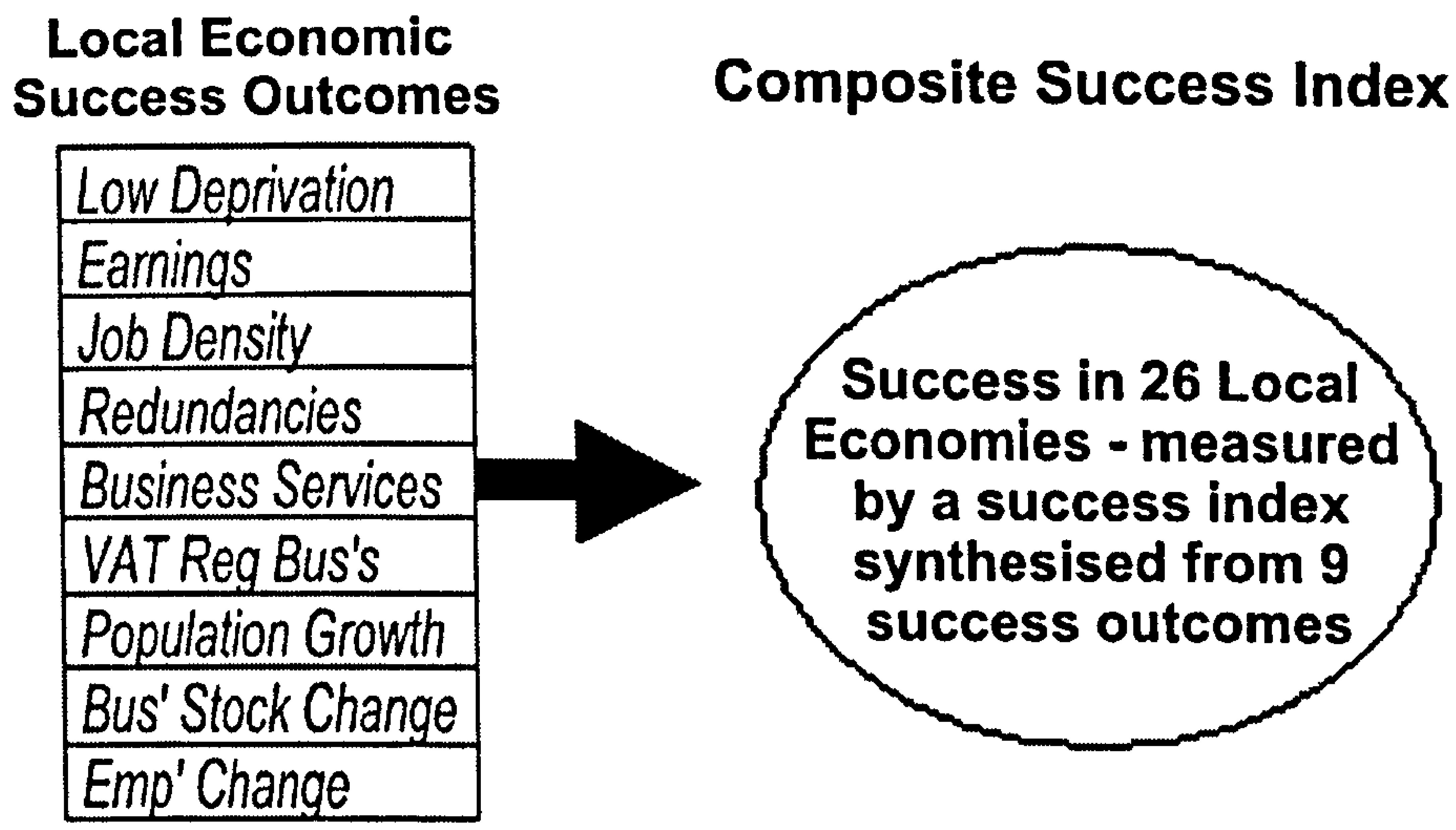


Figure 6.2: *Stage two: Progressively combining individual success outcomes into a composite success index*

6.9.3 Stage Three

In Chapter Nine the nine social capital indicators and the religious/cultural affiliation variable will be mapped, and their correlation with other potential local economic success inputs as well as the local economic success outcomes will be analysed (Figure 6.2). The individual social capital indicators will then be combined in a Social Capital Index to identify those District Council Areas in Northern Ireland where social capital was most heavily concentrated. The purpose of this chapter is to shed some light on how social capital interacted with other factors, to provide a better understanding of the functioning of social capital in all its subtlety in Northern Ireland; and also to determine whether there may have been an association between what Cooke *et al* (2005) described as Northern Ireland's religious and cultural *"peculiarities"* (p.1076) and the heterogeneity of its local economies.

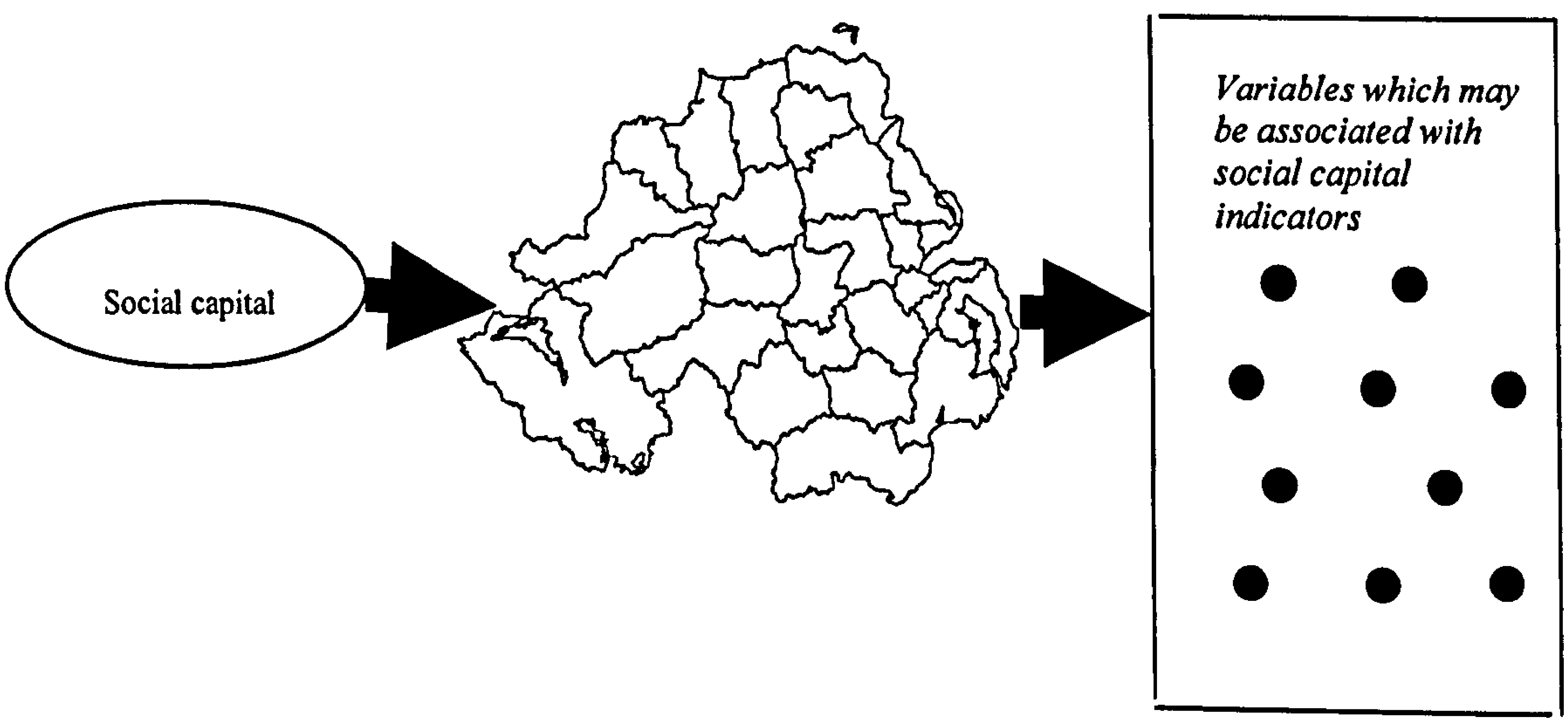


Figure 6.3: Stage four: Mapping the social capital indicators and considering their relationship with other variables.

6.9.4 Stage Four

In Chapter Ten the Ordinary Least Squares multiple regression method will be used to determine whether each individual measure of social capital (and then separately the Social Capital Index) was independently associated with the Local Economic Success Index (as the dependent variable), controlling for religious/cultural affiliation.

Thereafter, in Chapter Eleven, to put the association between social capital and local economic success into context, the analysis will be widened using regression to identify which variables in the four other clusters of influence (education and skills; the labour market; social characteristics; and economic development policy) were associated with the Local Economic Success Index. This stage is described diagrammatically in Figure 6.4 overleaf. From the associations which emerge some tentative inferences will be drawn which will form the basis for a set of qualified conclusions.

Chapter Twelve will then reflect on some of the lessons learned from this research as well as the challenges which have been encountered along the way.

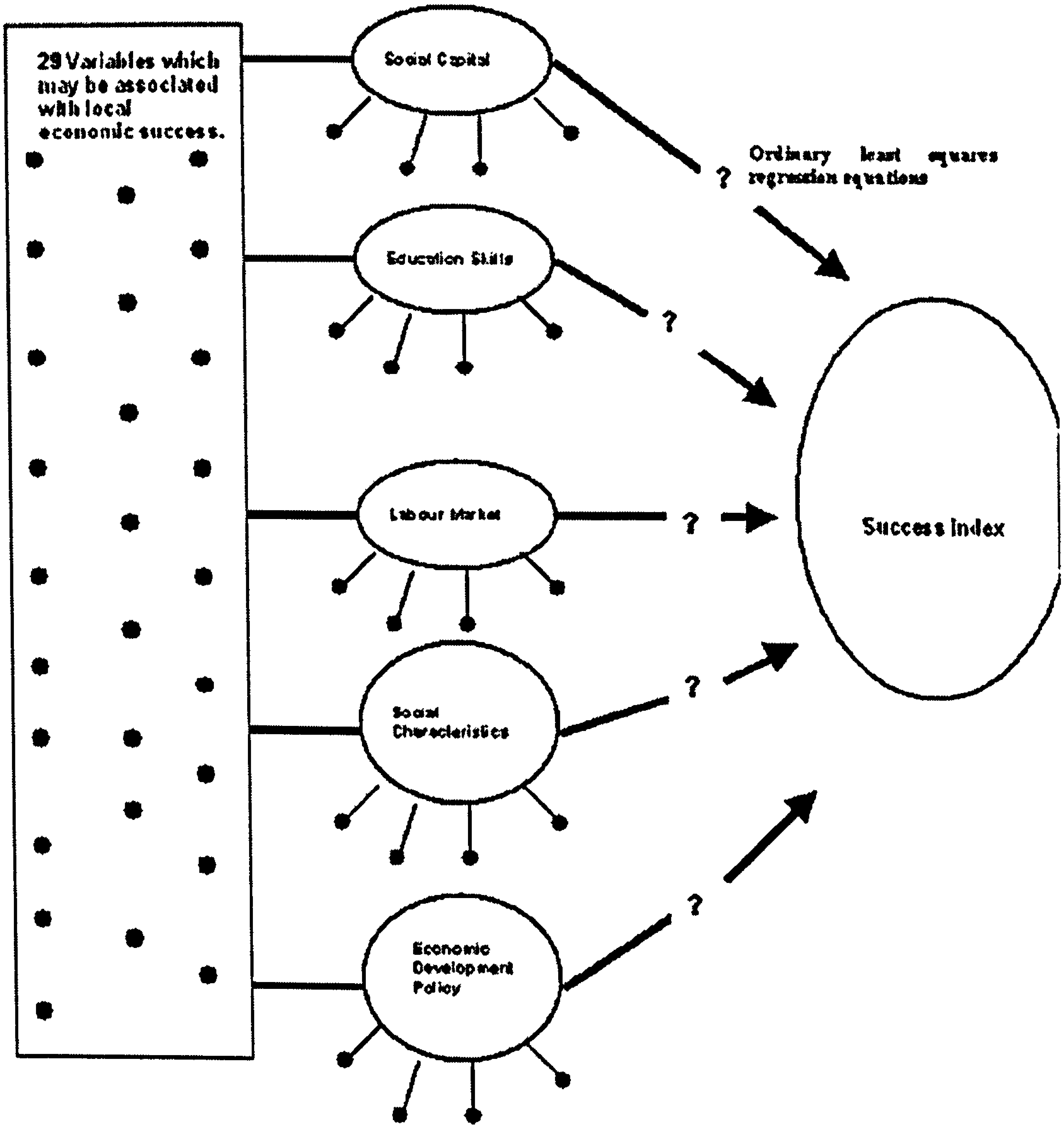


Figure 6.4: *Stage five: Assessing the independent association between social capital variables and local economic success and thereafter between other bundles of variables and local economic success.*

6.10 CONCLUSION

In summary

Six pooled *cross-section time-series* clusters of outcome and input measures have been constructed in an attempt to measure local economic success, social capital and other economic success inputs in Northern Ireland. Local Economic Success has been defined as a cluster of outcomes each of which describes a distinctive dimension of success. Each of those dimensions, how they distinctively map and relate to various economic success inputs, will be individually analysed (Chapter Seven) before being progressively combined in a Local Economic Success Index (Chapter Eight). In Chapter Nine the variables which comprise the social capital cluster will also be individually mapped and their relationship with other variables analysed as a precursor to their being combined in a Social Capital Index. The individual social capital indicators and the Social Capital Index will be brought together with the Local Economic Success Index in a regression equation in an attempt to determine whether there is an association between social capital inputs and economic success. This will be followed by an attempt to identify associations between other inputs and local economic success.

This staged approach, with its stepping off points to provide in-depth analysis of the two key concepts, local economic success and social capital, has been designed to highlight the internal heterogeneity and complexity of a region which has had a history of socio-economic inequalities, intra-regional development disparities and inter-communal conflict. It is also designed to make every step in the analysis transparent and to give each component, each map and each set of correlations, an integral stand-alone robustness which will maximise its value to the researcher with a specialist interest.

CHAPTER SEVEN

LOCAL ECONOMIC SUCCESS OUTCOMES

7.1 INTRODUCTION

In this chapter the distribution of District Council Area rankings against each of the nine economic success outcomes will be mapped and variables with which those distributions were correlated identified. The rationale for choosing each success outcome will be set out in turn.

The nine indicators measure four dimensions of economic success:

Quality of life

- A low level of multiple deprivation in 2001 in each District Council Area.
- Average earnings 2001 in each District Council Area.

The labour market

- Job density in 2001 in each District Council Area.
- Low redundancies in 2001 per 10,000 adult resident population by District Council Area.

Industrial/commercial structure

- Services which supported business and economic development as a proportion of total VAT-registered business stock in each District Council Area 2001.
- The aggregate number of new VAT-registered businesses per 10,000 adult resident population over 5 years, 1996-2001, by District Council Area.

Change

- The percentage population change 1991-2001 per 10,000 adult resident population by District Council Area.
- The business stock change competitiveness differential 1997-2001, per

10,000 adult resident population by District Council Area.

- The employment change competitiveness differential 1997-2001 per 10,000 adult resident population by District Council Area.

The objective of this chapter is to demonstrate the extent to which these outcome indicators each represent a distinctive dimension of economic success and how it is possible for economic success to be manifest in different ways in different parts of Northern Ireland and between Northern Ireland's two communities. This chapter will show the extent of Northern Ireland's intra-regional heterogeneity. It will show that because the individual success outcomes display varying intra-regional patterns, choosing one indicator over another to represent success can present two markedly different pictures. To determine which District Council Areas are most successful across most outcomes a composite index of those outcomes will have to be constructed (Chapter Eight).

7.2 THE PATTERNING OF THE LOCAL ECONOMIC SUCCESS OUTCOMES – IN SUMMARY

Mapping the distribution of District Council Area rankings against each of the nine local economic success outcomes highlights the extent to which the territorial distribution of these success outcome rankings differ (Figure 7.1): The earnings and deprivation maps, for example, present a picture of the west and south of the region (with the exception of Fermanagh) being relatively "unsuccessful" and Belfast and Newtownabbey, Castlereagh, Carrickfergus and Larne, being relatively "successful"; whereas the aggregate measure of new VAT registrations between 1997 and 2001 or the business stock change competitiveness differential (1997-2001) show the mid-west and south of the region as "successful" and those District Council Areas which constitute Greater Belfast as "unsuccessful" The other maps each display a pattern in which some District Council Areas in the west and east are successful and some are unsuccessful.

Table 7.1 below reveals that the performance range between the most successful and least successful District Council Areas in respect of each of the nine success outcomes was very wide, illustrating the extent of the economic disparities within the region in 2001.

Success outcome	Timeframe	Most successful DCA	Least successful DCA	Ratio
Low deprivation score:	2001	8.92 North Down	36.93 Strabane	*
Earnings:	2001	£433.5 Belfast	£230.9 Moyle	(i.e. a factor of almost 2:1)
Job density:	2001	1.25 Belfast	0.41 Carrickfergus	(i.e. a factor of 3:1)
Low redundancies:	2001	0 Ballymoney	143.38 per 10,000 Craigavon	(i.e. a factor of 143:1)
Business Services:	1997-2001	30.97% Belfast	7.89% Moyle	(i.e. a factor of almost 4:1)
VAT registrations:	1997-2001	35.71 per 10,000 Magherafelt	17.12 per 10,000 Castlereagh	(i.e. a factor of 2:1)
Population change:	1991-2001	23.69% Banbridge	–5.38% Belfast	(i.e. a factor of 5:1)
Business stock shift share:	1997-2001	+79.29 businesses Magherafelt	-13.19 businesses Belfast	(i.e. a factor of 7:1)
Employment change shift share	1997-2001	+923.49 jobs Castlereagh	-252.57 jobs Ballymoney	(i.e. a factor of almost 5:1)

Table 7.1: *Local economic success outcomes – the range of out-turns*

**A ratio here is not appropriate – District Council Area multiple deprivation scores were the product of small area rankings. It cannot be said therefore that Strabane was four times more deprived than North Down, only that it had four times as many deprived small areas as North Down – the intensity of deprivtion in those small areas may have differed considerably.*

The individual success outcomes will be analysed in some detail in this chapter on the basis that each is important in its own right. Individual success outcomes will be shown to have recorded distinctive patterns of correlations with potential economic success inputs (the correlation tables are appended at Appendix 2): Low deprivation and business services stock, for example, were associated with a very different set of input variables then was the business stock change competitiveness differential; while job density and population growth recorded no correlations at all at the 1% significance level. Some success outcomes were not correlated with any of the social capital indicators, while others were. It will be shown that there was a relative lack of co-linearity between the success outcome indicators, suggesting that each represented a particular dimension of economic success. Figure 7.1 overleaf which brings together the patterns mapped by the individual success outcome indicators, highlights how difficult it is to identify which areas enjoyed most success across the widest range of economic success outcomes.

Once the individual economic success outcomes have been brought together into the composite Local Economic Success Index, regression will be used in Chapter Ten in an attempt to determine whether the individual indicators of social capital were associated with its distribution. To put those findings in context regression will be used again to identify other input variables which were significantly associated with the distribution of local economic success (Chapter Eleven).

THE PATTERNING OF INDIVIDUAL SUCCESS OUTCOMES AND MOST ASSOCIATED VARIABLES (1% SIGNIFICANCE)

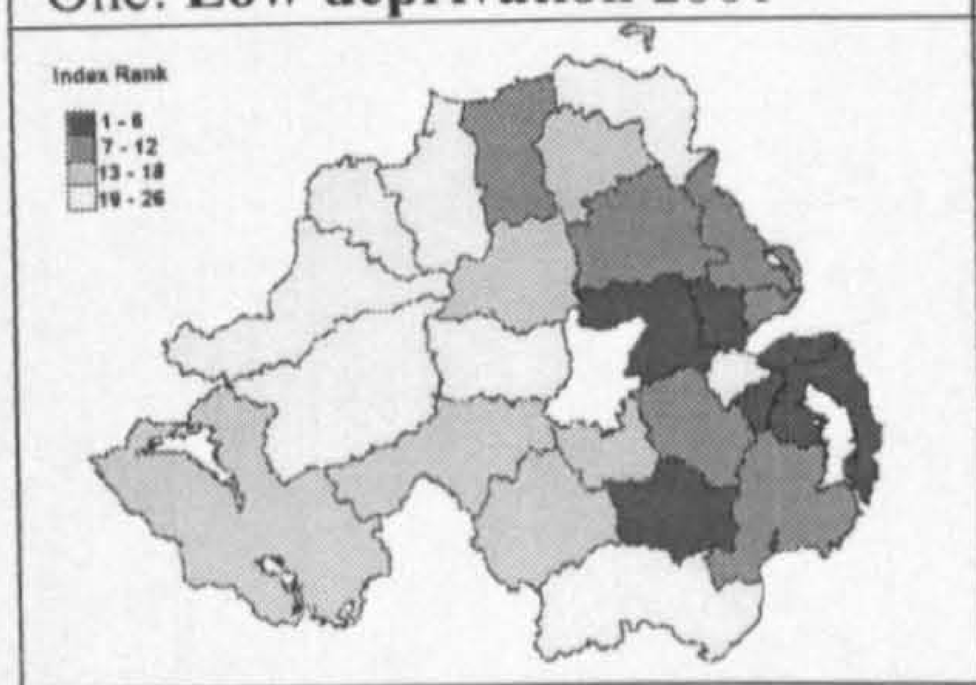
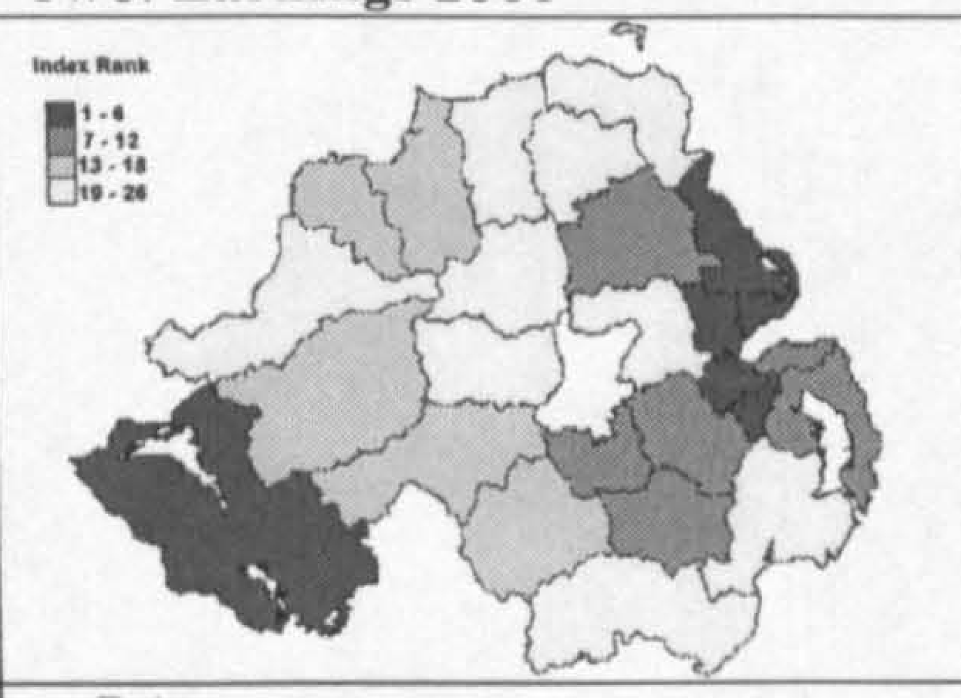
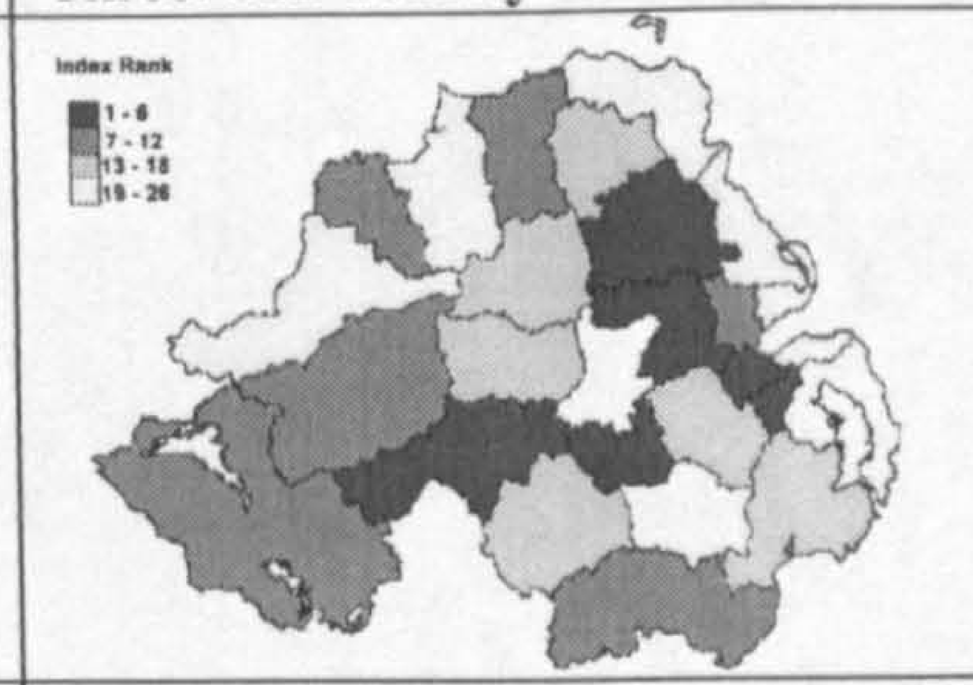
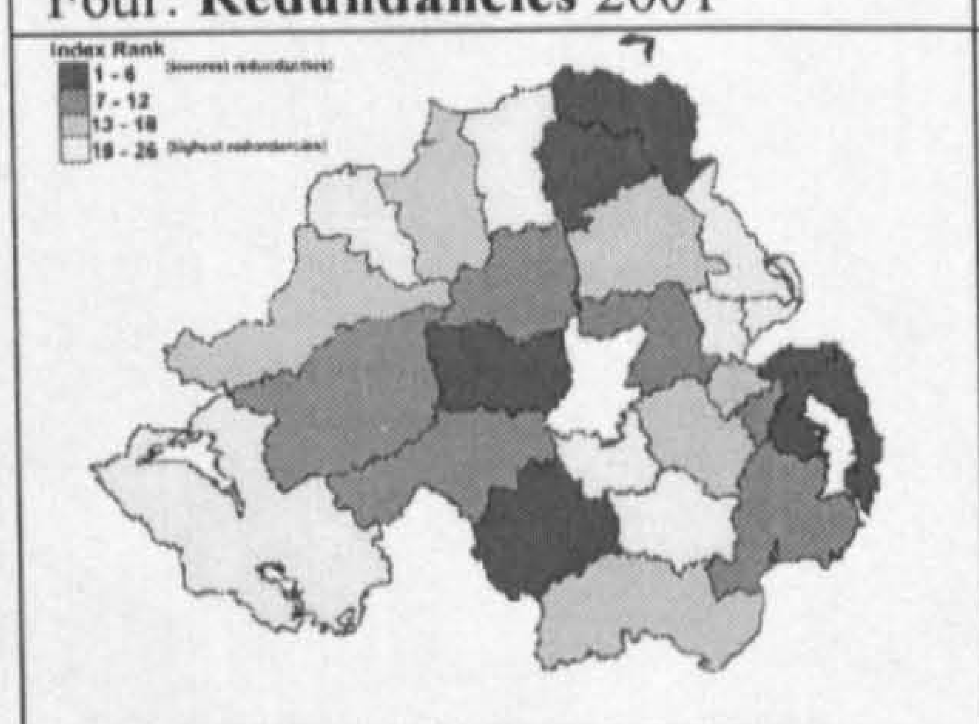
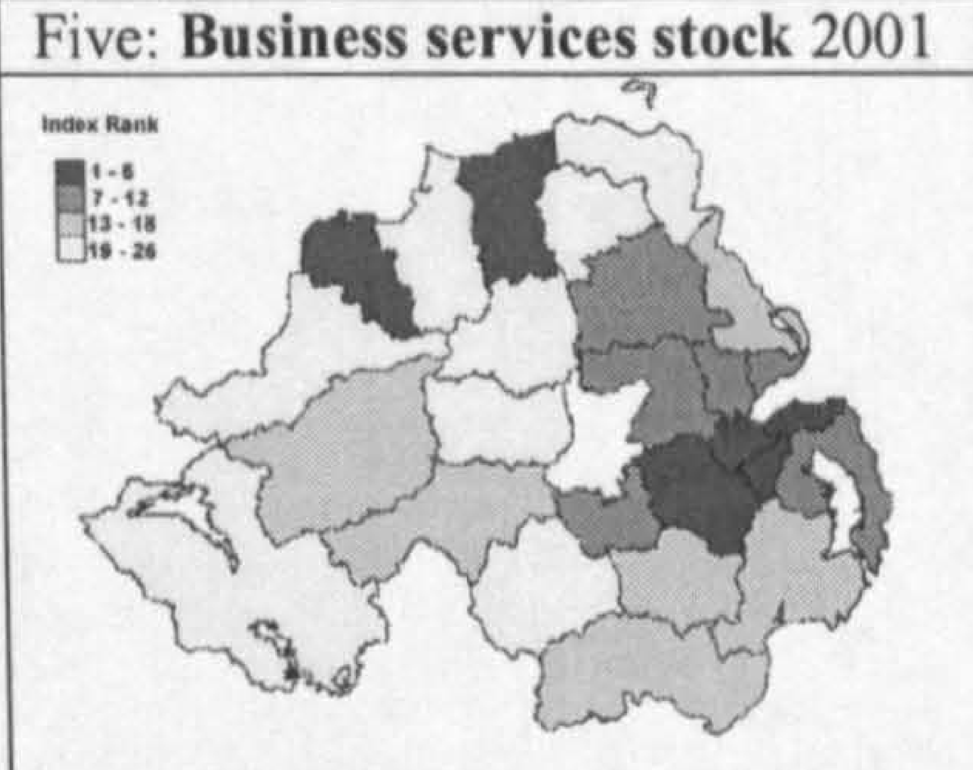
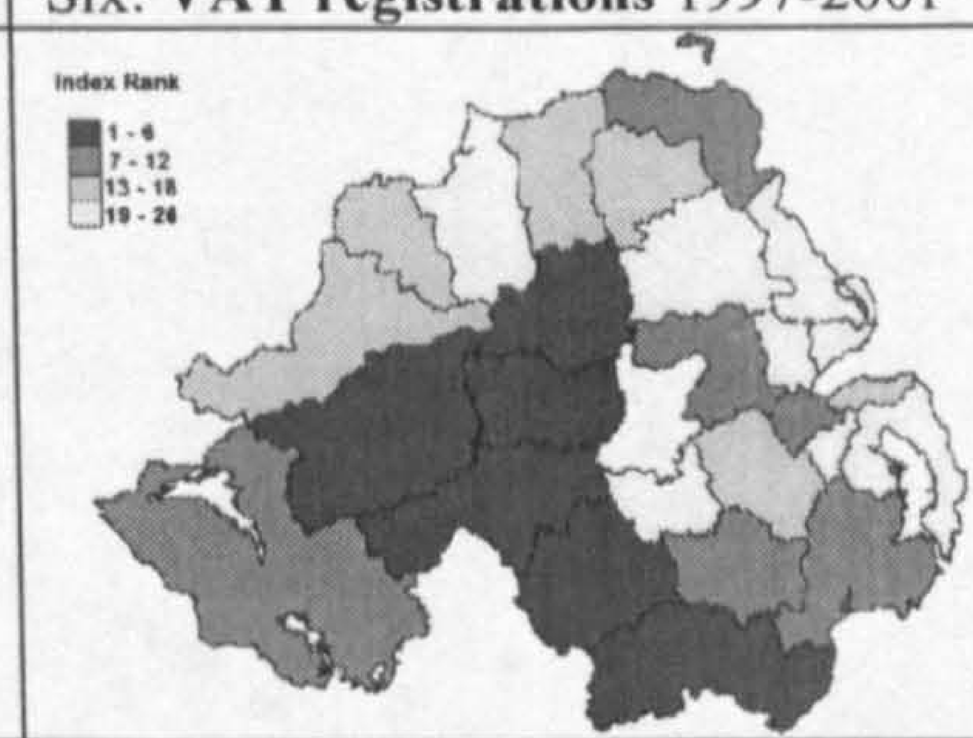
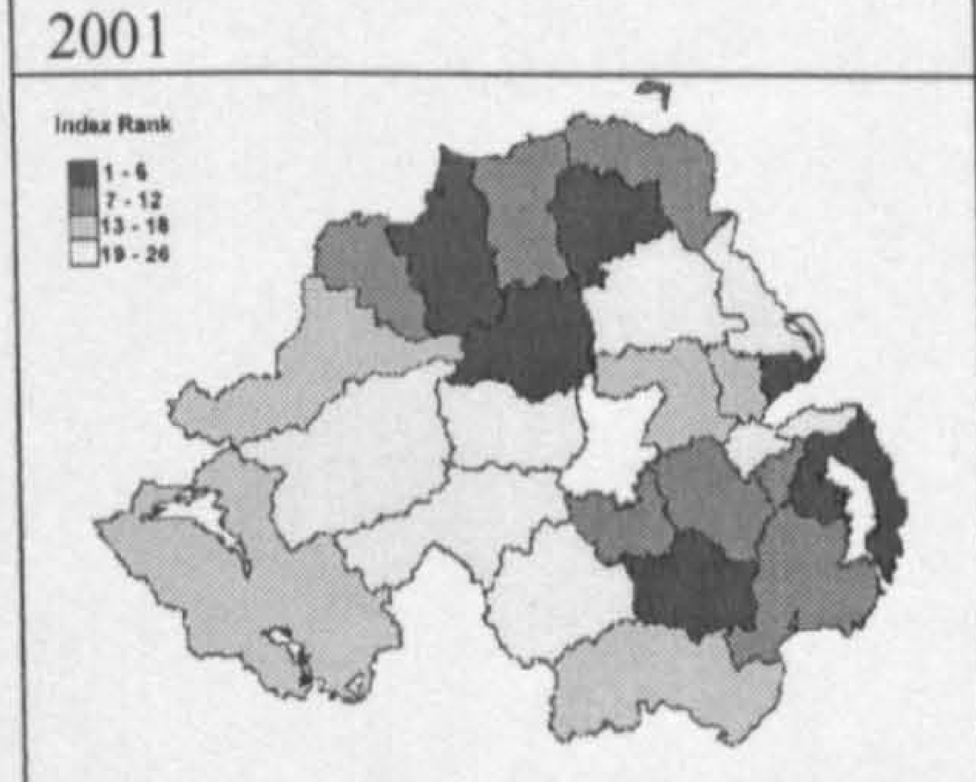
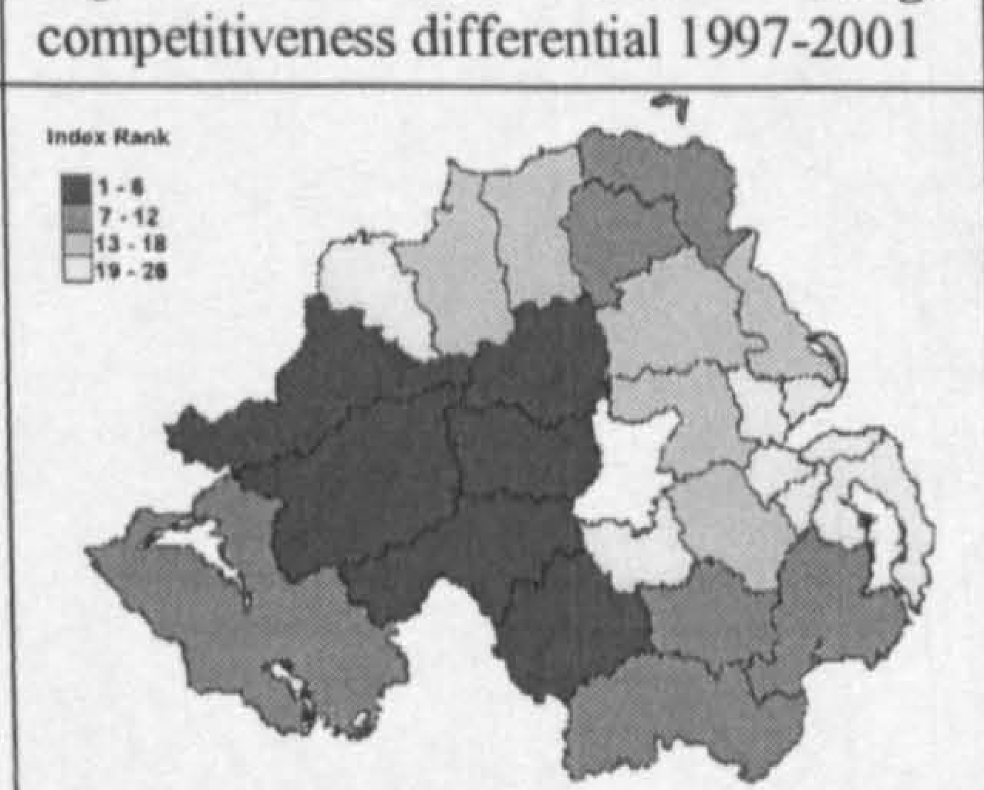
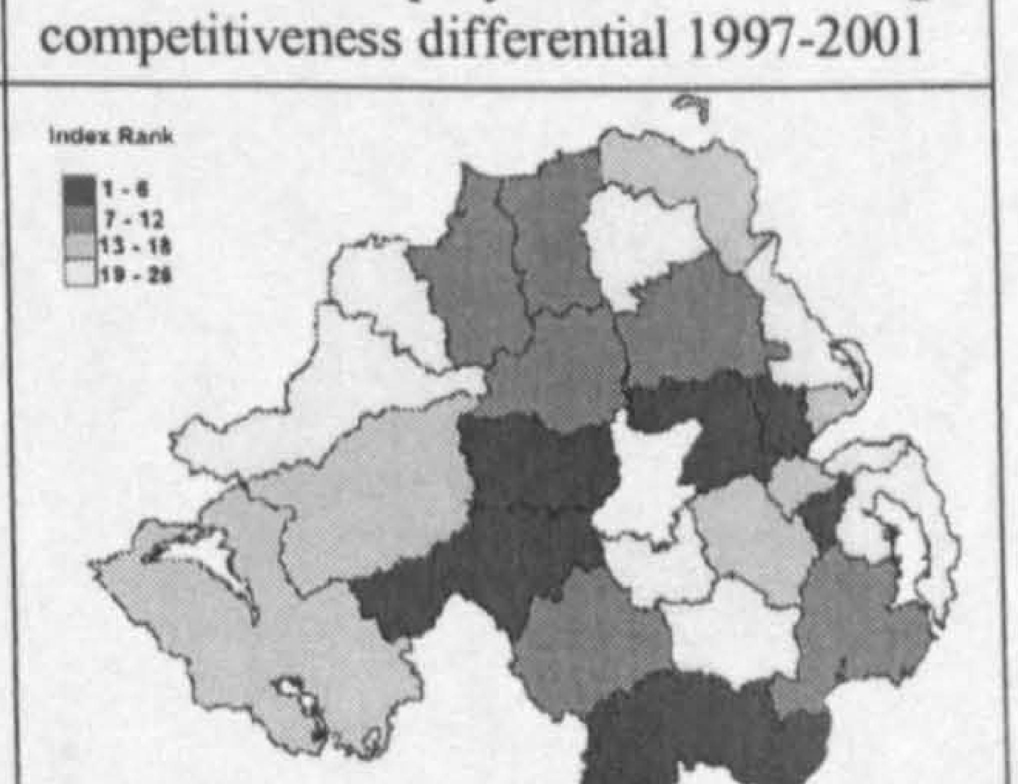
One: **Low deprivation** 2001	Two: **Earnings** 2001	Three: **Job density** 2001
		
- Number of sick and disabled *- Catholics* *- No. of Credit Union members* *- Females at home* *- No. of groups involved in eco dev.* *- No. without qualifications.*	*+ Private sector wages*	
Four: **Redundancies** 2001	Five: **Business services stock** 2001	Six: **VAT registrations** 1997-2001
		
+Total IDB/INI property provision	*+Degree qualifications* *+% of residents born outside the UK and Ireland* *+Crime* *-Business stock change competitiveness differential* *-No. of hours worked* *-No. of people self-employed* *-No. without qualifications*	*+Business stock change competitiveness differential* *+Catholics* *+Voter participation*
Seven: **Population growth** 1991-2001	Eight: **Business stock change** competitiveness differential 1997-2001	Nine: **Employment change** competitiveness differential 1997-2001
		
	+ Average hours worked *+Self employment* *+Voter participation* *+New VAT registrations 1997 – 2001* *+Supported Business starts* *+Catholics* *-Stock of business services* *-Private sector wages* *-No. born outside the UK and Ireland*	*+Employment change overall*

Figure 7.1: Matrix summarising: *i) The territorial distribution of District Council Area rank scores against each of the nine success outcomes, and ii) the variables which were correlated with each at the 1% significance level.*

7.3 LOCAL ECONOMIC SUCCESS OUTCOME ONE: LOW DEPRIVATION (A quality of life measure)

7.3.1 The rationale for adopting low deprivation as a success outcome

The Northern Ireland Economic Council (NIEC), in its response to the 1996 report which it had commissioned from Dunford and Hudson on successful regions in Europe, reflected that it was possible for regions which were defined as successful in respect of some economic indicators to also harbour significant economic and social disadvantage. Economic success was more difficult to achieve in areas where there was a legacy of some groups having been marginalised. It concluded that for a region to be judged as truly successful it had to have created a balanced social, cultural, political and economic environment; and on that basis it recommended that economic development as a policy should include the reduction of economic and social deprivation as a core objective.

Variables such as the number of VAT registrations, job density or other measures of economic success do not provide a sense of the circumstances prevailing in an area in respect of standard of living or quality of life. Three hundred additional jobs created over five years in an area with high levels of multiple deprivation, for example, may have a more significant impact in uplifting that area's standard of living and have greater political import than would a similar out-turn in a less deprived area.

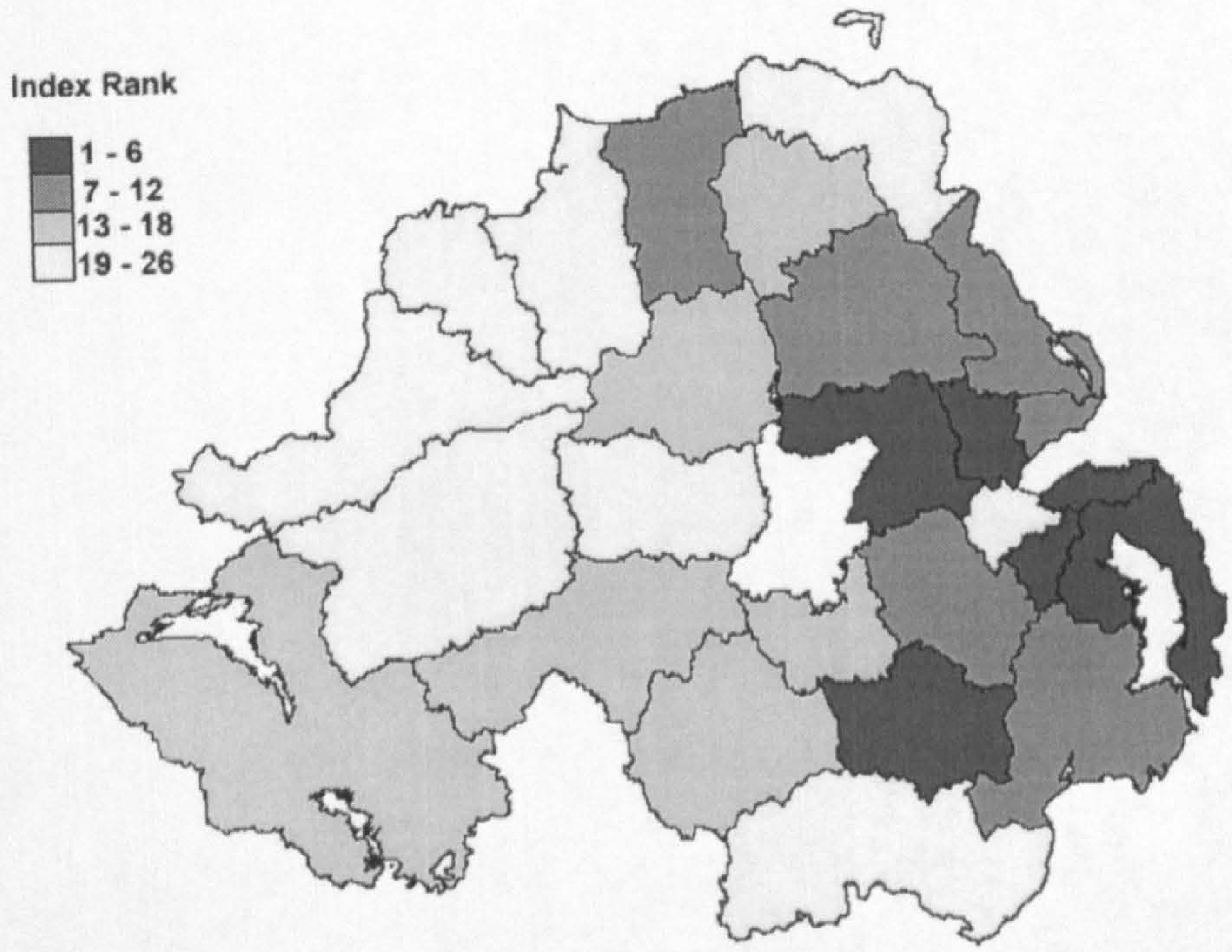
A deprivation measure adds depth to the picture of a local economy. If low deprivation were found to have been associated in a particular area with a high level of new VAT registrations, substantial population and employment growth, high job density and low earnings, the implication would be that economic success was more embedded in that area. A low level of multiple deprivation in an area is likely to suggest that it has been economically successful for many years and that its economy is sophisticated and mature.

The measure of multiple deprivation adopted for the purposes of this analysis is that calculated for each District Council Area in 2001 by NISRA. It is a synthesis of indicators drawn together from eight "domains", which include health and disability, the social environment, geographical access to services, and housing stress – all of which represent long-term quality of life challenges which can only be turned around over an extended timeframe. The absence of multiple deprivation has been selected as an economic success outcome because, as well as describing the extent to which all in a population are or are not sharing in the benefits of economic success and highlighting whether or not an area is having to cope with challenges which can affect the efficient functioning of an economy (such as poor health, poor educational attainment, low incomes limiting indigenous investment potential), multiple deprivation is also a variable which represents a legacy of historic economic under-performance, which establishes a context within which the significance of other local economic success outcomes (in respect of "distance travelled") can be judged.

There is a Northern Ireland "peculiarity" which has to be acknowledged in interpreting this deprivation data: deprivation was historically concentrated in Catholic/Nationalist areas from the formation of the State in 1922 right up to 2001. In these areas infrastructure was less well developed, the industrial/commercial base had historically been weak, emigration had been high and the workforce traditionally had fewer skills and qualifications. It is, therefore, possible that even if an area's economic performance in 2001 had been relatively strong, its historic deprivation experience would have exerted an overshadowing effect. An undeveloped property market or the detritus of dereliction, for example, may have discouraged in-migration and stymied population growth. Job density figures would also have been affected if a critical mass of employers had not been built up (as in Strabane, for example). While it is not possible to confirm whether and to what extent the deprivation prevailing in 2001 was attributable to historic economic disadvantage, the risk remains that deprivation statistics taken on their own could present an unduly negative picture of an area, masking significant recent transformations.

Where deprivation is present on a significant scale, whether as an overhang of historic disadvantage or because of more recent difficulties, it does constitute an economic development challenge. Multiple deprivation is associated with a number of economic inefficiencies, including educational under-achievement, a mis-match between labour supply and labour demand and a relative lack of indigenous investment resources. There is a big literature on the links between poor health and economic disadvantage (Davey Smith, 1996; Wilkinson, 1996; Kennedy *et al*, 1996; Kaplan *et al*, 1997; Lynch *et al*, 1998). Davey and Duncan (1998) suggested that a psychology of inequality could become embedded in a community, dampening economically productive behaviour. Bowles and Gintis (2003) contended that a community's ability to exploit opportunities could be impeded by socio-economic inequalities among its members. It is important that this analysis of local economic success takes account of where such inefficiencies may have prevailed, because even if a process of recovery was underway, the process of recovery itself would have absorbed resources which elsewhere would have been allocated to the acquisition of new skills and the capturing of new markets.

7.3.2 The pattern of low deprivation in Northern Ireland in 2001



Map 7.1: *District Council Areas ranked by absence of multiple deprivation 2001. (Source: Derived from NISRA Multiple Deprivation Measure) Note: Ranks 1-6 = lowest deprivation*

The map of NISRA's District Council Area multiple deprivation rankings (Map 7.1 above) reveals that with the exception of Belfast and Moyle there was a noticeable East-West split in the level of multiple deprivation being experienced by District Council Areas in 2001. The lowest deprivation scores were in the east of the Province, while the highest deprivation scores were in the west and south.

7.3.3 The interaction between low multiple deprivation and other variables

The correlation table at Appendix 2 reveals that there was a strong negative correlation (at the 1% significance level) between the density of Catholics in a District Council Area and low deprivation. Map 7.1 shows that the District Council Areas with the highest deprivation were all areas with substantial Catholic/Nationalist populations: Strabane, Belfast, Derry, Newry and Mourne, Moyle and Cookstown. The District Council Areas with lowest deprivation were all predominantly Protestant: North Down, Castlereagh, Ards, Newtownabbey, Antrim and Banbridge.

A low level of multiple deprivation in a District Council Area was negatively correlated also with two social characteristics associated with Catholics: the number of women staying at home and the number of long-term sick and disabled residents in an area, and it was negatively correlated, at the 1 per cent significance level, with the number of Credit Union members and the number of groups involved in economic development; as well as, at the 5 per cent significance level, with three other social capital measures: voter participation, the number of supported community business start-ups, and the number of applications made to the National Lottery Community Fund by community groups. There were further negative correlations at the 5 per cent significance level with a group of education-related measures and with two business-related measures. The education related indicators were: the percentage of people without qualifications, the percentage of full-time students, and the number studying IT at Further Education Colleges. The business-related measures were: the number of new VAT registrations between 1997 and 2001 and the business stock change competitiveness differential (two variables which were themselves highly correlated).

Low deprivation was positively correlated, at the 5 per cent significance level, with the percentage of people holding degree level qualifications or above and with the percentage of people with 5+ GCSEs, in line with the negative correlation with the percentage of people without qualifications. The negative correlation with the percentage of full-time students in a District Council Area suggests that deprived areas which would have historically achieved below average levels of educational attainment, were by 2001 generating higher than average levels of participation in education, proxied by the number of full-time students. It is possible that this was because a lack of opportunity had encouraged more young people to stay within the education system, in part because Further Education Colleges and other educational establishments had from the late 1990s been running programmes to promote educational opportunity in deprived areas through community education programmes. Nevertheless, even though there were more full-time students in deprived areas, educational attainment levels in those areas were relatively low.

Positive correlations, at the 5 per cent significance level, were recorded between low deprivation and average earnings, not surprising given that income deprivation was one of the domains from which the multiple deprivation measure had been constructed. In addition, low deprivation was positively correlated, at the 5 per cent significance level, with an area's stock of financial, property and business services and with locational advantage. This positive correlation with locational advantage (proxied by distance from an international airport) seems to conform to the Copus and Crabtree (1992) peripherality model which suggested that areas which were geographically advantaged in terms of access to markets and services were more likely to also be economically advantaged.

Areas in which deprivation was high seem more likely to have been Catholic, with fewer than average numbers of highly educated people but with relatively high levels of small businesses emerging, in spite of a relatively small stock of business services. It will be shown later in this chapter that the negative correlation between low deprivation and the number of new VAT registered businesses (1997-2001) is consistent with a negative correlation between low deprivation and Catholics. This could have been a case of co-linearity, in that deprived areas were Catholic and Catholic areas happened also to have high levels of VAT registrations; or it could have been that the propensity of people to start or expand a business was higher in areas where there were high levels of multiple deprivation and in which there were lower than average levels of educational attainment. If that was the case it might be speculated that a combination of visible deprivation and the lack of skills demanded by employers (which a relatively low level of educational attainment would suggest) might have encouraged more people in those areas to try to take control of their economic futures by owning and running small businesses. This, if it was true, would mean that locally owned and managed businesses emerged more as a response to necessity than opportunity. Put another way, if low deprivation is a proxy for quality of life, in Northern Ireland in 2001 it appears that where quality of life was relatively high (and deprivation low) fewer people than elsewhere in the region created or expanded their own businesses.

Multiple deprivation was negatively correlated with eight measures of social capital, in addition to the two measures of participation in education already referred to. Some commentators, such as Narayan and Pritchett (2000), have argued that participation in education is itself a social capital indicator. This seems to challenge observations in the literature (Chapter Three) that social capital was depleted in communities which had high levels of deprivation; although Casey (2004) cautioned that social capital in Northern Ireland was a very distinctive phenomenon; and Gaffikin and Morrisey (2005) noted that social capital in the Province was mostly of the bonding variety, deeply rooted in and influenced by culture, particularly that of the Catholic community. They suggested that social capital in Northern Ireland was a manifestation of identity more than it was a response to circumstances such as deprivation. If this assertion is true (and it would certainly reflect practitioner experience in Northern Ireland) it could be misleading to draw conclusions in respect of the functioning of social capital in other regions based on the role played by social capital in Northern Ireland.

7.4 LOCAL ECONOMIC SUCCESS OUTCOME TWO: EARNINGS (A quality of life measure)

7.4.1 The rationale for adopting average earnings as a success outcome

Earnings data adds another dimension to a local economic success picture. Martin (2005) noted that the European Commission in 1995 had defined an area's "competitiveness" as its ability to generate high incomes as well as employment. He highlighted also the emphasis placed by US President's Commission (1984) on the importance of high levels of wages as a measure of a nation's economic performance. Making an argument that the best chance of improving the economic circumstances of the less-well-off was to allow the better-off free rein to generate greater wealth, Norton (2002) contended that the incomes of the poor were intimately linked to the incomes of the better off and that growth in the incomes of the better off reduced the effects of poverty proportionately more than increases in the incomes of the poor; the implication being that the higher average incomes were in an area the larger would be the earnings multiplier and the spillover gains in respect of other economic success outcomes.

Huggins (2003) rationalised the use of average earnings in his UK regional competitiveness index on the basis that high earnings were:

> "*an indicator of area competitiveness if they are supported by high productivity*" (Huggins, 2003, p.91);

...... although he did note:

> "*the possibility of a long time lag between output growth and an increase in earnings becoming visible*". (Huggins, 2003, p.96).

He also cited the DTI as saying that a key measure of regional competitiveness was:

> "*the ability of regions to generate high income and employment levels*" (Huggins, 2003, p.90).

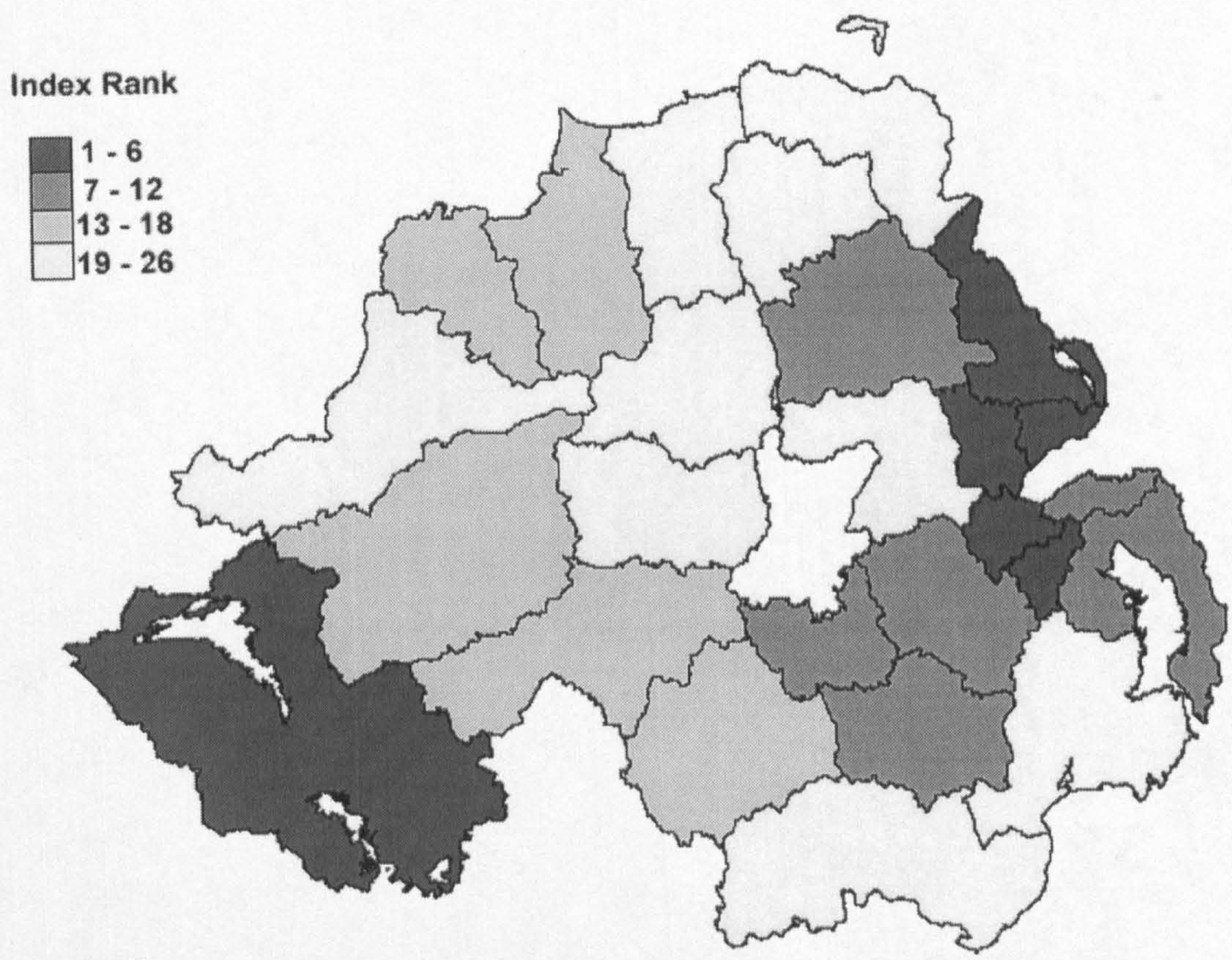
He concluded that:

> "*true local and regional competitiveness occurs only when sustainable growth is achieved at labour rates that embrace overall standards of living.*" (Huggins, 2003, p.89).

The relative economic success of two District Council Areas with similar scores in respect of other economic success outcomes can be differentiated by their respective levels of average earnings. A District Council Area's average earnings will indicate whether jobs in an area are of a calibre to generate higher incomes than elsewhere. It is average earnings which underpin the prevailing standard of living and quality of life in an area. As with deprivation, an earnings measure allows success to be defined as a more comprehensive achievement.

For the purposes of this research "gross average weekly earnings", which includes public sector wages, has been selected as an economic success outcome. Notwithstanding Bradley's contention that Northern Ireland was too dependent on public sector employment (Bradley 1996), public sector wages were an important component of the economic advantage enjoyed by some areas in the Province in 2001. While there has for more than a decade been an acceptance within Northern Ireland's body politic that the public sector is larger than in equivalent regions elsewhere in the UK, there has been no consensus as to how much smaller the public sector should be. Nor is it clear what the effect of future downsizing of public sector employment on individual District Council Areas would be. One possibility is that downsizing might be achieved by withdrawing from "outposts" (where the public sector had been of less economic significance) and that as a result there might not be a substantial change in the contribution which it will make to average earnings in the areas where it was concentrated in 2001. This debate notwithstanding, when the distribution of private sector wages was analysed separately as a local economic success predictor variable it was found anyway to have been highly correlated with the distribution of wages overall. Thus the areas with high public sector wages also had high private sector wages.

7.4.2 The earnings pattern in Northern Ireland in 2001



Map 7.2: *Ranked mean earnings score by District Council Area in Northern Ireland, 2001. Note: Ranks 1-6 = highest earnings. (Source: Derived from DETI New Earnings Survey 2001)*

Map 7.2 shows that average gross weekly earnings in Northern Ireland in 2001 were highest (with the exception of Fermanagh) in District Council Areas in Belfast and south east Antrim: in Belfast City, Castlereagh, Newtownabbey, Carrickfergus and Larne; all District Council Areas with substantial Protestant majority populations, and all District Council Areas which constituted part of the Greater Belfast commuter belt.

The District Council Areas with the lowest wages were in the south, west, north and north-west of Northern Ireland. Not all of these were Catholic District Council Areas. Some District Council Areas like Banbridge, Craigavon, and Carrickfergus which had relatively low wages were predominantly Protestant; whereas in Fermanagh, in which there was Catholic majority population, wages were high by the standards of the west. There may be a number of explanations for Fermanagh's high average earnings: The Erne basin, in effect most of

Fermanagh, is designated as an Area of Outstanding Natural Beauty (AONB) and has had a long-established tourism industry centred on fishing and boating, which has provided more opportunity for income generation than tourism elsewhere in Northern Ireland which has largely been focused on sightseeing. The area has also long had a reputation as an attractive place to live, having avoided the worst of the troubles. Enniskillen was also in 2001 a regional centre for the provision of public services. Nevertheless, Fermanagh is largely rural, it did not have many overseas-owned employers offering high wages, and it was relatively distant from Belfast and Dublin. What Fermanagh does demonstrate is that it was possible in 2001 for some areas not to have been disadvantaged, at least in respect of earnings, by rurality or relative peripherality. Conversely, the case of Antrim, which was ranked 22nd out of 26 District Council Areas in respect of average earnings, demonstrates that proximity to Belfast, as well as the presence of a large number of foreign-owned employers, was no guarantee of high wages. Both these cases are useful in highlighting the value of the average earnings indicator in adding, by proxy, a quality of life and quality of employment dimension to the picture of local economic success in Northern Ireland.

7.4.3 The interaction between earnings and other variables

The correlations between average earnings and other variables suggest that where earnings were high social capital stocks were low; though this may have been attributable to the association between social capital and the generally lower-waged Catholic community in Northern Ireland; more so than being an indication that people on lower incomes had a higher propensity to generate social capital. However, there is insufficient data to clarify which, if either, scenario prevailed.

Areas with high average earnings in 2001 were likely to have had a larger than average stock of business services companies, and a lower than average numbers of redundancies, (both economic success outcomes), as well as having had higher than average numbers of people who were degree-level educated, relatively low levels of self-employment and relatively high numbers of economically active females. These were also areas which were likely to be predominantly Protestant and where it appears the growth in business stock had been less than the Northern Ireland average, controlling for sectoral structure. Given that growth of business stock is also a local economic success outcome this might be a significant finding in that it seems to suggest that areas which enjoyed high earnings were less likely to have grown and refreshed their business stock, ensuring that they would provide for further sustainable economic development in the future; that they may have become, in other words, complacent. Lower than average business stock growth suggests a narrower than average economic base which, while it might have been providing high incomes in 2001, might also have been risking dependence on a relatively small number of employers, possibly including the public sector. This, however, is supposition as the data available cannot reveal anything in respect of the future prospects of that smaller group of employers.

Mean earnings were positively correlated with some success outcomes (low deprivation and business stock), negatively with others (redundancies, new VAT registrations 1997-2001, and the business stock change competitiveness differential), and not at all with others; highlighting the problems which would arise if this measure alone were to be deployed as an indicator of local economic success.

7.5 LOCAL ECONOMIC SUCCESS OUTCOME THREE: JOB DENSITY (A labour market measure)

7.5.1 The rationale for adopting job density as a success outcome

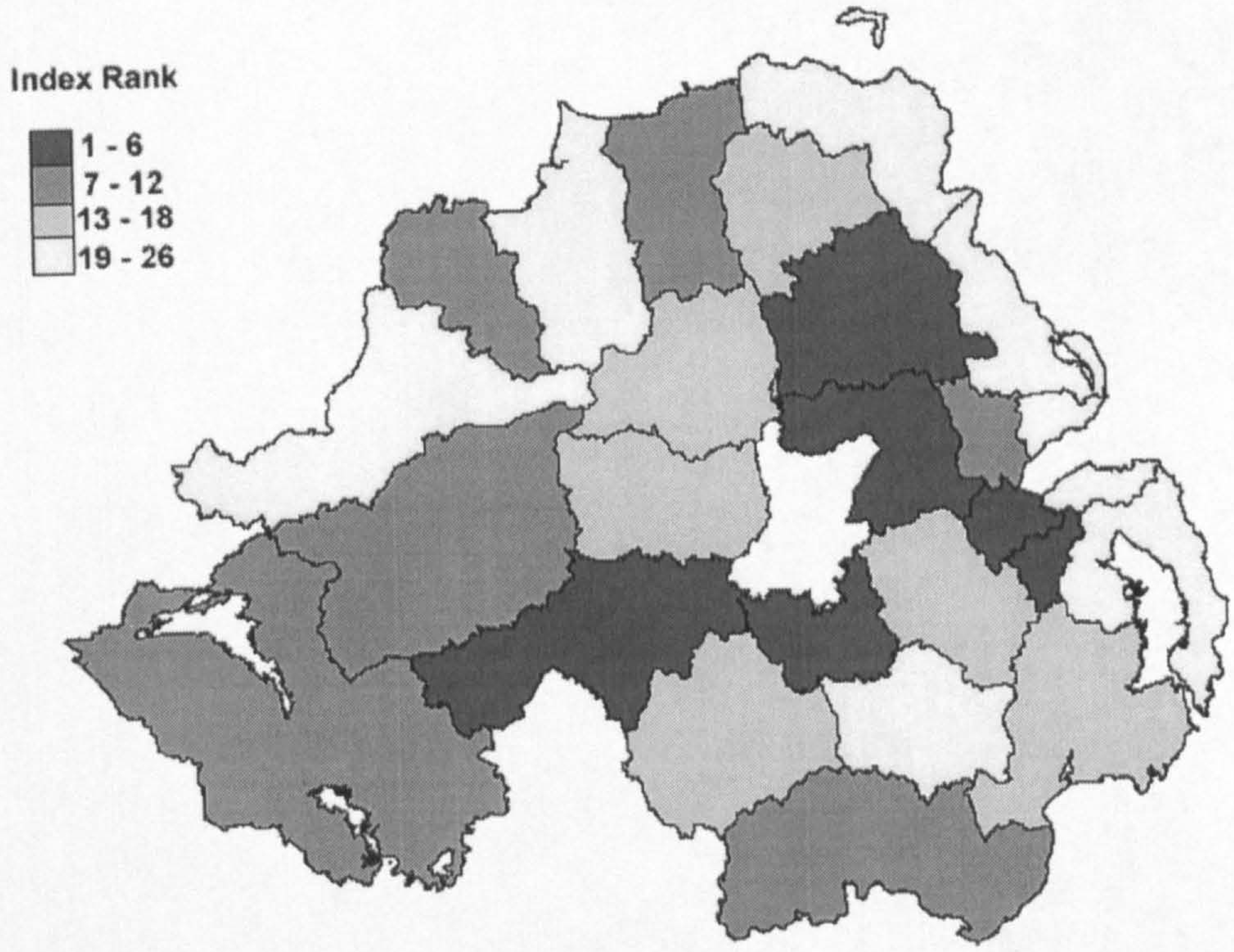
For Huggins (2003) tightness of the labour market was an important competitiveness indicator. Job density, which is derived by dividing the total number of jobs by the total working age population in each District Council Area, provides an insight into the level of labour market demand and thus the tightness of the labour market in an area. The more demand there is for labour, the higher will be the job density figure and the more successful a local economy is likely to be in employing human capital to generate wage and sales income. A relatively low job density figure could indicate that a relatively high number of people in a local economy were dependent on others to support them. Job density has been chosen rather than unemployment as a local economic success outcome indicator because unemployment is a measure only of people in an area who have been unable to find employment: It reveals nothing about whether there are or are not jobs available in an area and whether people are not working because of a lack of jobs or for other reasons (e.g. social/personal).

Job density indicates which areas are centres of employment. But as a job demand measure only, it is a measure not without its problems. While it divides jobs in an area by its resident working-age population, it doesn't measure the relationship between those jobs and the resident population. It does not, for example, allow for the fact that a centre such as Belfast may attract large numbers of commuting workers who do not live in the city. Because the boundaries which demarcate Belfast and other District Council Areas may not always be contiguous with travel-to-work areas, labour flows may not be accurately measured by the District Council Area-based job density measure.

The problem, highlighted by Curran and Blackburn (1994), in defining small areas as discrete economies is that the more "local" the area which is being defined the more subject it is likely to be to inward and outward flows of factors of production and of goods and services; and the more difficult it will be to speculate as to cause and effect on the basis of apparent associations between variables. The fact that a group of people might earn their living in one District Council Area crossing a boundary each day to and from their homes in another means that the benefit of the wages which they have earned will principally be enjoyed not in the District Council Area where they work but elsewhere.

In the context of this research, however, the job density measure is useful because it helps to highlight where demand for labour was high. A high job density is an outcome which, in economic policy terms, is preferable to a low job density insofar as it suggests that there are employment opportunities for people living in an area if they have the right skills and motivation. However, high demand for labour can only be defended as a local economic success outcome if it has been achieved in combination with other local economic success outcomes. A high job density alongside high average earnings in an area suggests a more robust economic situation than a high job density which is co-terminus with relatively low average earnings, which would suggest that a high proportion of the jobs on offer were providing low wages. Like the other success outcome indicators, job density adds depth to a picture of local economic success.

7.5.2 The job density pattern in Northern Ireland in 2001



Map 7.3: *Ranked job density score by District Council Area in Northern Ireland in 2001 (Source: DETI 2001)*
Ranks 1-6 = highest job density

Map 7.3 shows that in 2001 job density was highest in Belfast, Ballymena, Antrim, Craigavon, Dungannon and Castlereagh. The high job density figures in Antrim, Castlereagh and Craigavon are likely to have been a reflection of the concentration of employers in those areas. Antrim and Castlereagh, while part of the Greater Belfast region, were the location for substantial numbers of manufacturing jobs (Antrim) and retail and administration jobs (Castlereagh); and Craigavon had the largest concentration of manufacturing industry outside of Belfast. In the case of Ballymena it is more likely to have been the case that the working age population was small relative to the number of employers in the Borough. The District Council Areas in Northern Ireland with the lowest job density figures seem to have fallen into two groups: those areas which traditionally endured high levels of unemployment, like Strabane and Moyle, where the number of employers present was likely to have been lower than elsewhere, and those areas wherein lived large numbers of retirees as well as commuters who worked principally in Belfast – Carrickfergus, North Down, Ards and Armagh.

7.5.3 The interaction between job density and other variables

Positive correlations, at the 5 per cent significance level, were recorded between job density and the 1997-2001 employment change competitiveness differential as well as with one measure linked to Government intervention in support of economic development: the number of INI client companies. This might suggest that District Council Areas which had a high job density had also created more jobs between 1997 and 2001 than the Northern Ireland average, controlling for sectoral structure; and that they also had a higher number of INI client companies. A link between job density and employment growth is not unexpected. The correlation between the number of INI client companies and job density, however, suggests that INI was more active in areas where jobs were relatively plentiful; plentiful perhaps because that's where industry employers were concentrated; and that conversely INI was least active, as measured by its inventory of clients, in areas where there was less employment opportunity.

There was a relatively weak, though statistically significant, correlation with crime. Why, however, is less obvious. The correlation between crime and job density might have been the product of coincidence or of co-linearity with other unidentified variables. On the other hand, it might also have been the case that, in a sufficient number of areas which had a high job density, there were also co-existent conditions which encouraged crime.

Inverse correlations, significant at the 5 per cent level, were recorded in respect of population change and the percentage of people with 5+ GCSEs. The correlation with population change may simply have been a reflection of the fact that population growth had diluted job density in some areas. The inverse correlation with the percentage of people with 5+ GCSEs, if it did reflect an actual causal relationship between these two variables, would suggest that as the demand for labour in an area increased educational attainment levels fell.

Of greater note may be the fact that, beyond employment growth, job density was not correlated with other indicators which might have been defined as economic success outcomes (such as the number of new VAT registrations or earnings). This suggests that while a high job density might be a desirable local economic policy objective, of itself a high job density does not necessarily translate into higher than average earnings or other economic success outcomes, other than growth in employment. It is possible, for example, that a high job density in a District Council Area could be the product of a high level of employment in the public sector, or a concentration of jobs amongst a relatively small number of large private sector employers, and that, in addition, a significant number of those jobs offered low wages. In that case a high job density would not translate into the high level of small firm emergence (as measured by new VAT registrations) which had been rationalised by Invest Northern Ireland in its Business Birth Rate Strategy (2002) and the Accelerating Entrepreneurship Strategy (2004) as a local economic success objective; nor would it be reflected in higher average earnings.

The inclusion of job density alongside other economic success outcomes in an index of local economic success allows those District Council Areas in Northern Ireland to be identified where not only was demand for labour high but average earnings were high, alongside a high level of small firm emergence and so on – areas in other words which were comprehensively successful.

7.6 LOCAL ECONOMIC SUCCESS OUTCOME FOUR: LOW REDUNDANCIES
(A labour market measure)

7.6.1 The rationale for adopting low redundancies as a success outcome

Measuring the level of redundancies in an area reveals the extent to which businesses located there have had to restructure or close because of inefficiency and unprofitability, although redundancy figures alone cannot reveal how many jobs were lost as a result of restructuring and how many as a result of closure. nor how many might be replaced.

A high number of redundancies is not necessarily an indication that an area will be economically unsuccessful in the longer term. Industrial restructuring can lead over time to higher sales and greater profitability and, in that sense, success; although Martin (2005) argued that while a combination of labour-shedding and low wages might produce an increase in productivity it was:

> "*the 'low road' route to competitiveness, and in the long run not a sustainable strategy*" (Martin, 2005, pp.6-7).

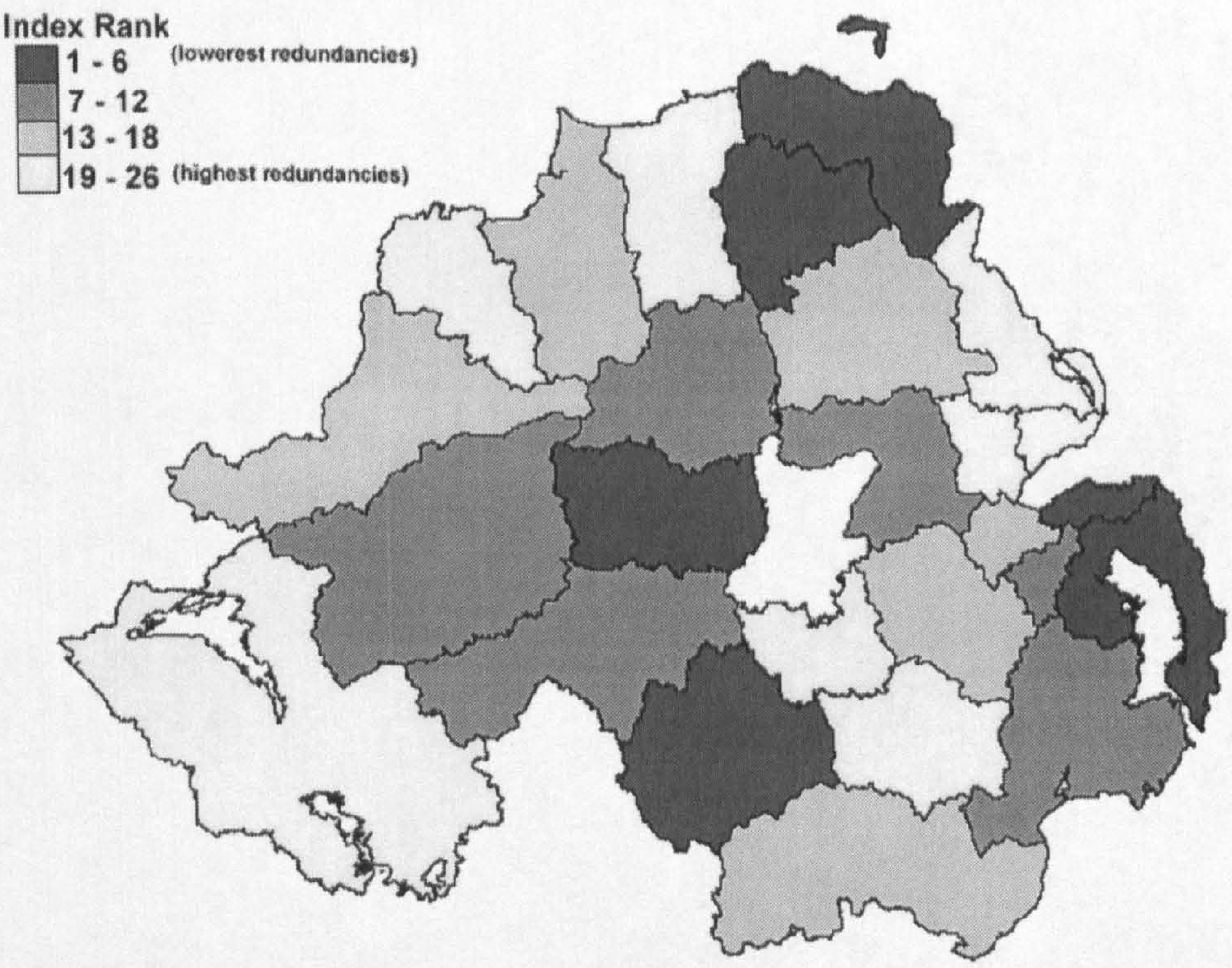
Where redundancies are occurring, it is an indication that an area's economy is experiencing some difficulty and that, even if a business does not close down and might ultimately achieve greater profitability, at the time when the data is collected its operations will have been sufficiently problematic to justify restructuring or closure. Redundancies generate costs for companies, most directly in the form of severance compensation for workers losing their jobs. Companies which are restructuring will be vulnerable to a further deterioration of their market position until the success or otherwise of their strategy is reflected in increased profitability. Areas in which redundancies occur have to endure a withdrawal of resources from the production cycle and a reduction in overall wage income; and those made redundant may need financial support while they search for new jobs, during which time they constitute an inefficiency in the economy. Redundancies can also have a negative effect on community morale and while this may be difficult to quantify, it is one of the reasons why redundancies are politically unpopular and are not presented as a measure of success. Iyer *et al* (2005) went so far as to suggest that:

"*shocks or processes that destroy jobs*" (Iyer *et al, p.*1036)

.... would negatively impact on social capital.

Redundancies may, of course, occur in areas which have the capacity to handle a high turnover of jobs, where there is continuing demand for labour, increasing the chances of redundant workers being quickly re-employed. For that reason the wider economic and social context in which redundancies occur is important. A low level of redundancies alone is an inadequate indicator of local economic success. In combination with other economic success outcome measures, however, it can add depth to the description of a local economy.

7.6.2 The pattern of lowest redundancies in Northern Ireland in 2001



Map 7.4: *Ranked redundancies score by District Council Area in Northern Ireland, 2001. (Source: DETI 2001)*
Note: low redundancies = 1; high redundancies = 26.

Map 7.4 shows that redundancies in Northern Ireland in 2001 were highest in south-east Antrim (Newtownabbey, Carrickfergus and Larne), the north west (Derry, Coleraine, Limavady and Strabane), in Craigavon, Banbridge, Lisburn, Belfast, and in Fermanagh. They were lowest in North Down and Ards, North Antrim, Cookstown and Armagh, all with the exception of Ards predominantly rural areas with a relatively under-developed industrial base. Redundancies in 2001 seemed to be concentrated in District Council Areas containing relatively large urban settlements where there was a substantial presence of manufacturing industry. Wherever industry was concentrated in Northern Ireland in 2001, redundancies were relatively high.

7.6.3 The interaction between low redundancies and other variables

In 2001 a low level of redundancies was negatively correlated with three measures linked to Government intervention in support of economic development: IDB/INI's property provision (significant at the 1 per cent level), the level of financial assistance allocated to companies in each District Council Area by the IDB, and the number of IDB jobs supported in each District Council Area (both significant at the 5 per cent level). These findings seem to suggest that where redundancies were lowest in 2001 the IDB/INI had invested least resources, concentrating instead on areas in which there had been above average redundancies. A negative correlation between low redundancies and wages seems to suggest that redundancies were more likely to occur in areas where wages were low; which might in turn imply that redundancies were a feature of areas where there was a concentration of relatively poorly remunerated labour intensive industries. Positive correlations at the 5 per cent level were recorded with the number of people who were self-employed, the number of new VAT registrations between 1997 and 2001, the number of female small employers, the number of hours worked and the business stock change competitiveness differential.

The positive correlation with the number of people who were self-employed, and the business stock change competitiveness differential could be attributable to co-linearity between the number of new VAT registrations and the number of female small employers (with both of which self-employment and the business stock change competitiveness differential were correlated at the 5% significance level) or between VAT registrations and another unidentified variable. If these correlations did, however, reflect a situation whereby redundancies were low in places with high levels of self-employment, of aggregate new business formations and of females engaged in business management, from a policy perspective that could be significant. It would suggest that there may have been something specific in the management style adopted by women which limited redundancies; or, alternatively, that having more women in management reflected something else in an area which limited its exposure to redundancies; or that women were more likely to accede to management in areas where there were higher numbers of small indigenously owned businesses. It could also simply be an indication that redundancies were more of a phenomenon in areas with a high number of large employers and that in those areas fewer women managed businesses and the level of self-employment generally was low. Because of the narrow timeframe on which this thesis is focused and the limited number of variables which have been analysed, however, it is beyond its scope to confirm which scenario prevailed.

The negative correlation at the 5% significance level with the stock of business services companies appears to suggest that redundancies were higher in areas where business services companies were concentrated. Speculation as to causality on the basis of such a relatively weak correlation would be spurious. What can be said, however, is that those areas which had the lowest levels of redundancies in 2001 were the areas which also had above average levels of self-employment, and that in areas in which self-employment was high the number of business services companies was low.

The absence of a correlation with those other indicators which have been proposed in this thesis as economic success outcomes seems to confirm that, while low redundancies might be politically desirable, the fact that redundancies do or do not occurr cannot be taken alone as an indicator of economic success. Redundancies can occur as part of a change process in areas which already have high average earnings, low deprivation and high levels of employment growth. That said, an economy which is enjoying these and perhaps other advantageous conditions and which has also been able to record low levels of redundancies, will be in possession of a success menu which will be preferred by policy-makers over that offered by another economy which, while similar in other respects, is enduring relatively high levels of redundancy.

7.7 LOCAL ECONOMIC SUCCESS OUTCOME FIVE: STOCK OF FINANCIAL/PROPERTY AND BUSINESS SERVICES 2001 (A commercial structure measure)

7.7.1 The rationale for adopting the stock of financial/property and business services as a success outcome

The Financial, property and business services sector for the purposes of this research combines two SIC categories (J and K) and includes banks, estate agents, accountancy practices and management consultancies. This is a knowledge-based sector. Huggins (2003) citing Thurrow (1993), argued that the presence of knowledge-based companies determined whether a region would be able to provide:

> "*a world-class standard of living for its citizens.*" (Huggins, 2003, p.89).

Huggins had used a knowledge-based business measure in his competitiveness index on the grounds that:

> "*it is now recognised as the key driver of economic growth at all levels*" (Huggins, 2003, p.91).

This is a sector the scale of which might be assumed, *interalia*, to be a function of the level of economic activity requiring its services. It might be further assumed, if that were the case, that the larger an area's stock of financial, property and business services; the more densely concentrated would be other economic activities, and the more successful would be its economy. The presence of financial, property and business services, according to this perspective, would be associated with external economies which benefited existing firms and encouraged the birth of new ones. Van Stel and Storey (2004) suggested that start-up rates tended to be higher in the service sector, more so than in manufacturing, because entry barriers were fewer, scale was lower, and demand was higher. For these reasons they speculated that areas with a high share of services in the local economy were more likely to have had higher start-up rates than other regions. These are assumptions and contentions which this research will attempt to test.

The value of this indicator, particularly at the level of the District Council Area, has to be qualified by the pre-eminence of Belfast as a centre which in 2001 provided services to businesses right across Northern Ireland. Economies of scale meant that more specialised services, among them those provided by management consultants, were concentrated in Belfast. Also, an area's business stock in 2001 would to some degree have been the product of past patterns of economic activity. There is likely, therefore, to have been a legacy effect in the distribution of these services which would, in part, have been influenced by Northern Ireland's history of uneven geographical and inter-community economic development.

Three different ways of measuring business services stock are considered in this section:

- The distribution of Northern Ireland's total stock of business services, to identify those areas where the agglomeration economies associated with concentrations of business services prevailed. This measure is of limited value on its own, however, because it does not reflect how important the sector was relative to the rest of a District Council Area's economy.

- An examination of where the sector had grown over a five year period (1997-2001), to provide some sense of where the recent environment in respect of demand for business services and the availability of people with appropriate skills had been conducive to the expansion of the sector. The difficulty with this measure, however, is that again it does not shed any light on the relative significance of the sector in a District Council Area vis-à-vis the rest of its business stock.

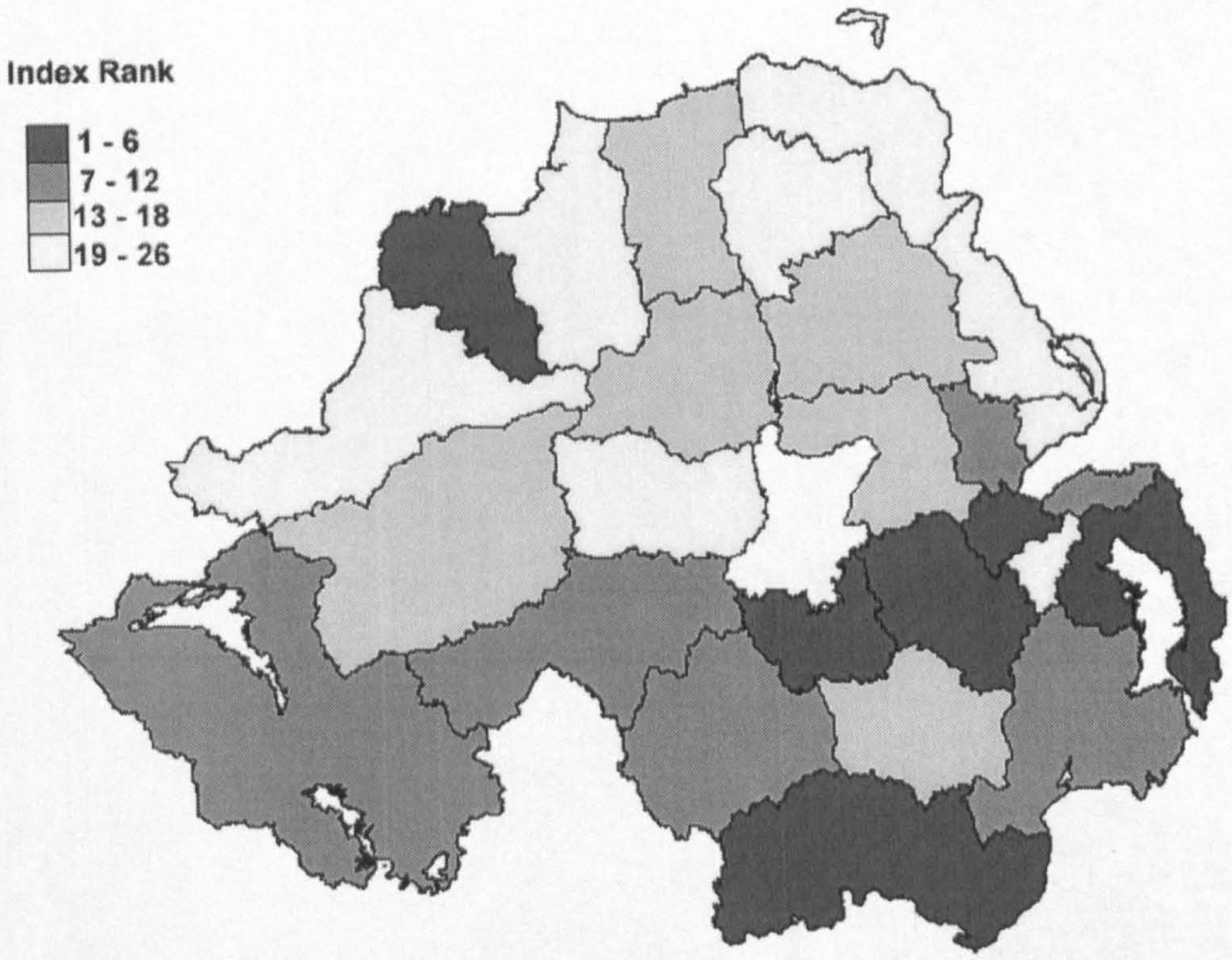
- The measure which will be adopted as a success outcome is a snapshot of the business services sector as a proportion of the total business stock in each

District Council Area in 2001; the *prior* being that it is economically advantageous if an area's industrial/commercial structure includes a high proportion of business services because these are businesses which typically provide relatively highly remunerated, graduate-level employment, and that it is their remit to provide the support which will make other businesses successful. The denser the population of business services the more well paid white-collar jobs there are likely to be in an area and the more access other firms in that area will have to the finance and advice which can accelerate their business development. Correlations which test these assumptions will be considered later in this section.

While this measure of the relative size of the business services sector in each District Council Area in 2001 has been adopted as a success outcome, there is nevertheless some value in mapping both the distribution of Northern Ireland's total stock of business services in 2001 and the increase in business services stock over the previous five years, insofar as these measures will contribute to a fuller understanding of the intra-regional distribution of economic activity in Northern Ireland.

7.7.2 The distribution of Northern Ireland's total stock of business services in 2001

Mapping each District Council Area's share of Northern Ireland's total stock of financial, property and business services (Map 7.5 below) reveals where, in absolute terms, those services which supported business and economic development across the region were concentrated.



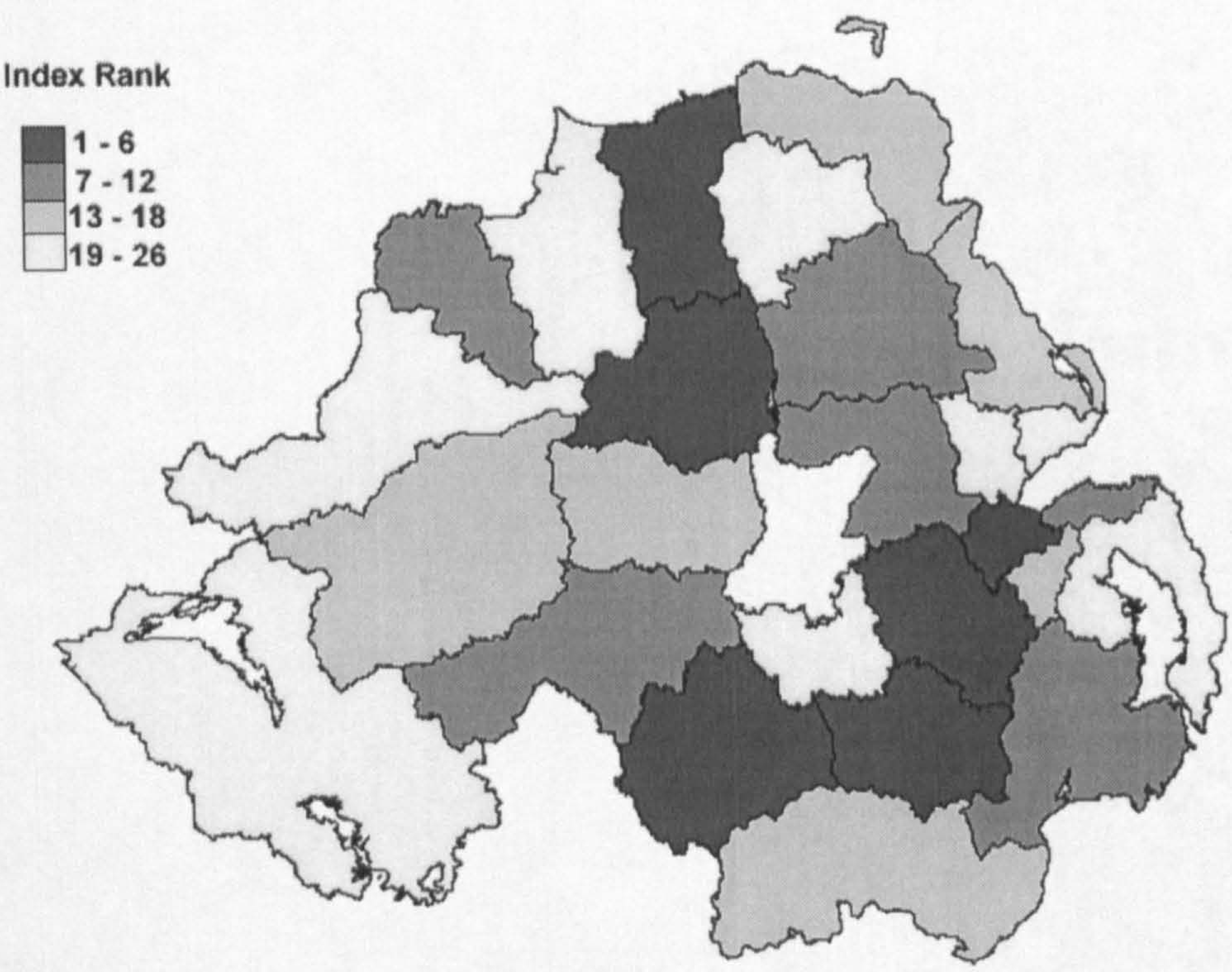
Map 7.5: *Proportion of Northern Ireland's total business services stock located in each District Council Area – ranked 2001. (Source: Derived from Small Business Service VAT Registration Data)*
Ranks 1-6 = most concentrated.

The Belfast City Council Area was home to almost 17.5 per cent of Northern Ireland's total stock of financial, property and business services and was, by a very significant margin, the centre of business and economic development support services in Northern Ireland, with Lisburn, which had the second largest share, only accounting for 6.38 per cent. This was followed by Newry and Mourne at almost 6 per cent, Derry at 4.8 per cent, Craigavon at 4.5 per cent and Ards at 4.36 per cent. The District Council Areas with the smallest shares were Moyle, Carrickfergus, Larne, Limavady, Ballymoney, Strabane and Cookstown. The strength of the Greater Belfast Area, including Lisburn and Ards as well as Craigavon is not surprising. The strength of the sector in Newry and Mourne stands out, especially given that Derry was a larger population centre and almost twice as far from Belfast as Newry and Mourne. The emerging role of Newry as a location for services which supported cross border trade, given its relative proximity to Dublin, may have been a factor.

The weakness of this measure is that, because District Council Areas vary so much in size (of population and number of companies they support), it does not reveal the relative significance of the sector within each District Council Area. For that reason it is likely to under-represent the relative importance of business services in some smaller District Council Areas. Coleraine is a case in point. It is only ranked 14th out of 26 in terms of its share of Northern Ireland's total stock of business services; yet when business services are taken as a proportion of its total stock of VAT registered businesses, Coleraine in 2001 had the sixth highest relative concentration of business services amongst Northern Ireland's 26 District Council Areas.

7.7.3 The increase in the business services stock in Northern Ireland 1997-2001

Another way to assess the relative significance of business services is to measure their growth in each area. An increase in business services companies will have been a function of a growth in demand for those services, a growth in demand which is likely in turn to have been generated by a growth in economic activity. In order to control for a situation where, by way of example, an area which increased its stock of business services from one estate agency in 1997 to two in 2001 would be registered as an increase of 100%, the relative significance of that increase is measured instead in proportion to the size of the adult resident population in each area.

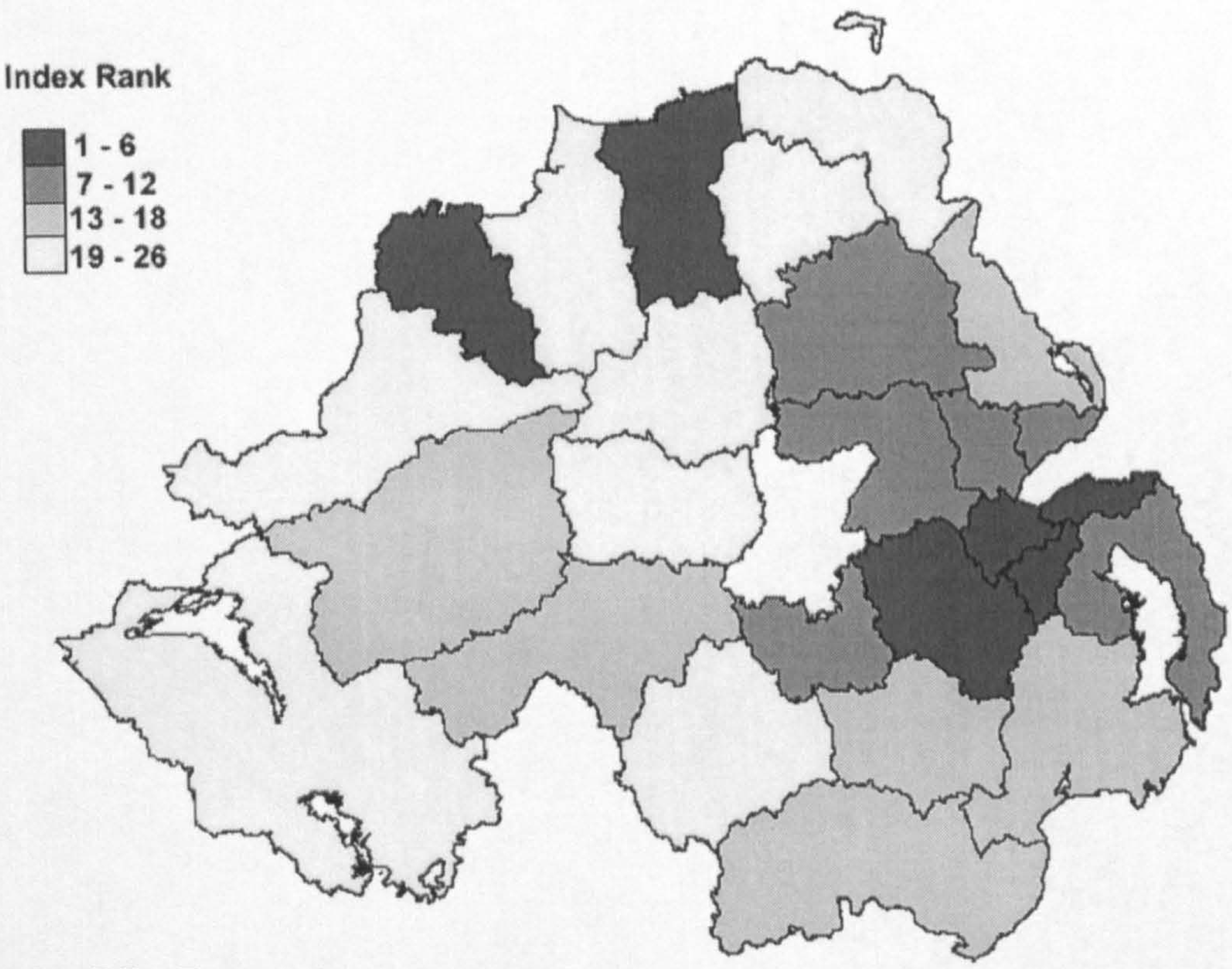


Map 7.6: *Increase in the number of financial, property and business services (SIC codes J and K) per 10,000 adult resident population, 1997-2001, ranked by District Council Area. (Source: Derived from Small Business Service VAT Registration Data)*
Ranks 1-6 = greatest increase.

Map 7.6 reveals that the District Council Areas in which the relative increase in business services providers was most significant were Belfast, Magherafelt, Lisburn, Coleraine, Armagh and Banbridge. The growth in Belfast is not surprising because as Northern Ireland's capital it had historically been the centre of the region's service sector. The increase in business services in Coleraine may have been a function of an expansion of ancillary activities and businesses linked to the University of Ulster at Coleraine. The growth in Lisburn and Banbridge might have been attributable to their proximity to Belfast, although why Lisburn's service sector grew significantly while that of Newtownabbey or Castlereagh had not to the same degree when both were located equally close to Belfast, cannot be answered within the scope of this thesis. An explanation for the growth of financial, property and business services providers in Armagh and Magherafelt is also not immediately obvious. It could be that the growth of business services in these areas reflected wider economic growth, suggesting that these District Council Areas would then have been economically successful more generally (something which will be tested later in this thesis). However, that link to economic success is not obvious elsewhere. In fact, overall there is no clear explanation for the geographical distribution of these increases. Some areas which generated relatively high numbers of new VAT registrations, another economic success outcome, such as Newry and Mourne and Cookstown, experienced only modest relative growth in their stock of business services. Thus while this measure provides a useful insight into growth trends in this sector, it is not clear what it says in respect of economic success.

7.7.4 Success outcome – The stock of business services by District Council Area 2001

The most straightforward way to measure the relative significance of business services (and of the direct and indirect benefits associated with the sector) within each of Northern Ireland's District Council Areas is to calculate the proportion of the total stock of VAT registered businesses in each District Council Area in 2001 which were financial, property and business services.



Map 7.7: *Financial, property and business services companies (SIC codes J and K) as proportion of the total VAT-registered stock in each District Council Area, 2001. (Source: Derived from Small Business Service VAT Registration Data). Ranks 1-6 = highest concentrations.*

Map 7.7 reveals that the District Council Areas which had the largest stock of financial, property and business services providers as a proportion of their total stock of non-agricultural businesses were Belfast, North Down, Castlereagh, Lisburn, Derry and Coleraine. These first four District Council Areas together constituted a large part of the Greater Belfast area. Derry was the second largest urban settlement in Northern Ireland and the main service centre in the north west.

The concentration of business support services in the Coleraine Borough may have been attributable to the presence in Coleraine of the University of Ulster and its population of students, staff and ancillary services all of which would have generated a relatively high demand for banking and estate agency. The District Council Areas in which business support services were least concentrated were in the mid west, south west and south of Northern Ireland. An interesting feature of this distribution is that some of the areas in which these services were sparsest had also between 1997 and 2001 generated high numbers of new VAT-registered businesses per 10,000 adult resident population, suggesting that the link between the presence of business services in an area and new business formation may not have been a straightforward one; although it is possible that in the predominantly Catholic rural west and south of the Province the pace of new business formation across all sectors had been such in the five years up to 2001 that the relative significance of financial, property and business services may have been diluted. If that had been the scenario, the presence of business services may not only have been an encouragement to business start-up and expansion in these areas but may, in combination with other factors, have contributed to circumstances which actually accelerated the process. This, however, is speculation. It is beyond the scope of this thesis to venture whether this was or was not the case. Rather the possibility is highlighted as a caveat.

7.7.5 The interaction between the stock of financial property and business services companies and other variables

The stock of financial property and business services companies in Northern Ireland's District Council Areas was positively correlated, at the 1 per cent significance level, with the percentage of people with degree qualifications, the proportion of residents born outside the UK and Ireland and crime; and at the 5 per cent level with the number of IDB/INI-sponsored inwaard investor visits and with two earnings measures: overall mean earnings and private sector wages; as well as with locational advantage, the number of people studying science at Further Education Colleges and low deprivation.

Negative correlations, at the 1 per cent significance level, were recorded with the business stock change competitiveness differential, the number of hours worked, the number of people who were self-employed and the percentage of people with no qualifications (which was consistent with the positive correlation in respect of the percentage of people with degrees).

There were also negative correlations, at the 5 per cent significance level, with the number of Catholics in a District Council Area and with three other variables which were strongly correlated with Catholics: the number of females staying at home, and the number of long-term sick and disabled and low redundancies. In addition, business services stock was negatively correlated with two social capital measures: voter participation, and Credit Union membership; and there was a further set of negative correlations at the 5 per cent significance level with another variable linked to self-employment: the number of new VAT registrations between 1997 and 2001.

While it may be possible that above average business expansion in Catholic/Nationalist areas had diluted the relative significance of business services as a proportion of the total business stock in those areas, which would explain the negative correlations with Catholics and new VAT registrations, the other negative correlations with the business stock change competitiveness differential, the percentage of people who were self-employed, and low redundancies, seem to suggest that areas with concentrations of business services companies had lower levels of small business activity overall and relatively higher levels of redundancies. Alternatively, it is possible that because the business stock change competitiveness differential was higher where the growth in the VAT registered stock had been greatest, in the predominantly Catholic rural mid-west, west and south of Northern Ireland, that this was a case of co-linearity – and that all of these associations were a function of the relative size of the business services stock in these areas having been diluted by the rapid growth of the overall VAT registered stock. That said, if it were the case that business services stock growth had not kept pace with the growth of the overall business stock, that would be an interesting finding.

A negative correlation with the number of female small employers might imply that in areas where there were relatively large numbers of financial, property and business services companies there were fewer women managing small businesses. This would be an important finding if it represented an established pattern because it would suggest that the presence of financial, property and business services companies, along with higher numbers of well-educated people, higher wages, and higher numbers of residents who were born overseas, did not represent circumstances in which women were likely to accede to management positions in the private sector.

Overall, this correlation analysis suggests that District Council Areas with a large finance, property and business services sector were likely to be predominantly Protestant, locationally advantaged, with high wages and a well-educated workforce. More women would be economically active in these areas, though fewer of them would manage small businesses; fewer people would be sick and disabled and general deprivation would be lower, although levels of crime were higher than average. Whether crime was associated directly with the presence of business services companies is questionable. More likely is that crime was attracted to areas in which high earnings were being generated and that these were areas in which business services companies were concentrated, many of which would have been providers themselves of relatively high wages.

The average hours worked per employee in these areas was also likely to have been less than elsewhere. Fewer hours worked and higher wages suggest that a higher proportion of employers in these areas offered superior terms and conditions, though levels of redundancy were also higher. Despite this, these were areas which attracted more overseas residents, and which also attracted more inward investor visits – whether this was because there were more well-educated people living in these Districts, and more people studying science, for example, at Further Education Colleges; whether it was because of the relatively good quality of life and the presence of business support services also in these areas; or whether it was simply because they were well located in respect of Belfast and its international airport – these questions cannot be answered from the data which is available.

Social capital stocks were lower in these areas – an important finding insofar as it suggests that where wages, education and quality of life were relatively high, engagement in the political process (voter participation) and involvement in associational activity (Credit Unions), was likely to be relatively low. This last finding seems to conform to Iyer *et al*'s (2005) observation in respect of social capital in the USA whereby the more ethnically diverse a community apparently the lower its stock of social capital (p.1036). Glaeser (2001) too had claimed that there was a link between the heterogeneity of a population and a lack of social capital, suggesting that the formation of social capital took co-ordination and that such co-ordination was likely to be more problematic when people living in an area were from different cultural, national or even social backgrounds – as they appear more likely to have been, by Northern Ireland standards, in areas where financial, property and business services were concentrated.

7.8 LOCAL ECONOMIC SUCCESS OUTCOME SIX: AGGREGATE NEW VAT REGISTRATIONS 1997-2001 (A commercial structure measure)

7.8.1 The rationale for adopting new VAT registrations as a success outcome

The aggregate number of new or expanding businesses between 1997 and 2001 per 10,000 population has been adopted as an economic success outcome because the more employment and income-generating options there were in a local economy the less likely it was to be dependent on a small number of large employers the future of which might have been decided outside the economies in which they were located. Bridge *et al* (2003) contended that the number of new VAT registrations per capita was a proxy for entrepreneurship because it indicated the extent to which business opportunity had been exploited in an area (Bridge *et al* 2003 p.359). Huggins (2003) suggested that the key to achieving economic growth which would be sustainable and which would maintain a high standard of living was the possession of a critical mass of firms able to generate new entrepreneurs and innovation:

> "*Business density is important since firm concentration and competitive performance are related*" (Huggins, 2003, p.89).

He used business density in his UK Regional Competitiveness Index on the basis that it was:

> "*a strong measure of the potential for sustainable economic growth through the generation of new entrepreneurs and new firms*" (Huggins, 2003, p.91).

The corollary was that a low business density could mean that there were too few firms to generate sufficient wealth and jobs to maintain a high standard of living, and that there was insufficient local competition to encourage the efficiencies and innovation which were necessary to sustain economic growth.

But how is business creation in Northern Ireland to be measured? Storey (2004) recommended the use of VAT registration data as a proxy measure of the level of business start-ups, saying that it was the most robust dataset readily accessible to researchers, it was collected by a highly competent and reliable authority (UK Customs and Excise), it was a long established measure and it could provide consistent, comprehensive and rigorously accurate data over time. A further attraction, from the perspective of this research, is that VAT registration data is available down to NUTS IV level, i.e. District Council Area in Northern Ireland.

New VAT registration data has been adopted as a local economic success outcome indicator because businesses which have crossed the VAT threshold will be generators of jobs, not just directly themselves but also, because they increase local competition, they will encourage existing firms to perform better (Van Stel and Storey 2004, citing research by Disney, Haskel and Heden 2003). New firms often introduce new ideas into an economy, a process which Romer (1986) argued was the source of long-term economic growth. Storey (1994), however, suggested that the extent of innovation generated by new firms was, in practice, likely to be small; although he also acknowledged that a proportion of new firms would mature into generators of innovation.

The "demonstration effect" generated by successful locally-based businesses can be an encouragement to pre-existing entrepreneurial propensities, particularly among the young, and initiate a virtuous cycle in which the existence of large numbers of locally-owned businesses in an area will inspire the set-up of yet more businesses. The 2004 Northern Ireland GEM Study concluded that people who knew an entrepreneur were 1.9 times more likely to start a business themselves than those who didn't.

High numbers of firms starting up or expanding in an area is an indication that there are people there prepared to take business risk, who have entrepreneurial aptitudes such as a preparedness to work hard, a propensity to make sacrifices, and a degree of self-sufficiency. Such people tend to continue to be active in trying to spot what they believe will be market opportunities, suggesting that they are a repository of future business expansion opportunities. Martin (2005) claimed that:

> "*high rates of entrepreneurship and new firm formation*" (Martin, 2005, p.27)

...... were associated with the:

> "*regional dynamic adaptive capability*" (Martin, 2005, p.27)

...... which was the key to maintaining competitiveness.

An area is also likely to benefit from a greater multiplier effect when businesses are indigenously rather than externally owned and managed: A proportion of firms newly registering for VAT will expand and develop into indigenously-owned and managed exporters some of whom may ultimately provide substantial employment and income; and firms newly registering for VAT will generate local fiscal gains in the form of business rates, providing an income for local authorities to invest in further improving their economies.

The economic development practitioners' experience in Northern Ireland appears to be that there is often a greater propensity to develop local sub-supply networks, joint ventures and sectoral clusters in economies with high levels of small firm emergence. In addition, it appears that there is a greater degree of sectoral diversity in local economies with high levels of new firm formation and less exposure as a result to the local economic instability which can occur when a large employer closes down because of changed priorities or business failure.

Anyadike-Danes *et al* (2002) analysing VAT data between 1980 and 1999 suggested that, relative to other regions of the UK, Northern Ireland had a low rate of small business mortality and a concomitant high rate of small business survival. This, it was implied, meant that fewer of Northern Ireland's business formations were being wasted and that more of them than elsewhere in the UK became long-term features of local economies. This suggests that local economies in Northern Ireland with high levels of new firm formation might have been better able to cope with macro-economic problems because indigenous employers may have been prepared to shoulder bigger falls in profitability in order to stay in their home area, more so than externally-owned concerns whose presence had been rationalised solely on the grounds of profitability.

However, Storey (1994) argued that it was difficult to accurately estimate how many firms went out of business each year because business terminations were recorded in different ways (e.g. bankruptcies, liquidations, VAT de-registrations). Some of these would have been planned closures which resulted from positive decisions to move on and would not, therefore, have been failures per se. Burns (2001) and Bridge *et al* (2003) argued along similar lines that some VAT de-registrations which were recorded would have been terminations due to retirement or moves on to better opportunities elsewhere. Because of their doubt as to what VAT de-registrations would actually be an indicator of, as well as the uncertainty as to the relationship between de-registrations and economic success, they have been ignored as part of this research. Gross VAT registration figures are used instead.

Another potential weakness with VAT registration data is that it does not include very small businesses operating at a scale below the threshold for VAT registration. While the number of VAT-registering businesses has been falling across the UK, the number of people recorded as self-employed has increased suggesting that this very small business sector is of growing importance. Another limitation is that VAT registration data records businesses which have reached a turnover threshold rather than those which have been newly established. As Johnson and Conway (1997) pointed out, dates of registration may not bear any relation to the dates when businesses started up and began trading. Anyadike-Danes *et al* (2002) while acknowledging that VAT data had its weaknesses, concluded that it was the dataset which had been consistently used by policy-makers in the UK since the early 1990s to assess the status of the small business sector and that there were no other alternative sources of data readily available which would not have had even more significant imperfections. Bridge *et al* (2003) said:

> *"VAT statistics do not provide good small business data because they cover neither only small businesses nor very small businesses. Nevertheless they are used because they are the best that is available."* (Bridge *et al* 2003 p.246).

Businesses in the UK were required to register for VAT when their annual turnover was more than £49,000 in 1997 and £53,000 in 2001. The number of businesses with an annual turnover less than this threshold in Northern Ireland is difficult to estimate, as are the numbers for whom these businesses provided employment. The distribution of these very small businesses is also difficult to establish, although self-employment data acquired from the 2001 census will be separately analysed as part of this research. Self-employment has not been adopted as a success outcome because self-employment per se is no more or less a success outcome than being in employment or in further and higher education. Many construction workers and tradesmen/women are self-employed for taxation purposes but have no form or status as businesses beyond that; whereas VAT registration is usually only undertaken when a business is being run. Businesses which are being run will be, or will have the potential to be, providers of employment and generators of income and turnover over and above the salary of the owner.

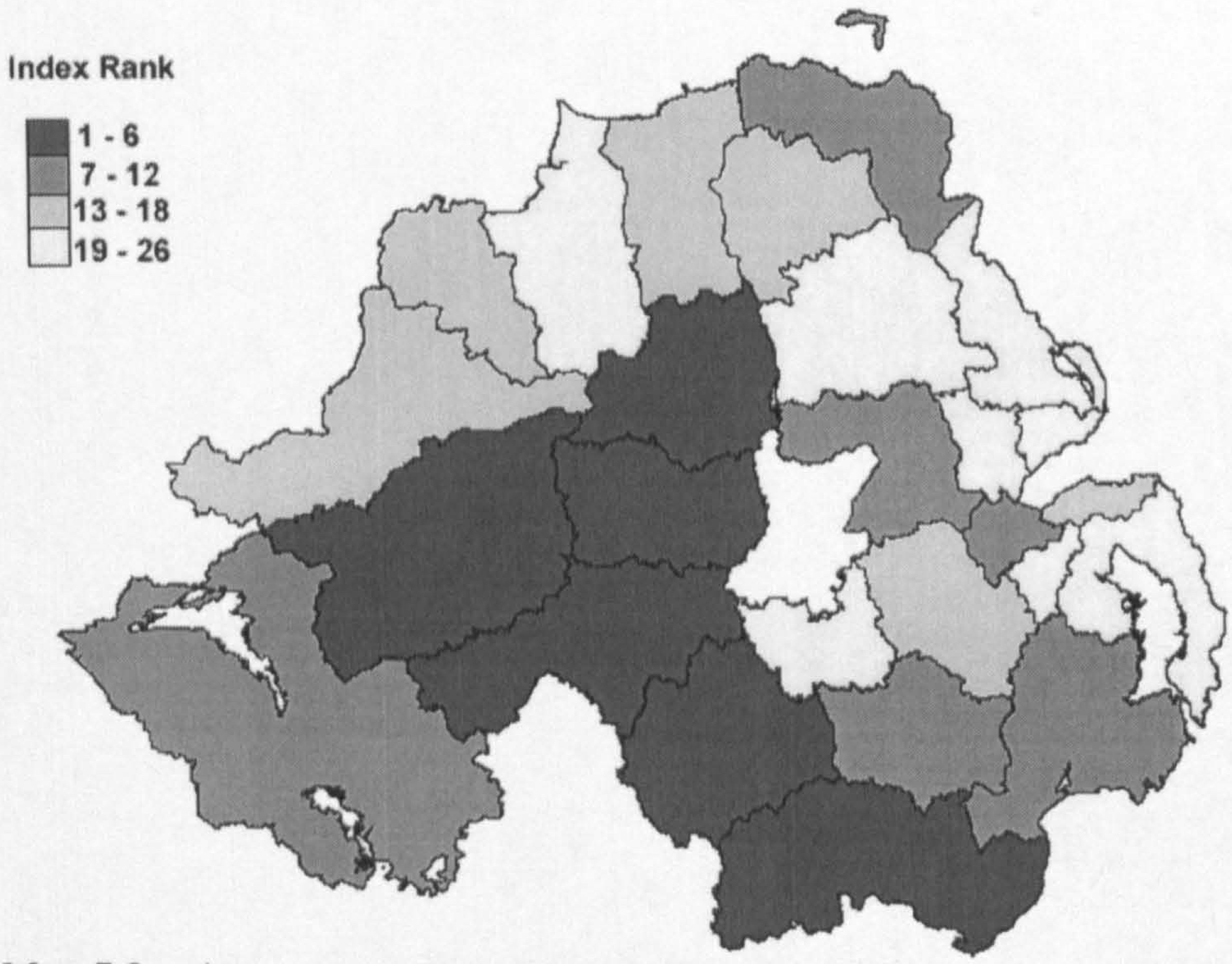
Measuring new VAT registrations of course only directly indicates that some areas had fewer firms reaching the VAT taxation threshold than others. Crude headcounts say nothing about what contribution those firms made to standards of living and quality of life more generally or about the context in which firms formed and grew: Might some economies have been in the process of catching up from a position of relative under-development? Were the new VAT registrations likely to have been "necessity" businesses, a symptom of few other choices being available in the economy, or were they "opportunity" businesses? What was their relative significance as employers and generators of wealth in their local economies? These questions have been challenging students and analysts of entrepreneurship worldwide for many years. Bygrave, the progenitor of the Global Entrepreneurship Monitor (GEM) project, for example, speaking at the launch of the GEM Northern Ireland Survey in March 2004, recognised that the context in which a business formed and survived was a very important consideration. He said that analysts had to exercise care in comparing data from different settings. Most of the businesses registered in somewhere like Uganda, for example, were likely to have been subsistence traders, whereas in Sweden, they were more likely to have been owner-managers of firms which employed others and which generated significant incomes within their local economies. While an extreme example, it does make the point that a count of businesses in Strabane, for example, cannot reveal whether the impact of those businesses was similar to or very different from businesses in North Down, for example. Clearly the context in which new businesses form is important. Acknowledging this, the DTI (2001) sought to measure the comparative economic performance of regions in Britain by combining data on business formation with data on employment, average earnings, infrastructure, and education and training in its regional competitiveness index; similar to the model which will be constructed for the District Council Areas in Northern Ireland in Chapter Eight.

7.8.2 The success outcome dataset: Aggregate new VAT registrations in Northern Ireland, 1997-2001

Because of its significance as a success outcome and the availability of multi-annual data, a judgment has been made that it will enhance the robustness of this analysis if a consistent picture in respect of business formation is established over time. A dataset has been constructed which aggregates VAT registrations in each District Council Area over the five post-ceasefire years 1997-2001, and which standardises them per 10,000 adult resident population. Agricultural businesses have been excluded from this dataset, on the grounds that agriculture between 1997 and 2001 was a managed economy, the fortunes of which were determined more by EU agriculture policy than by local conditions. The inclusion of farmers registering for VAT would have skewed the analysis: 12 per cent of all newly registering businesses in Northern Ireland were agricultural enterprises, a high figure in its own right; and these businesses were predominantly concentrated in rural District Council Areas in the west, south and north-east of the Province, where their proportional significance was even higher.

7.8.3. The pattern of new VAT registrations in Northern Ireland 1997-2001

When new VAT registrations between 1997 and 2001, excluding agriculture, are mapped the geographical pattern revealed is striking (see Map 7.8 below). VAT registrations during this period were concentrated in the south, mid-west and south-west of the region. The cohesiveness of the area in which were located the top ranked 6 District Council Areas is very noticeable. All of them had substantial Catholic populations: Cookstown (55.18 per cent), Newry and Mourne (75.89 per cent), Magherafelt (61.52 per cent), Dungannon (57.35 per cent), Omagh (65.10) per cent), and Armagh (45.44 per cent). The areas of Northern Ireland with the lowest levels of new VAT registrations during this 5-year period were in the north-west, and south/mid and north-Antrim, North Down and Ards, Lisburn and Craigavon. With the exception of Derry and Strabane, all these areas had substantial Protestant majority populations.



Map 7.8: *Aggregate new VAT registrations (excluding agriculture) per 10,000 adult resident population ranked by District Council area in Northern Ireland, 1997-2001. (Source: Small Business Service VAT Registration Data)*
Ranks 1-6 = Highest aggregate number.

7.8.4 The interaction between new VAT registrations 1997-2001 and other variables

The number of companies newly registering for VAT in Northern Ireland between 1997 and 2001 was positively correlated at the 1 per cent significance level with the 1997-2001 business stock change competitiveness differential, as well as the number of Catholics resident in a District Council Area, and voter participation (a social capital measure); and at the 5 per cent significance level with one other social capital measure: the number of groups active in economic development. Positive correlations at the 5 per cent significance level were recorded with deprivation and two apparently related measures: the number of sick and disabled residents and the number of females staying at home. VAT registrations were correlated at the 5 per cent significance level with five other industrial and commercial structure related measures: the percentage of self-employed, the number of INI client companies, the percentage of female small employers and low redundancies. There were also positive correlations at the 5 per cent level with the percentage of full-time students as well as with the number of redundancies in each District Council Area.

Negative correlations at the 5 per cent significance level were recorded with low deprivation and average weekly earnings, as well as with the stock of financial, property and business services in a District Council Area and with the number of people studying engineering at Further Education Colleges. This latter inverse correlation may be a challenging finding insofar as it seems to suggest that areas in which there were higher than average numbers of companies newly registering for VAT had lower than average demand for or take-up of engineering courses at Further Education Colleges. These were areas in which engineering had historically been under-developed. Rates of business formation may have been below average in areas in which engineering was strong because these were likely to have been areas in which large employers and MNCs predominated.

The positive correlation at the 5% significance level between the number of Invest Northern Ireland-client companies and the aggregate number of VAT registrations over a five year period may suggest that Government programmes were reinforcing established differentials and that some of the activity supported by Government would have happened anyway (i.e. deadweight). If the rationale for Government intervention was market failure then the pattern which would have been expected would have been one in which INI client companies were concentrated in areas where VAT registrations over a five year period had been relatively low. However, beyond identifying a correlation, this level of analysis cannot shed any light on the direction of influence, i.e. whether VAT registrations were driving the pattern of Government-supported programmes, whether Government-supported programmes were influencing the pattern of VAT registrations, or whether the association was coincidental; although it is notable that the overall level of new VAT registrations was positively correlated with the five year business stock growth competitiveness differential suggesting that areas in which overall VAT registrations were high were also likely to have generated sector-adjusted growth in their business stock over the previous five years.

It is notable that the number of new VAT registrations, which has been used for more than a decade by policy-makers in Northern Ireland as a proxy for entrepreneurial dynamism, was negatively correlated with low deprivation and negatively correlated with average earnings and business services stock, suggesting that, *prima facie*, areas with higher levels of new VAT registrations were also more likely to be multiply deprived to have lower wages and fewer business services companies. Athayde *et al* (2001) noted a link between the motivation to be self-employed and the desire to escape social and economic deprivation. They cited social marginality theory as a possible explanation for the apparent association between self-employment and deprivation. It postulates that people are driven to set up their own businesses when they perceive there to be an incongruity between the lack of economic opportunity available to them and their own self-concept (they referred to Weber, 1930, Stanworth and Curran, 1973, and Jones and McEvoy, 1986).

Reducing the level of multiple deprivation has been an economic success objective for policy-makers in Northern Ireland since the institution of the

Targeting Social Need policy in 1991; and maximising business formation (as measured by new VAT registrations) was formally adopted as an economic success priority by Government in Northern Ireland with the launch of its Business Birth Rate Strategy in 2001. However, the negative correlation between low deprivation and new VAT registrations suggests that the achievement of one objective did not necessarily lead, at least in the short term, to the achievement of the other.

There was no correlation with other variables which during this same period had been policy objectives and assumed indicators of economic success, such as employment growth. This finding suggests that small firm emergence was a feature of areas in which employment opportunities were restricted and in which, as a result, self-employment and the creation and development of small businesses was necessity-driven rather than opportunity-driven. While Hart and Murray (2000) asserted that:

> "*It is widely accepted that a vibrant small business sector is a key factor in the creation of local jobs and enterprise*" (Hart and Murray, 2000, p.42);

...... Van Stel and Storey (2004) argued that the employment impact of new firms was not likely to be immediate. They had found that although there was a positive relationship between firm births and job creation during the 1990s in Britain overall, in Scotland, which had a heavily resourced policy promoting start-ups, the relationship had actually been negative, suggesting that start-up policies were not necessarily a route to employment creation in so-called low enterprise areas. Storey (1994) argued that it was generally eight or nine years before new manufacturing firms achieved their peak employment levels. In 1994 he had found that new firms (measured as new VAT registrations) were only providing a very small proportion of the stock of jobs in the UK economy (he said that, for example, only 5.5 per cent of the stock of UK employment in 1989 could be attributed to firms born in the previous two years). The conclusion was that the number of jobs created depended on the type of firms and the dynamism of their owners rather than on their absolute number. Van Stel and Storey (2004) suggested that high mortality rates among start-ups may have been masking the employment which they were creating. They argued that for this reason contemporaneous start-up and employment change data should be interpreted with caution.

The overall picture in respect of new VAT registrations over a five year period appears to be one whereby areas generating the highest number of new VAT registrations per 10,000 adult resident population were likely to have been Catholic, to have had characteristics associated with Catholic areas (such as high levels of deprivation, more sick and disabled and more women staying at home); they were also likely to have had higher levels of business stock growth controlling for sectoral trends, to have had low wages and to have had people working longer hours than average; but also to have had fewer than average numbers of INI client companies. These were areas, it would appear, which had high stocks of social capital manifest in community group activity, Credit Union membership and voter participation, suggesting an intriguing relationship between economic activity and social capital which will be considered in more depth later in the thesis.

7.9 LOCAL ECONOMIC SUCCESS OUTCOME SEVEN: POPULATION CHANGE 1991-2001

(A change measure)

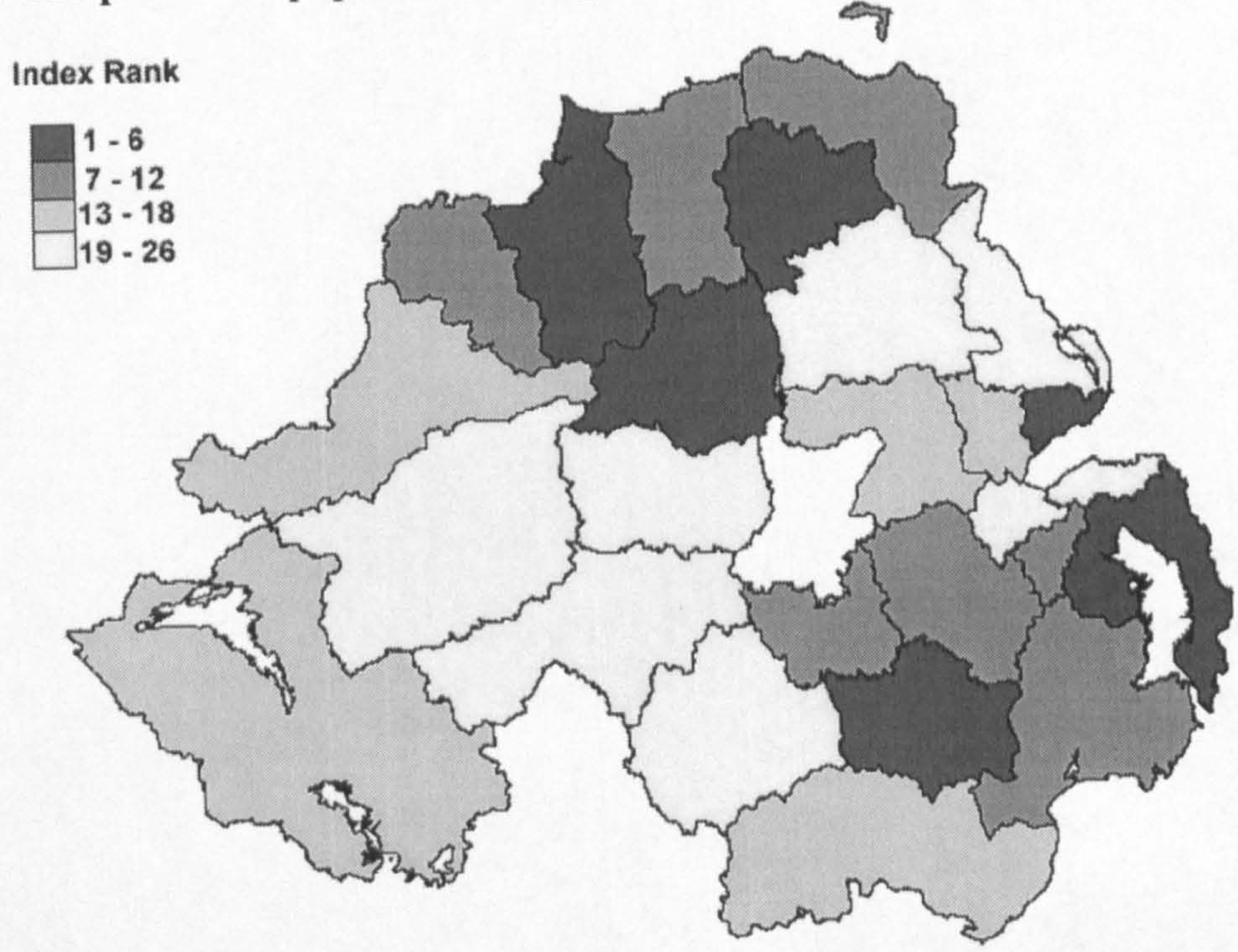
7.9.1 The rationale for adopting population change as a success outcome

Population growth has often been cited as an indicator of economic success by politicians operating at District Council level in Northern Ireland, possibly because the new houses, new people and new voters which population growth brings are highly visible. As an indicator of local economic success, however, population change must be accompanied by the caveat that, because it measures endogenous demographic change as well as inflows and outflows of people, how much of a District Council Area's growth or decline is attributable to in- or out-migration as opposed to the local birth rate, will not be revealed. Furthermore in Northern Ireland, population data must be interpreted with caution because some of the population change between 1991 and 2001 may have been attributable to movements of people between Districts as a result of the two communities continuing through the 1990s to draw apart and increasingly reside in single identity areas. The Northern Ireland Housing Executive in its 2001 Annual Report confirmed the continued link between inter-community tension and housing pressure in some areas, especially in Belfast.

In parallel with this trend, the 1990s was also a period when labour mobility was increasing and the phenomenon of distinctive commuter settlements was becoming well established, although even these tended to have a distinctive Catholic or Protestant hue. During the decade between 1991 and 2001 immigration was limited in Northern Ireland, and the traditionally high Catholic birth rate fell, narrowing the gap between the Catholic and Protestant birth rates. Variable population change can thus be primarily attributed to moves within Northern Ireland. Those people who moved within the Province during this period were principally young singles and young families re-locating from rural areas to larger towns and areas within easy commuting distance of the two cities. Some of that shift can also be attributed to the strict planning controls which restricted new housing development in rural areas; and some to the drift of commercial activity from smaller rural settlements to the larger urban centres. Generally District Council Areas containing larger urban centres and/or located close to Belfast, and to a lesser extent Derry, were likely to experience the greatest population increases.

Nevertheless, the extent to which the population of a District Council Area grew over the course of a decade will indicate whether its local economy was successful in attracting new people into the area and in encouraging the people already living there to stay and raise their families. An area with a population in decline or with a growth rate significantly below average is less likely to be defined as having a successful economy because, whatever the explanation for its demographic situation, such an area will be faced with economic challenges in the future. Out-migrants tend to be the younger, better skilled and better resourced in a community: mobility requires resources and energy. As a result, areas which are losing population risk demographic residualisation as the imbalance between youth and old age within a community becomes more obvious and more of the young and ambitious are tempted to leave. In these circumstances, the people who remain will increasingly be those most dependent and least productive in economic terms. One of the underpinning assumptions in this research is that a declining population presents an economic challenge, particularly in circumstances where significant socio-economic disadvantage may also prevail in the District; and that conversely, growing populations are likely to be associated with increased demand for housing and other services which in turn will generate increased opportunity for construction and other sectors.

7.9.2 The pattern of population change in Northern Ireland 1991-2001



Map 7.9: *Ranked percentage change in population 1991–2001 by District Council Area in Northern Ireland. (Source: Derived from the NISRA mid-year population estimates 1991 and 2001).*
Ranks 1-6 = Largest population increase.

Map 7.9 reveals that there were two distinct population growth areas in Northern Ireland between 1991 and 2001:

1) District Councils within easy commuting distance of Belfast where new housing development has been facilitated by the availability of relatively low-cost sites: Banbridge, Carrickfergus, Ards and to a lesser extent Lisburn, Castlereagh and Down.
2) District Councils in the North and North West offering available and affordable housing: Limavady, Magherafelt and Ballymoney, and in the case of Limavady and Magherafelt, relatively easy access to Derry.

The areas in which population grew least were Belfast City, Ballymena, Larne, Armagh, North Down, Omagh, Cookstown and Dungannon.

7.9.3 The interaction between population change and other variables

Population change between 1991 and 2001 in Northern Ireland was correlated with only two variables: positively, at the 5 per cent significance level, with the number of people studying engineering at Further Education Colleges and inversely, also at the 5 per cent significance level, with job density. How important these relatively weak correlations were may, however, be questionable. While it is reasonable to assume that those areas where the population had grown fastest would have had younger populations and that this in turn would have generated greater demand for educational provision, why there was apparently more take-up of engineering courses than IT or science (two other variables included in the correlation exercise), cannot be readily explained. While on the face of it, those areas where population was increasing were also areas in which there was higher take up of places on Further Education engineering courses, either in response to demand or as a legacy of a tradition of engineering in such areas, it is a considerable speculative leap to suggest that this was because of a causal relationship rather than co-incidence or co-linearity.

The correlation with job density could have been attributable to population growing in some labour markets faster than employment growth, so diluting the job to resident population ratio. It might be expected that population growth would to some extent have been a function of demand for labour. In this case, however, there was clearly a sufficient number of District Council Areas where this had not happened to generate a weak inverse correlation. Why this may have been so cannot be answered from this analysis. What is significant though is the absence of a strong correlation between population growth and employment growth or other economic success outcomes. *A priori* population growth would have been expected to be associated with other economic success outcomes on the basis that in-migrants would favour more economically dynamic areas; although there is also a strong counter-argument, based on trends in the EU, that more economically successful areas were likely to have recorded lower birth rates, potentially offsetting any population increases resulting from in-migration. There is also the further complication that movements of population in Northern Ireland may have been affected by sectarian tensions.

The absence of a correlation between population change and other economic outcomes, with the exception of job density suggests that population growth alone is not an effective indicator of economic success. In combination with other variables it may, however, point to a set of conditions which would be consistent with economic success. Population change, like the other outcome indicators, can add depth to the analysis of local economic success in Northern Ireland.

7.10 LOCAL ECONOMIC SUCCESS OUTCOME EIGHT: CHANGE IN TOTAL STOCK OF VAT REGISTERED BUSINESSES 1997 – 2001 (A change measure)

7.10.1 The rationale for adopting change in business stock as a success outcome

Huggins (2003) argued that:

> "*The competitiveness of localities/regions and the competitiveness of firms are interdependent concepts*" (Huggins, 2003, p.90).

Foutopoulis and Spence (2001) said that where sectors which were growing or declining across the UK had a strong presence in a UK region the overall economic status of that area would be affected, unless the performance of those sectors departed in some way from the UK trend. Storey (2004) said that an area's pre-existing economic structure could have a potentially limiting influence on future business start-up rates, because people in areas in which weaker commercial sectors had a strong presence were less likely to be able to draw upon endowments of financial and human capital when they came to start a business. Anyadike-Danes *et al* (2005) contended that the differential rates of firm formation across the regions of the UK were primarily attributable to variations in the pre-existing concentration of particular industrial sectors.

Areas whose local sector performances deviate from national trends are of interest because those performances are not attributable to sectoral strengths or weaknesses, suggesting that endogenous trend-altering factors may be exerting an influence. The extent to which a District Council Area had in the five years up to and including 2001 grown its pre-existing stock of businesses and in what sectors; and the extent to which that change might have departed from Northern Ireland trends, is examined using shift share methodology. Ashcroft, Lowe and Malloy (1991) used the shift share technique to correct for sectoral structure in order to derive a measure, in their case, of sector-adjusted start-up activity. Any element of start-up activity above that which would have been expected given an area's sectoral structure represented the extent to which that area was entrepreneurial. Studies by Audretsch and Fritsch (2002) and Van Stel and Storey (2004) both used shift share to identify residuals which national trends could not explain and which were likely to be attributable to interactions with other variables or the endogenous circumstances prevailing in the regions concerned.

For the purposes of this research, the number of VAT registered businesses by sector (i.e. SIC – Standard Industrial Classification) located in each District Council Area in 2001 was measured against the number of businesses in those same sectors located there in 1997. Five-year Northern Ireland growth rates were calculated for each sector and applied to the 1997 sector stock in each District Council Area to calculate an expected 2001 figure which would determine whether the stock of businesses in each sector had grown at, by more or by less than the respective Northern Ireland growth rate. The differentials between the expected and the actual change across all sectors were added up for each District Council Area to provide a total stock change differential figure, labelled within shift share as the "competitiveness differential". This methodology allowed District Council Areas to be identified where the change in business stock over five years had differed from the Northern Ireland trend, suggesting that factors other than industrial or commercial structure had been associated with their local economic performance. This is a potentially important local economic success indicator because it highlights those areas which managed to defy sectoral trends and to create or attract more businesses than their industrial/commercial structure suggested they should have done, implying that their business stock growth was a function of their "competitiveness".

However, determining what that "competitiveness" dimension, facet or "differential" actually is:

> "*is no easy matter*" (Huggins, 2003, p.90).

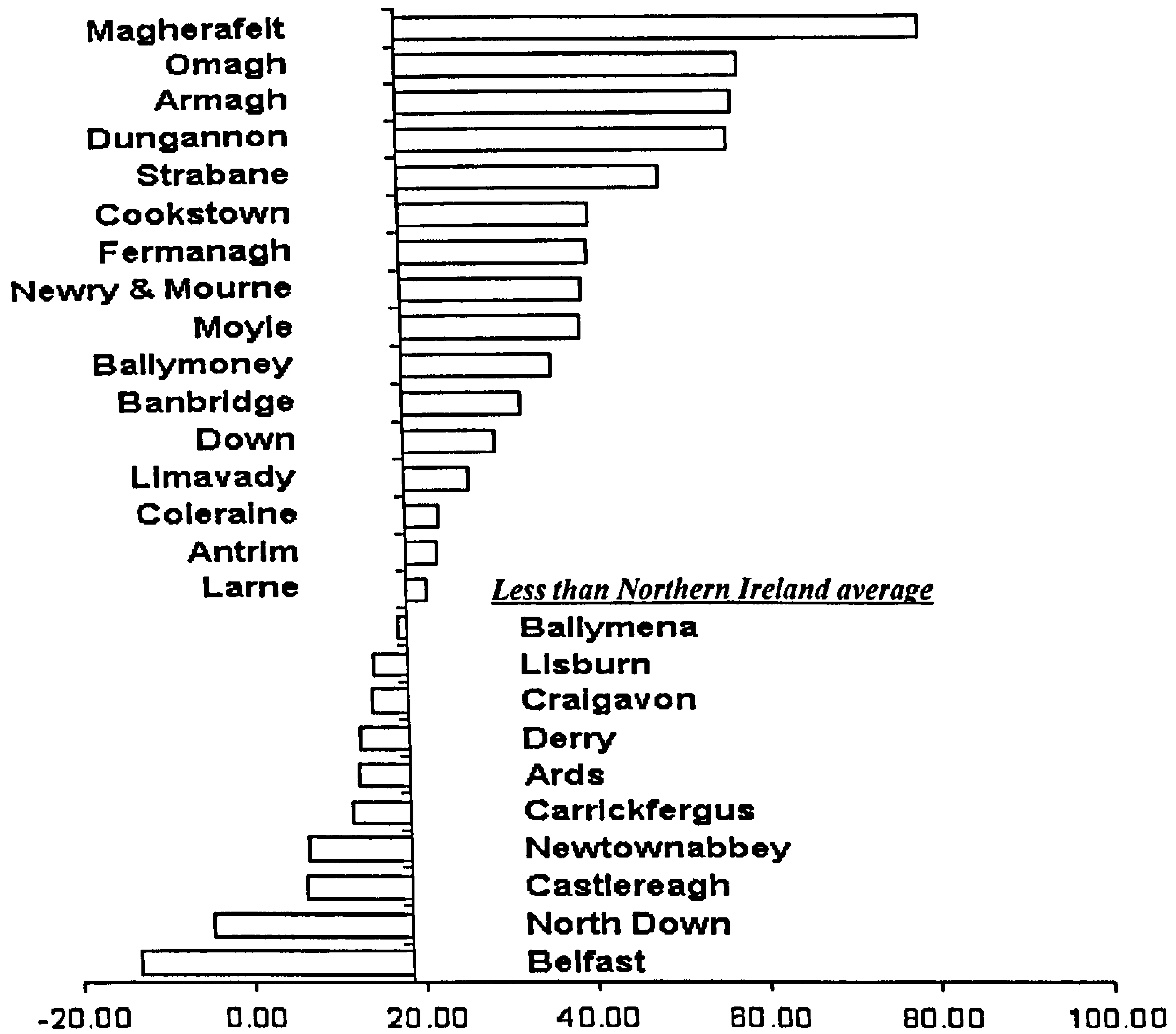
Competitiveness according to Huggins cannot be reduced solely to measures of business density; it is a multi-faceted achievement. Armington and Acs (2002) contended that it was the interaction between the performance of certain industrial and commercial sectors and factors such as population growth, earnings and skills (human capital) which accounted for the variable business start-up rate in both the UK and the US. Thus while a competitiveness differential measure might be useful in highlighting changes in business density at District Council Area level which cannot be attributed to Northern Ireland sectoral trends; of itself it cannot say anything about the context within which those differentials occurred or about associated impacts in terms of earnings or employment. When this measure can be combined with other economic success outcome indicators, however, it has the potential to significantly sharpen the picture which is presented of local economic success.

7.10.2 The pattern of the business stock change competitiveness differential between 1997 and 2001 in Northern Ireland

Figure 7.2 identifies those District Council Areas which grew their business stock by more than the Northern Ireland trend in each sector, and those District Council Areas which grew their business stock by less than the Northern Ireland average. Of the latter, two experienced an overall net decline in their stock of businesses: North Down and Belfast.

Greater than Northern Ireland average

1997-2001 Northern Ireland average(i.e.: 18.41 businesses per 10,000 adult resident population)

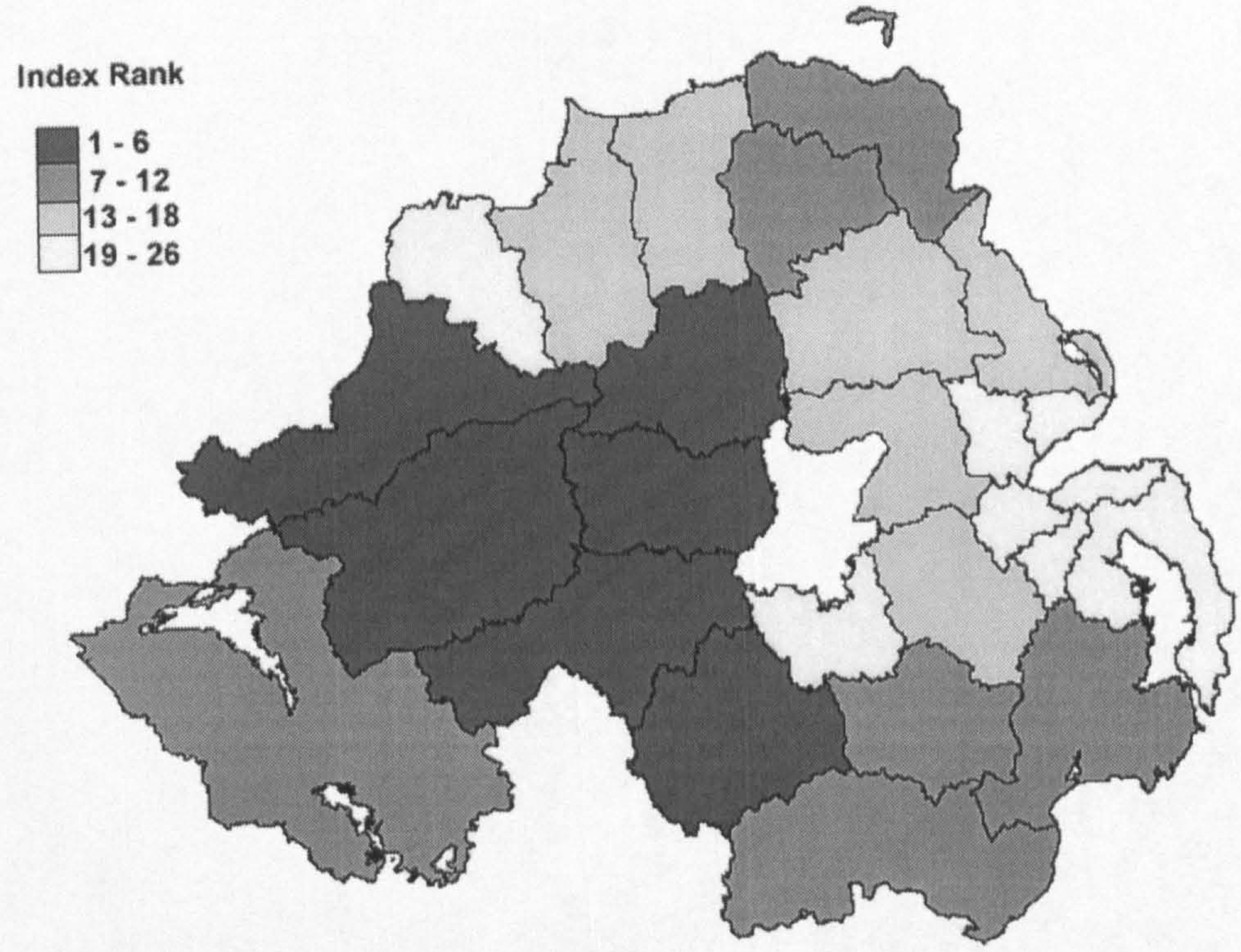


Growth in numbers of businesses per 10,000 adult resident population – all sectors, excluding agriculture 1997-2001

Figure 7.2: *Number of VAT-registered businesses per 10,000 adult resident population in each District Council Area greater or less than the Northern Ireland increase in the number of VAT-registered businesses per 10,000 adult resident population 1997-2001.* (Source: Derived from Small Business Service VAT Registration Data)

Note: the Northern Ireland average increase over that 5 year period was 18.41

** For a sample shift share calculation see Appendix 3.*



Map 7.10: *Ranked business stock competitiveness differential 1997-2001 by District Council Area standardised per 10,000 adult resident population.* (Source: Derived from Small Business Service VAT Registration Data)
Ranks 1-6 = highest positive differentials.

Mapping the competitiveness differential rank scores achieved by Northern Ireland's District Council Areas (Map 7.10) reveals a distinctive geographical pattern: an urban/rural split and a west/east split. The District Council Areas with the largest positive competitiveness differentials were concentrated in the rural mid-west and the south of Northern Ireland in a contiguous zone between Magherafelt in the north and Armagh in the south; whereas those areas which recorded negative competitiveness differentials (i.e. vis-à-vis the Northern Ireland average) were concentrated in the Greater Belfast region (i.e. Belfast, North Down, Castlereagh, Newtownabbey, Carrickfergus and Ards) as well as Derry and Craigavon, Northern Ireland's two largest urban areas outside of the Greater Belfast region.

7.10.3The interaction between the business stock competitiveness differential and other variables

What variables were associated with this competitiveness increment and might help to explain it? The business stock change competitiveness differential was positively correlated, at the 1 per cent level, with three indicators which measured the extent of the indigenous small business economy, variables which were themselves highly correlated with each other: the number of people who declared in 2001 that they were self-employed, the aggregate number of new VAT registrations across all sectors between 1997 and 2001 and the number of LEA/INI supported business starts. Average hours worked, a variable which was highly correlated with these latter three measures at the 1 per cent significance level, was also highly correlated at the 1% significance level with the business stock change competitiveness differential.

There was a positive correlation at the 1 per cent significance level with the number of Catholics resident in each District Council area. That association may explain the correlation at the 5% significance level with two other variables: the number of females staying at home, and the number of sick and disabled.

There were significant correlations between the business stock change competitiveness differential and measures of social capital: at the 1 per cent significance level with voter participation; and at the 5 per cent significance level with the number of community groups involved in economic development, Credit Union membership, and the number of assisted community business start-ups.

There were further positive correlations, at the 5 per cent significance level with the number of females in the 2001 census who identified themselves as small employers, the number of people without qualifications and low redundancies. The suggestion that there were more female small employers in areas which generated business stock growth (over and above that which would have been expected given their sectoral structure) is potentially an important finding from a policy perspective (the gender dimension is discussed in more detail later in this thesis in Chapter Eleven).

The higher number of people without qualifications in such areas, while it might, as might every correlation, have been the product of a relationship with other unidentified variables, could alternatively suggest a scenario whereby some people without qualifications who had found it difficult to progress in the world of employment had concentrated their energies on self-employment, and that sufficient numbers of those people had generated sufficient growth in the businesses which they owned and managed to overcome sectoral trends.

Negative correlations were recorded at the 1 per cent significance level with the stock of business services, private sector wages and the number of residents born outside Britain and Ireland. These three variables were highly correlated with each other as well as with five other variables for which negative correlations at the 5 per cent significance level had been recorded: crime, the number of people with degree level qualifications, average earnings, location, the number of IDB/INI-sponsored inward investor visits and low deprivation. Areas where the business stock change competitiveness differential was highest appear to have been areas which were not locationally advantaged and where the stock of business services was relatively low. By contrast, those areas which were locationally advantaged and which had relatively large stocks of business services companies tended to have high levels of crime, more residents born overseas, higher numbers of degree-educated people in the population, higher wages, and they appear to have attracted greater numbers of inward investor visits, despite their not having generated growth in their stock of businesses at rates above Northern Ireland sector trends.

The negative correlation, at the 5 per cent significance level, with the number of IDB assisted jobs might have been a coincidence or the result of an association with other variables not included in this analysis. Alternatively, it might suggest that the IDB was providing financial assistance for job creation to more companies located in areas in which there was a lower density of high growth companies. There is insufficient evidence to determine whether the IDB was supporting job creation and maintenance in companies which were themselves experiencing sluggish growth or whether the IDB was targeting strong companies in "weak" areas, with other companies accounting for the weak position of these areas in respect of the businesses stock change competitiveness differential.

The strong negative correlation with the stock of business services companies is noteworthy because it suggests that the larger an area's business stock change competitiveness differential the fewer business services companies were likely to be located there, or, alternatively, the larger the business services sector in a District Council Area the less likely it was to have generated a higher than average growth in its overall stock of businesses. On the face of it, this is a challenging finding because it seems to contravene the assumption that the presence of business services companies in an area would encourage the growth of other businesses in that area, given that these were companies whose business it was to facilitate business development (e.g. accountants, banks, estate agents). This might, however, be explained by the likelihood that these companies would not have confined their work to the District Council Areas in which they were located, with the result that there may not have been a direct relationship between business development trends in a District Council Area and the presence or otherwise of business services companies. It is also likely that the growth of the business stock in an area would have been determined by factors other than whether there were banks or accountants located there. All of those caveats notwithstanding, however, the fact that there was such a strong negative correlation is important, if only in suggesting that business services companies had not based their decisions to do business in an area on the business stock growth trends prevailing there.

The picture which this array of correlations suggests is very striking: areas which created more new businesses between 1997 and 2001 than would have been expected given their sectoral structure were more likely to have been Catholic, to have had a population which was less well educated than average and to have had a workforce which worked longer hours for wages which were lower. These areas were likely to have also generated more new VAT registrations overall, irrespective of sectoral mix, to have had more of their business starts receiving Government support and to have had a higher than average rate of self-employment. These were areas likely to have had high stocks of social capital as measured by membership of Credit Unions, the number of community groups involved in economic development and voter participation; and these were areas likely to have been experiencing relatively low levels of crime and to have had fewer than average numbers of residents born overseas.

While the patterns generated in this correlation exercise seem interesting, there may have been a degree of co-linearity between some of the variables (for example between females at home and Catholics; and average hours worked and mean earnings). To what extent the correlation with the number of community groups involved in economic development might have been a function of its correlation with Catholics and to what extent social capital overall was directly associated with the business stock change competitiveness differential rather than the distribution of Catholics, can only be determined by using regression. In the context of this thesis' central hypothesis that social capital was associated with local economic success in Northern Ireland in 2001 it will be important to establish whether or not this "community groups" variable and other social capital measures were independently associated not just with the business stock change competitiveness differential but with the other local economic success outcome indicators. This is the rationale for synthesising, in the next phase of the analysis, the business stock change competitiveness differential with other local economic success outcomes in a local economic success index and then using ordinary least squares regression equations to identify which predictor variables had been associated with its distribution.

7.11 LOCAL ECONOMIC SUCCESS OUTCOME NINE: EMPLOYMENT CHANGE 1997-2001 (A change measure)

7.11.1 The rationale for adopting employment change as a success outcome

Employment change has been adopted as a local economic success outcome because whether an area has increased its stock of jobs or whether it has suffered a net loss of jobs is the measure by which the effectiveness of economic development policy is perhaps most frequently judged by politicians and the public. However, employment change is an important indicator also because it suggests how an economy is functioning. Employment levels reveal the extent to which human capital is being efficiently exploited. The more employment there is in an economy the more income, both in wages and in productivity earnings, will be generated and the more spending power there will be to create further opportunities for other income-generating activities such as leisure and retail.

Growth in employment levels points to economic success insofar as it suggests that *inter alia* there will have been an increase in productive activity. Fewer people employed in a District in 1997 are likely to have produced less than a larger group of people employed there in 2001, because almost certainly they would have had less sophisticated tools, machinery, communication systems and production techniques at their disposal. Therefore, *a priori*, the District Council Areas in Northern Ireland which experienced growth in employment at a time when productivity per unit of labour was increasing would have increased their output of goods and services and generated increased sales income.

However, employment change of itself is not an entirely reliable benchmark against which to judge one area's level of economic success against another. While it is reasonable to assume that a larger number of people working in a local economy in 2001 than in 1997 would mean that in aggregate more goods were being produced in 2001, it does not necessarily follow that a District or sector in which fewer people were in employment in 2001 than in 1997 would have produced fewer goods than it did five years earlier. It is possible that fewer people, deploying new technology, could have been producing more goods and achieving substantially higher levels of productivity than in 1997. Moreover, an area may have experienced less employment growth than another, not because it was failing economically but because it already had high levels of employment to start with. High levels of employment growth in some areas may have had a number of explanations: some areas may have been catching up from a position of relative underdevelopment; some may have been a focus for in-migration; and some may have had larger labour resources to deploy in the first place, perhaps because they had a younger population.

Some economists caution that the link between productivity and employment levels is tenuous. Martin (2005) found that in the UK between 1980 and 2003 productivity growth had not always been associated with employment growth. The difficulty, he said, when considering relative economic performance was in deciding whether an area which had above average employment growth but below average productivity had gained or lost competitiveness. The implication was that employment growth alone was an inadequate indicator of economic success because taken in isolation it could not show the effect that new jobs created or jobs lost had had within a local economy in respect of incomes, standards of living or quality of life. If wages in one employment growth area were lower than those in another, this might suggest that many of the jobs being created there were low-skill and potentially transferable elsewhere.

Nevertheless, because employment growth has been a policy objective in Northern Ireland for decades and new jobs are politically popular (even though existing employers can feel threatened by the prospect of wage-price inflation), employment growth is an important variable; and while its value as a measure on its own may be limited, it is useful to include in a composite economic success picture on the basis that an area which had the same wage levels, business stock growth rate, or levels of deprivation as another area but which had created more jobs would be more economically successful because of the economic benefits which increased employment would have brought – not least in the form of increased income circulating in the economy and new employers able to bring in new skills and new technologies.

7.11.2 The employment change competitiveness differential

As an alternative to examining crude increases or decreases in employment, change in employment can be examined more rigorously using shift share methodology, allowing those areas to be identified which had experienced an employment change outcome which differed from that which would have been expected given their industrial and commercial structure. This "competitiveness differential" indicator has the potential to be a more insightful success measure because it identifies how much of the outcome might be attributable to factors other than an area's industrial and commercial structure, factors such as its stock of social capital for example.

The number of jobs by Standard Industrial Classification located in each District Council Area in 2001 is measured against job numbers in 1997. Five-year Northern Ireland growth rates are calculated for each sector and applied to the 1997 stock of jobs in each District Council Area to calculate an expected 2001 employment figure and determine whether employment numbers in each sector grew, and if so by more or by less than the Northern Ireland growth rate for that sector. The differentials between the local and the Northern Ireland average growth rates are added up for each District Council Area to provide an overall employment change differential figure, which is described as the "competitiveness differential". District Council Areas where the change in employment between 1997 and 2001 differed from the Northern Ireland trend and where factors other than industrial or commercial structure may explain their performance can thus be identified.

7.11.3 The pattern of the employment change competitiveness differential between 1997 and 2001 in Northern Ireland

Figure 7.3 below highlights District Council Areas which increased their employment numbers by sector by more than the Northern Ireland average (i.e. the bars to the right of the vertical axis) and those which increased employment numbers by less than the Northern Ireland average (i.e. the bars to the left of the vertical axis). Three District Council Areas experienced a net loss of jobs during this period: Ballymoney, Larne and Ards (all predominantly Protestant areas in the north-east of the region).

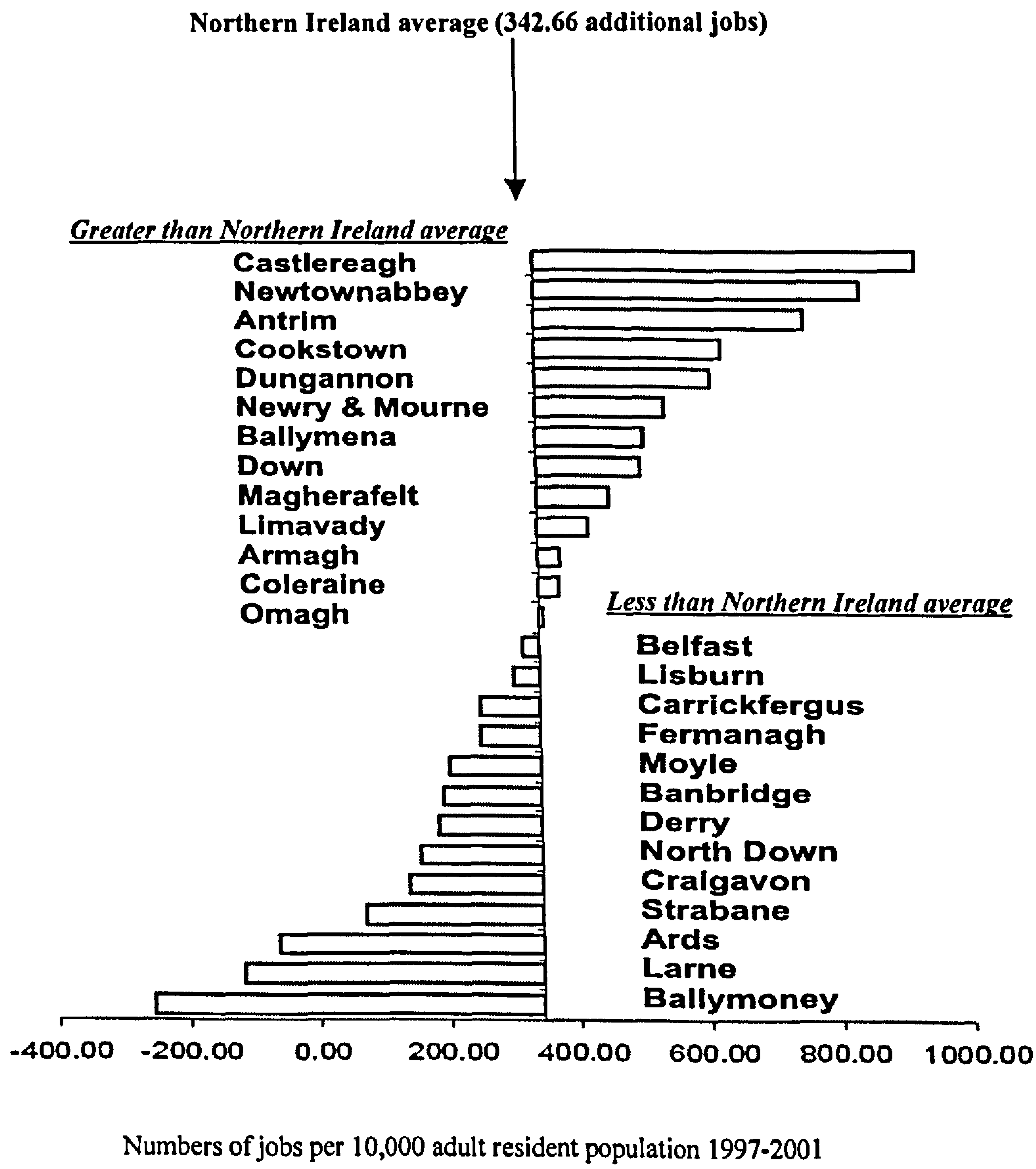
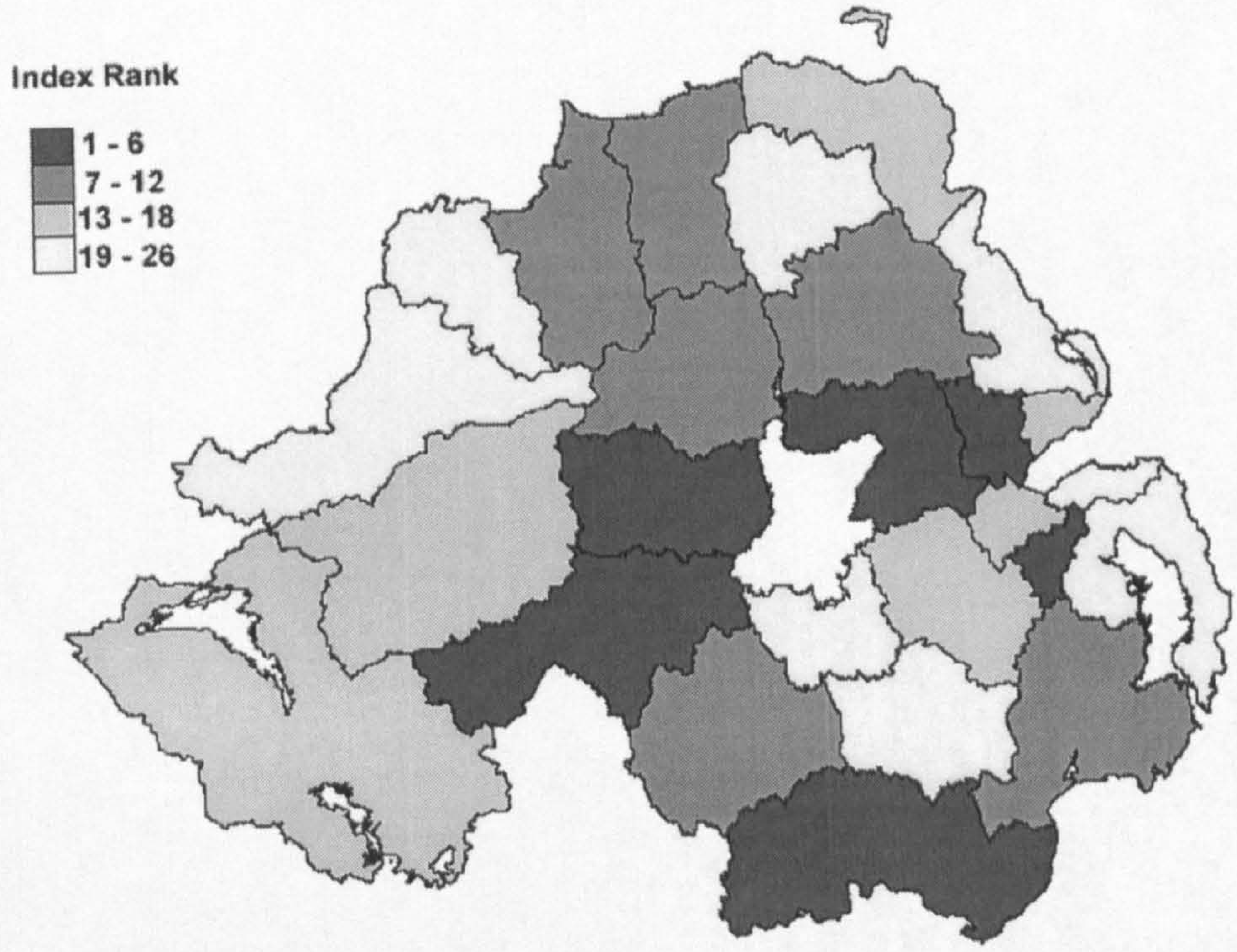


Figure 7.3: Number of jobs per 10,000 adult resident population in each District Council Area greater or less than the Northern Ireland average increase in job numbers per 10,000 adult resident population (1997-2001). *(Source: Derived from Northern Ireland Census of Employment 1997 and 2001)*



Map 7.11: *Ranked employment change competitiveness differential (1997-2001) by District Council Area (standardised per 10,000 adult resident population). (Source: Derived from Northern Ireland Census of Employment 1997 and 2001) Ranks 1-6 = Highest positive differentials.*

Map 7.11 reveals that those District Council Areas which recorded the highest positive employment change competitiveness differentials were located in the outer Belfast region (Castlereagh and Newtownabbey), south Antrim (Antrim and Ballymena), mid-Ulster (Dungannon, Cookstown and Magherafelt) and the southern border region (Newry and Mourne, Down and Armagh); whereas those which recorded a negative or lower than average competitiveness differential were clustered in north and east Antrim (Ballymoney, Moyle and Larne), north Down (North Down and Ards), mid-Down and north Armagh (Craigavon and Banbridge) and the north west and south west (Strabane, Derry and Fermanagh). While there were clusters of District Council Areas which did well or did less well, no distinctive geographical pattern emerged: some areas close to Belfast did very well while others did very badly; some areas west of Lough Neagh did very well and others very badly. Similarly some District Council Areas which did well had predominantly Protestant populations, while others had predominantly Catholic populations; and some District Council Areas which did less well were predominantly Protestant and others were predominantly Catholic.

The fact that the employment change competitiveness differential as a potential indicator of local economic success did not display a definitive territorial (or inter-community) pattern is a significant finding because it suggests that employment change between 1997 and 2001 had not been associated with the religious/cultural profile of an area or its geographical location. What then might have been associated with the distribution of areas which performed well and those which performed less well, some located side by side?

7.11.4 The interaction between the employment change competitiveness differential and other variables

The analysis of the 37 other variables deployed in this research, including the 8 other success outcomes, reveals only one closely related variable with which the employment change competitiveness differential was correlated, a positive correlation at the 5% significance level with job density in 2001.

That employment change over 5 years was correlated with the 2001 snapshot of each District Council Area's labour market, job density, is not unexpected. What is striking, however, is the absence of a significant correlation with any of the other variables analysed as part of this exercise, suggesting that the level of sector-adjusted employment growth was not a function of religious/cultural affiliation, other social characteristics, policy, education and skills, industrial structure, social capital or location. Other than job density the absence of correlations with any of the other local economic success outcomes suggests that the competitiveness differential measure alone can provide only a limited insight into the performance of a local economy. While an area which created more jobs than suggested by its sectoral mix could with some justification claim to have achieved a degree of economic success, a crude measure of the quantum of jobs created reveals nothing about their quality, about the wages they provided or their association with quality of life outcomes. While it is useful to be able to identify those areas which lost more employment than would have been suggested by their industrial/commercial structure, it cannot be assumed that such areas were economically unsuccessful; nor can it be assumed that they were economically successful. Taken together with other success outcome measures, however, the employment change competitiveness differential does add value to a composite assessment of local economic success, insofar as areas which provided higher than average wages, had lower than average deprivation, and so on, and which created more jobs than would have been expected, can be regarded as more successful, certainly from an economic development policy perspective, than areas which had done well against other local economic success outcomes but less well in respect of employment creation.

7.12 LOCAL ECONOMIC SUCCESS OUTCOMES – CONCLUSIONS

Having analysed each of the nine indicators individually the following can be concluded:

- The geographical distributions of District Council Area rankings in respect of some success outcomes differ significantly from those of others. The earnings and deprivation maps, for example, show an economically successful east of the region whereas aggregate VAT registrations concentrate success in the west and south.
- Given that *inter alia* each of the nine indicators is a defensible economic success outcome, these distinctively different distributions suggest that no one is an adequate proxy for economic success. Majoring with one indicator over another would, in fact, present a misleading picture. The only way to determine which District Council Areas in 2001 were most successful is to combine the success outcomes into a single "Success Index". That will be the subject of Chapter Eight.
- Economic success appears to have been manifest in different ways in predominantly Catholic District Council Areas (largely in the west and south of the region) as opposed to predominantly Protestant District Council Areas (in the east of the region). Catholic areas had higher aggregate new VAT registrations, higher business stock change and employment change competitiveness differentials and lower redundancies; whereas Protestant areas had lower levels of deprivation, higher earnings, and more white-collar business services.
- The inputs which are associated with those different manifestations of economic success also differ. In Catholic areas, with their higher rates of new VAT registrations and employment creation, social capital was strong, longer hours were worked, more people were self-employed, more women managed businesses, but also more women overall stayed at home and were economically inactive. Levels of long-term illness and disablement were also higher in these areas. In Protestant areas, with their higher earnings, lower deprivation, and higher numbers of business services companies,

degree level education was higher, self-employment was lower, hours worked were lower, more women were economically active, there were more people who were born overseas, but levels of crime were also higher. Social capital in these areas was very under-developed.

- Given this duality, if not heterogeneity (subsets appeared to exist within these broad groups) it will be intriguing to see which areas had the most comprehensive portfolio of success and which inputs, if any, were associated with the distribution of the Local Economic Success Index rankings. This analysis would seem to suggest that those inputs which will record a statistically significant association with the Index, will be factors which were part of the economic success story across the region as a whole and not just in Catholic areas or Protestant areas.
- However, social capital appears to have been such a distinctively Catholic phenomenon that there must be a question mark as to whether it will be associated with the Local Economic Success Index.

CHAPTER EIGHT

THE COMPOSITE NORTHERN IRELAND LOCAL ECONOMIC SUCCESS (LES) INDEX

8.1 INTRODUCTION

In this chapter a composite index of local economic success will be constructed from the nine individual success outcomes described in the previous chapter.

Those nine success outcome indicators are:

- A low level of multiple deprivation in 2001 in each District Council Area.
- Average earnings 2001 in each District Council Area.
- Job density in 2001 in each District Council Area.
- Redundancies in 2001 per 10,000 adult resident population by District Council Area.
- Services which supported business and economic development as a proportion of total VAT-registered business stock in each District Council Area 2001.
- The aggregate number of new VAT-registered businesses per 10,000 adult resident population over 5 years, 1996-2001, by District Council Area.
- The percentage population change 1991-2001 per 10,000 adult resident population by District Council Area.
- The business stock change competitiveness differential 1997-2001, per 10,000 adult resident population by District Council Area.
- The employment change competitiveness differential 1997-2001 per 10,000 adult resident population by District Council Area.

Two of these indicators measure quality of life outcomes: multiple deprivation, and earnings; two measure labour market related outcomes: job density and redundancies; two business/commercial structure outcomes: the size of the business services stock, and the aggregate number of new VAT approved businesses over five years; and three measure change: one demographic, i.e. population change 1991-2001; one industrial/commercial structure change, i.e. the business stock change competitiveness differential; and one labour market change, i.e. the employment change competitiveness differential.

Before the detailed analysis of each success outcome was carried out in Chapter Seven it had been assumed that the economic success outcomes would be strongly correlated with each other. However, what Chapter Seven revealed was that while there was some level of correlation between the nine outcome indicators in almost 50 per cent of cases where a correlation could have been possible (see table 8.1), in only 5 per cent of those cases were the correlations significant at the 1 per cent level and in those cases the correlations were between sets of data derived from the same source. This suggests that each success outcome reflected a specific dimension of local economic success. While Chapter Seven was able to show which areas had performed strongly in respect of individual outcomes, it was not obvious which areas overall had performed best and which overall had performed worst. No one success outcome indicator was an adequate proxy for overall economic success.

The only way to capture success in all its dimensions so that the comprehensiveness of each District Council Area's economic success status can be tested is to combine each of the individual success outcomes in a composite measure, a synthetic Local Economic Success Index.

	Quality of life		Labour market		Industrial/commercial structure		Change		
	Low depriv-ation 2001	Earnings 2001	Job density 2001	Redund-ancies 200'	Business services 2001	VAT reg 1997-2001	Popula-tion change 1991-2001	Bus stock change '97-2001 competit-iveness diff-ntial	Emp chge '97-2001 compet-itiveness different-ial
Low depriv-ation 2001	-	-	-	-	-	-	-	-	-
Earnings 2001	**0.3955***	-	-	-	-	-	-	-	-
Job density 2001	*-0.1148*	*0.2096*	-	-	-	-	-	-	-
Redund 2001	*-0.0802*	**-0.5304***	*-0.2711*	-	-	-	-	-	-
Bus services 2001	**0.4345***	**0.5636***	**0.3300***	**-0.3721***	-	-	-	-	-
VAT reg '97-2001	**-0.5015***	**-0.4951***	*0.1401*	**0.4549***	**-0.4646***	-	-	-	-
Pop' change 1991-2001	*0.1920*	*-0.1143*	**-0.4933***	*-0.0598*	*-0.0868*	*-0.2303*	-	-	-
Bus' stock change competit-ivness differential 1997-2001	**-0.4701***	**-0.5866***	*-0.0565*	**0.3714***	**-0.8161****	**0.7347****	*-0.0485*	-	-
Employ-ment change 1997-2001 compet' differential	*0.1282*	*-0.0241*	**0.5074***	*0.0474*	*0.0988*	*0.2588*	*-0.1811*	*0.1009*	-

* Significant at the 5% level. ** Significant at the 1% level.

Table 8.1 : Correlations between the success outcomes.

The extent to which each success outcome appears to be independent of the others also suggests that the effect of each on the pattern of success might be quite distinctive. By constructing the composite success index in four stages, by adding labour market outcome indicators to those which measure quality of life outcomes, and then adding commercial structure success outcomes followed by change outcomes, the effect of extending the success definition to include each set of outcome indicators will be clearly seen. This approach will also reveal how the distribution of success "morphs" as the definition of success is changed (an emphasis on quality of life measures, for example, will produce a different map from one which focuses on business and job creation). This is important because it demonstrates that different definitions of success deliver very different territorial manifestations and that a definition which is anything other than multi-dimensional will present an inaccurate picture in a region within which the relative economic status of communities and places has been a highly charged political issue.

8.2 THE FOUR-STAGE COMPOSITION OF A COMPREHENSIVE LOCAL ECONOMIC SUCCESS INDEX

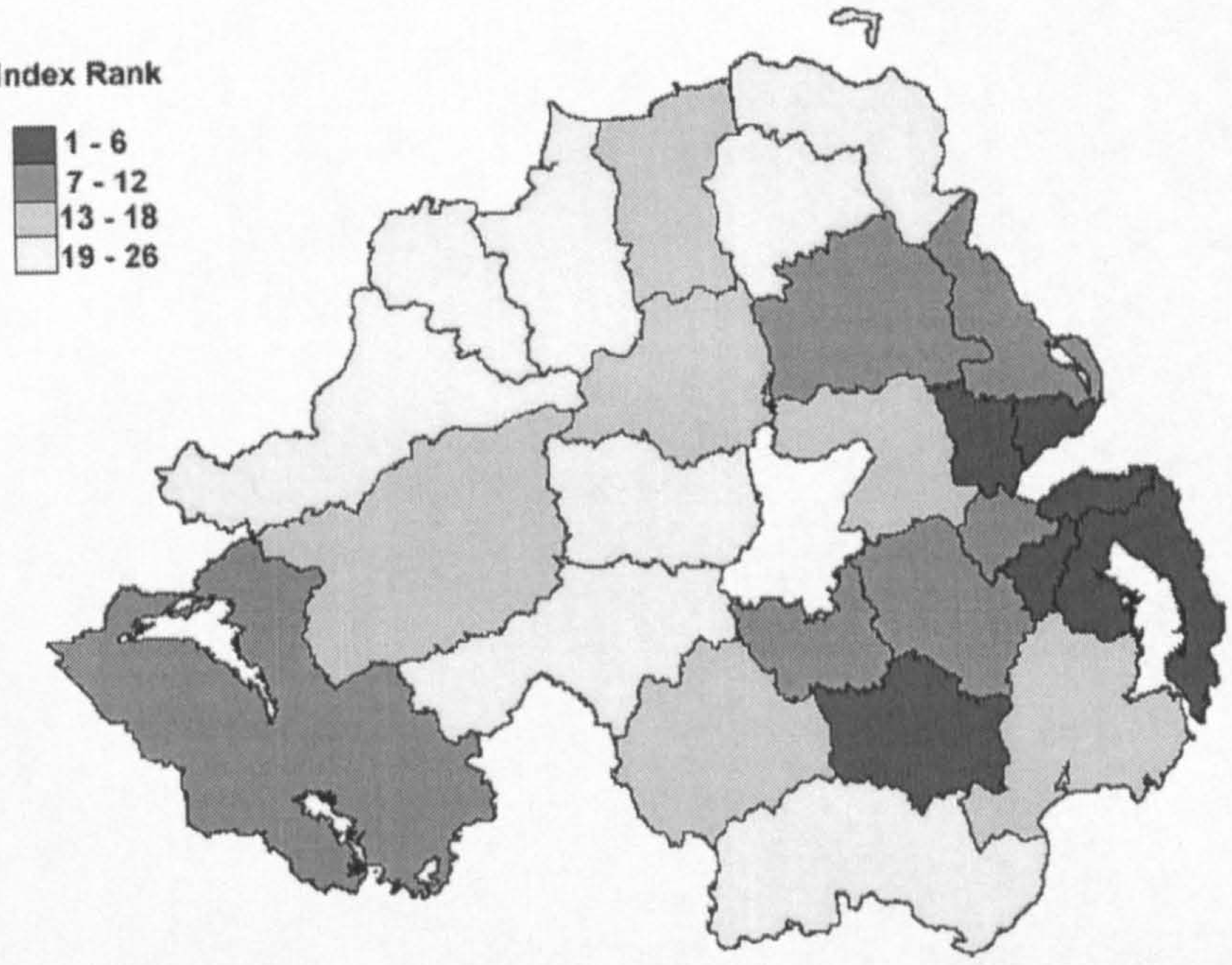
The picture of local economic success in Northern Ireland will be built up in four stages (summarised in table 8.2 below). While the territorial success pattern will change as new variables are added to extend the definition of success it will also be noticeable that the relative strength and weakness of some areas will be consistent through each iteration, suggesting that their success status may be more comprehensively structural and less obviously attributable to the inclusion of any particular set of variables. This approach, which makes transparent the impact of adding new sets of success indicators, should assist other researchers who may be interested only in interactions between certain variables and who may not be convinced by the inclusion of others. The inclusion of low deprivation, for example, can be defended on the grounds that it is a proxy for quality of life which is in turn a local economic success outcome. However, there is a counter argument that a high level of deprivation in 2001 might in part have been a legacy of historic economic disadvantage and that circumstances which no longer prevailed could, through this deprivation "shadow", have been exerting a lagged effect, presenting an unduly negative impression of the success status of some local economies.

Success outcome indicators:	*Evolving success models*			
	Stage 1 *Quality of Life +*	*Stage 2* *Labour Market +*	*Stage 3* *Commercial Structure +*	*Stage 4* *Change*
Low deprivation	✓	o	o	o
Earnings	✓	o	o	o
Job density		✓	o	o
Redundancies		✓	o	o
Business services			✓	o
VAT registrations			✓	o
Population change				✓
Business stock change				✓
Employment change				✓

Table 8.2: *The four stage construction of the synthetic index of economic success outcome indicators.*

Each District Council Area's combined rank score is calculated by adding its rank scores in respect of the nine individual success outcomes. This approach is modelled on that used by Storey (1982) and later Robson *et al* (1994). In this way ultimately each of Northern Ireland's 26 local economies will be ranked in respect of its level of multi-faceted local economic success, from 1 for most successful (i.e: for the lowest aggregate score) to 26 for least successful (i.e.: for the highest aggregate score). In this model the most successful local economy will be the one which, more than any other, had low levels of deprivation, a high level of earnings, a high demand for labour, a low level of redundancies, a larger number of new businesses overall, a large number of service companies supporting business and economic development, a larger population than it had had a decade earlier, and more new jobs and businesses than it had five years earlier (when the "troubles" had officially ended).

8.3 STAGE ONE: QUALITY OF LIFE OUTCOMES: DEPRIVATION AND EARNINGS



Map 8.1: *Combined District Council Area rank scores in respect of low deprivation 2001 and average earnings 2001.*
Ranks 1-6 = Most successful.

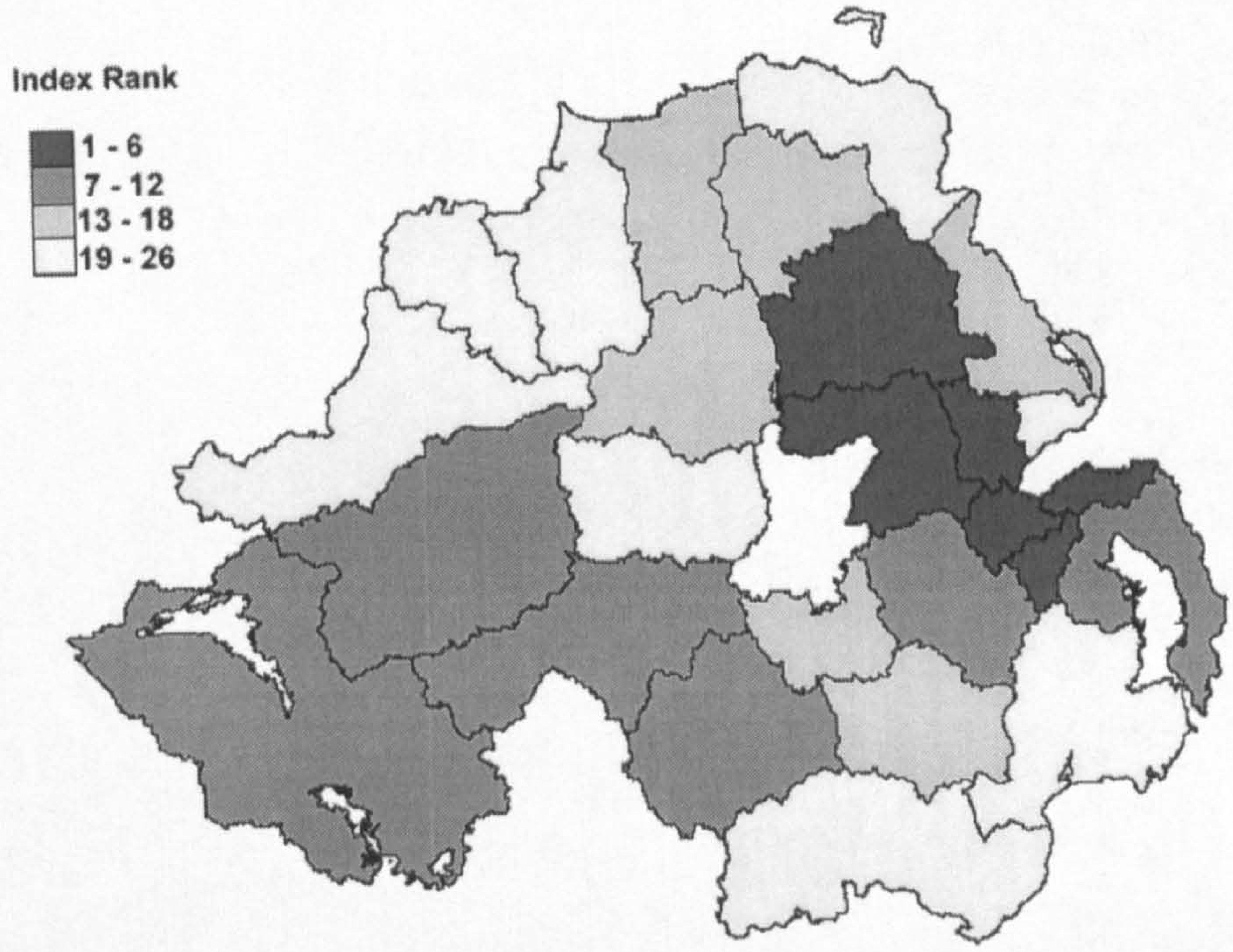
When economic success is measured in terms of quality-of-life related outcomes only i.e. low deprivation in 2001 and average earnings in 2001, Map 8.1 shows that with the exception of Fermanagh it is the predominantly Protestant east of the Province which is seen to be favoured, in particular the Greater Belfast commuter belt. Table 8.3 overleaf shows that the six top ranked District Council Areas in respect of the quality of life dimension of economic success in 2001 were: Castlereagh, Newtownabbey, Carrickfergus, North Down, Ards and Banbridge. These were areas with large Protestant majority populations. Of the next six most advantaged areas, in only one, Fermanagh, were Catholics the majority population (55%). The least advantaged areas are all shown to have been located in the west, north and south of the Province. Of this group only one, Ballymoney was predominantly Protestant. The least advantaged areas in respect of deprivation and earnings were: Strabane, Moyle, Cookstown, Newry and Mourne, Derry, Ballymoney, Limavady and Dungannon. When economic success is defined narrowly in respect only of social and economic deprivation and earnings, what is presented is (with the exception of Fermanagh) a stark geographical and inter-community cleavage between the Catholic rural west and south and the Protestant east.

Council	Low depriv-ation	Rank	Mean Earnings	Rank	Av of Ranks	Index Rank
Antrim	13.34	5	324.00	22	3.00	13
Ards	12.56	3	350.70	11	1.56	5
Armagh	17.50	13	344.30	14	3.00	13
Ballymena	13.64	7	352.50	10	1.89	9
Ballymoney	19.65	15	318.00	23	4.22	21
Banbridge	13.43	6	357.30	9	1.67	6
Belfast	35.87	25	433.50	1	2.89	12
Carrickfergus	13.99	8	367.10	5	1.44	3
Castlereagh	9.54	2	378.40	2	0.44	1
Coleraine	16.23	10	326.90	20	3.33	15
Cookstown	25.98	21	294.40	25	5.11	24
Craigavon	20.89	17	360.40	8	2.78	11
Derry	35.38	24	330.50	17	4.56	22
Down	17.37	12	324.20	21	3.67	16
Dungannon	21.65	18	332.90	16	3.78	19
Fermanagh	19.74	16	373.20	4	2.22	10
Larne	16.68	11	367.10	5	1.78	7
Limavady	22.52	19	343.00	15	3.78	19
Lisburn	16.10	9	364.80	7	1.78	7
Magherafelt	18.22	14	330.20	19	3.67	16
Moyle	26.78	22	230.90	26	5.33	25
Newry & Mourne	27.04	23	330.20	19	4.67	23
Newtownabbey	12.69	4	377.70	3	0.78	2
North Down	8.92	1	349.50	12	1.44	3
Omagh	25.37	20	346.50	13	3.67	16
Strabane	36.93	26	303.40	24	5.56	26

Table 8.3: Northern Ireland Local Economic Success Index 1 – District Council Area rankings by variable..

8.4 STAGE TWO:

...... adding LABOUR MARKET OUTCOMES: JOB DENSITY, REDUNDANCIES



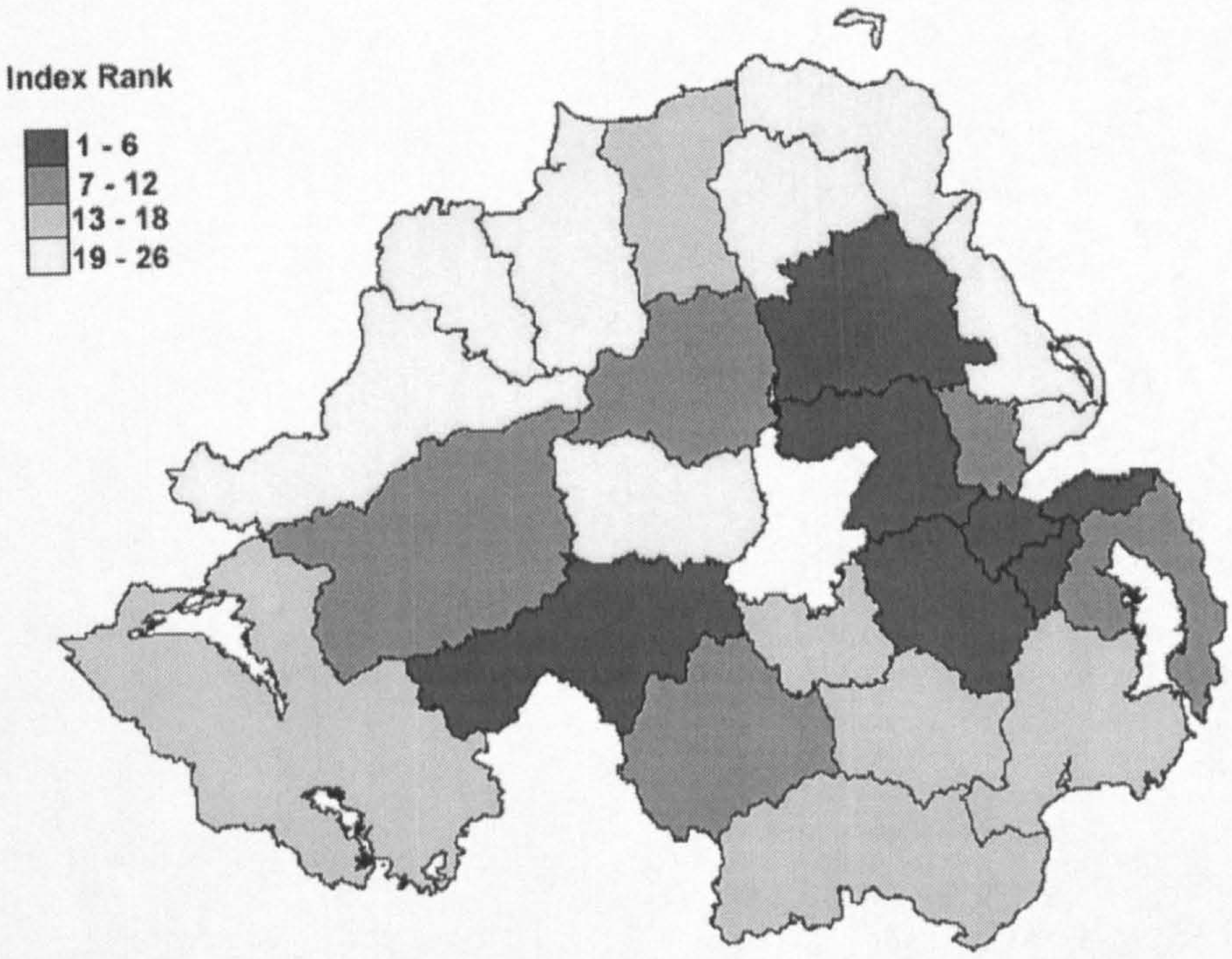
Map 8.2: *Combined District Council Area rank scores in respect of low deprivation 2001, average earnings 2001, job density 2001 and redundancies 2001. Ranks 1-6 = Most successful*

When two labour market-related economic success outcomes (job density in 2001 and redundancies in 2001) are added to the composite measure of economic success, Table 8.4 overleaf and Map 8.2 above reveal that the six most advantaged areas are still in the predominantly Protestant east (Castlereagh, Ballymena, Newtownabbey, North Down, Antrim and Belfast). However, three areas with large Catholic populations West-of-the-Bann (the predominantly Catholic rural sub-region which had consistently since the establishment of the Northern Ireland State fared badly in respect of measures of economic performance and social disadvantage) improve their rank positions: Omagh, Dungannon and Armagh; whereas the rank positions of Carrickfergus, Ards, Banbridge, Larne, and Craigavon, all predominantly Protestant areas in the east, slip. Carrickfergus (along with Down) now moves into the group of six least successful areas. The extent to which the rank position of Carrickfergus has been weakened by the inclusion of labour market outcome measures is striking (it slips from the 3rd most successful local economy in Northern Ireland to the 20th). While the group of least successful District Council Areas continue to be predominantly Catholic: Strabane, Derry, Moyle, Limavady, Newry and Mourne, and Cookstown, the effect of broadening the definition of economic success to include labour market indicators is nevertheless to weaken the east/west, Protestant/Catholic divide, although more Protestant areas than Catholic areas continue to be successful.

Council	Low depriv-ation	Rank	Job Density	Rank	Redund-ancies	Rank	Mean Earnings	Rank	Av of Ranks	Index Rank
Antrim	13.34	5	0.83	3	26.37	12	324.00	22	**4.67**	5
Ards	12.56	3	0.45	25	2.60	5	350.70	11	**4.89**	7
Armagh	17.50	13	0.65	13	0.49	4	344.30	14	**4.89**	7
Ballymena	13.64	7	0.91	2	40.24	18	352.50	10	**4.11**	2
Ballymoney	19.65	15	0.54	18	0.00	1	318.00	23	**6.33**	16
Banbridge	13.43	6	0.46	23	47.13	20	357.30	9	**6.44**	17
Belfast	35.87	25	1.25	1	30.90	15	433.50	1	**4.67**	5
Carrickfergus	13.99	8	0.41	26	126.97	24	367.10	5	**7.00**	20
Castlereagh	9.54	2	0.74	6	7.11	8	378.40	2	**2.00**	1
Coleraine	16.23	10	0.72	7	53.05	21	326.90	20	**6.44**	17
Cookstown	25.98	21	0.59	16	0.00	1	294.40	25	**7.00**	20
Craigavon	20.89	17	0.81	4	143.38	26	360.40	8	**6.11**	13
Derry	35.38	24	0.71	10	53.21	22	330.50	17	**8.11**	25
Down	17.37	12	0.55	17	17.93	11	324.20	21	**6.78**	19
Dungannon	21.65	18	0.76	5	9.88	9	332.90	16	**5.33**	10
Fermanagh	19.74	16	0.72	7	69.40	23	373.20	4	**5.56**	11
Larne	16.68	11	0.52	20	44.80	19	367.10	5	**6.11**	13
Limavady	22.52	19	0.52	20	38.53	17	343.00	15	**7.89**	23
Lisburn	16.10	9	0.63	15	37.79	16	364.80	7	**5.22**	9
Magherafelt	18.22	14	0.65	13	16.32	10	330.20	19	**6.22**	15
Moyle	26.78	22	0.46	23	0.00	1	230.90	26	**8.00**	24
Newry & Mourne	27.04	23	0.66	12	30.66	14	330.20	19	**7.56**	22
Newtownabbey	12.69	4	0.72	7	130.91	25	377.70	3	**4.33**	3
North Down	8.92	1	0.48	22	3.27	6	349.50	12	**4.56**	4
Omagh	25.37	20	0.71	10	6.19	7	346.50	13	**5.56**	11
Strabane	36.93	26	0.54	18	30.04	13	303.40	24	**9.00**	26

Table 8.4: Northern Ireland Local Economic Success Index 2 – District Council Area rankings by variable..

8.5 STAGE THREE: ...... adding INDUSTRIAL/COMMERCIAL STRUCTURE OUTCOMES: STOCK OF BUSINESS SERVICES AND 5-YEAR AGGREGATE NEW VAT REGISTRATIONS



Map 8.3: *Combined District Council Area rank scores in respect of low deprivation 2001, average earnings 2001, job density 2001 and redundancies 2001, stock of business services 2001 and aggregate new VAT registrations 1997-2001. Ranks 1-6 = Most successful.*

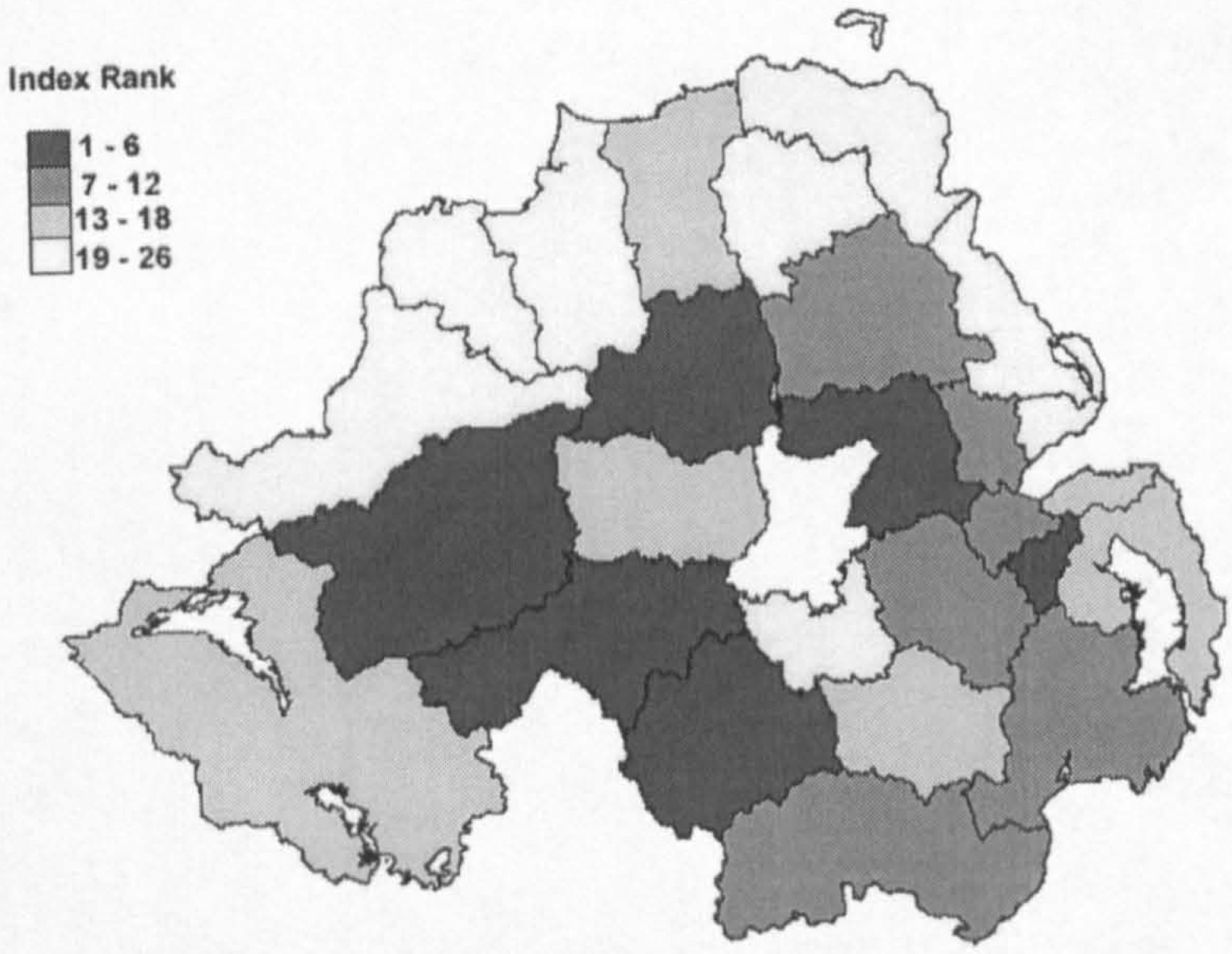
When two industrial/commercial structure-related outcomes (the stock of business services in 2001 and the aggregate of all new VAT registrations over 5 years, 1997-2001) are added to the composite economic success measure, Table 8.5 overleaf and Map 8.3 above show that a group of three District Council Areas with large Catholic populations in mid-Ulster (west-of-the-Bann) appear to consolidate their position among the 12 most successful District Council Areas in Northern Ireland (they are: Magherafelt, Omagh and Armagh), and one other (Dungannon) moves up the rank order advancing from the 10th to the 5th most successful local economy in Northern Ireland. At the other end of the success continuum, three predominantly Protestant District Council Areas in the east have now moved into the group of least successful local economies (Carrickfergus, Ballymoney and Larne). The least successful District Council Areas, with the exception of Cookstown, are located together in two groups, one in the north-west (Strabane, Limavady and Derry) and the other in the north-east (Moyle, Ballymoney, Larne and Carrickfergus). In broadening further the definition of economic success the Protestant/Catholic, east/west divide between the most successful and the least successful local economies in the Province has been further diluted.

Council	Vat Reg	Rank	Low depriv-ation	Rank	Job Density	Rank	Redund-ancies	Rank	Mean Earnings	Rank	Bus service stock	Rank	Av of Ranks	Index Rank
Antrim	25.54	9	13.34	5	0.83	3	26.37	12	324.00	22	14.10	12	**7.00**	**4**
Ards	21.66	21	12.56	3	0.45	25	2.60	5	350.70	11	14.33	11	**8.44**	**11**
Armagh	30.96	5	17.50	13	0.65	13	0.49	4	344.30	14	10.85	20	**7.67**	**8**
Ballymena	22.10	20	13.64	7	0.91	2	40.24	18	352.50	10	14.49	10	**7.44**	**5**
Ballymoney	23.90	14	19.65	15	0.54	18	0.00	1	318.00	23	10.45	22	**10.33**	**21**
Banbridge	24.68	11	13.43	6	0.46	23	47.13	20	357.30	9	10.90	18	**9.67**	**16**
Belfast	27.04	7	35.87	25	1.25	1	30.90	15	433.50	1	30.97	1	**5.56**	**2**
Carrickfergus	17.53	25	13.99	8	0.41	26	126.97	24	367.10	5	16.04	8	**10.67**	**23**
Castlereagh	17.12	26	9.54	2	0.74	6	7.11	8	378.40	2	20.29	3	**5.22**	**1**
Coleraine	22.43	18	16.23	10	0.72	7	53.05	21	326.90	20	18.01	6	**9.11**	**13**
Cookstown	32.78	3	25.98	21	0.59	16	0.00	1	294.40	25	9.84	24	**10.00**	**19**
Craigavon	20.10	23	20.89	17	0.81	4	143.38	26	360.40	8	15.38	9	**9.67**	**16**
Derry	23.41	16	35.38	24	0.71	10	53.21	22	330.50	17	19.10	4	**10.33**	**21**
Down	26.04	8	17.37	12	0.55	17	17.93	11	324.20	21	13.40	13	**9.11**	**13**
Dungannon	35.31	2	21.65	18	0.76	5	9.88	9	332.90	16	11.69	17	**7.44**	**5**
Fermanagh	25.17	10	19.74	16	0.72	7	69.40	23	373.20	4	10.37	23	**9.22**	**15**
Larne	20.33	22	16.68	11	0.52	20	44.80	19	367.10	5	12.20	15	**10.22**	**20**
Limavady	22.41	19	22.52	19	0.52	20	38.53	17	343.00	15	10.53	21	**12.33**	**25**
Lisburn	23.54	15	16.10	9	0.63	15	37.79	16	364.80	7	18.56	5	**7.44**	**5**
Magherafelt	35.71	1	18.22	14	0.65	13	16.32	10	330.20	19	10.89	19	**8.44**	**11**
Moyle	24.59	12	26.78	22	0.46	23	0.00	1	230.90	26	7.89	26	**12.22**	**24**
Newry & Mourne	31.14	4	27.04	23	0.66	12	30.66	14	330.20	19	11.88	16	**9.78**	**18**
Newtownabbey	18.37	24	12.69	4	0.72	7	130.91	25	377.70	3	17.93	7	**7.78**	**9**
North Down	22.71	17	8.92	1	0.48	22	3.27	6	349.50	12	26.54	2	**6.67**	**3**
Omagh	28.93	6	25.37	20	0.71	10	6.19	7	346.50	13	13.28	14	**7.78**	**9**
Strabane	24.03	13	36.93	26	0.54	18	30.04	13	303.40	24	8.48	25	**13.22**	**26**

Table 8.5: Northern Ireland Local Economic Success Index 3 – District Council Area rankings by variable..

8.6 STAGE FOUR: COMPLETING THE LOCAL ECONOMIC SUCCESS INDEX

...... adding CHANGE VARIABLES: POPULATION CHANGE, BUSINESS STOCK CHANGE AND EMPLOYMENT CHANGE



Map 8.4: *Combined District Council Area rank scores in respect of low deprivation 2001, earnings 2001, job density 2001, redundancies 2001, business services stock 2001, aggregate new VAT registrations 1997-2001, population change 1991-2001, business stock competitiveness differential 1997-2001, and employment change competitiveness differential 1997-2001.*
Ranks 1-6 = Most successful.

District Council Area Local Economic Success rankings:

Most successful

1. Castlereagh
2. Magherafelt
3. Dungannon
4. Antrim
5. Armagh
5. Omagh
7. Down
7. Lisburn
9. Newtownabbey
10. Ballymena
10. Belfast
10. Newry and Mourne
13. Banbridge
14. Coleraine
14. Cookstown
16. Ards
16. Fermanagh
18. North Down
19. Ballymoney
20. Carrickfergus
21. Limavady
22. Craigavon
23. Derry
24. Moyle
25. Larne
Least **26.** Strabane
successful

The composite index of nine local economic success outcomes is completed (see Table 8.6 on page 300) with the inclusion of three success indicators which reveal the extent to which each District Council Area had by 2001 experienced a growth or decline of population (1991-2001), employment (1997-2001) and business stock (1997-2001). The rationale for including these change measures, which was rehearsed in Chapters Five and Six, is that the significance of each area's 2001 success status would be validated by setting it in a dynamic improvement (or decline) context. The business stock and employment change competitiveness differentials, for example, would help to identify those areas whose changed economic status in 2001 was not attributable to sectoral trends but to other inputs which may have included social capital.

Map 8.4 reveals that the most significant effect of adding these change measures to the success index, is to place among the top six most successful local economies four District Council Areas from West-of-the-Bann. The cases of these four areas, Magherafelt, Dungannon, Armagh and Omagh, will be considered in more depth in Chapter Eleven.

Castlereagh and Antrim in the east make up the rest of this top group of six. Both areas had consistently through all the stages in the evolution of the success index been in the top group, with Castlereagh ranking from the outset as the most successful District Council Area in the Province. Castlereagh appears to have been advantaged because it had secured a substantial share of the employment created in the Greater Belfast area between 1997 and 2001, and it had low deprivation, high earnings and a relatively large number of business services employers. Interestingly, however, Castlereagh also had the lowest number of aggregate new VAT registrations per 10,000 people in Northern Ireland (1997-2001) and the second lowest level of sector-adjusted growth in business stock, over the same period – suggesting that the large numbers of jobs being created in Castlereagh along with the high average wages which prevailed there may have mitigated against the creation and expansion of local small businesses. Antrim, the fourth most successful local economy in Northern Ireland, as well as hosting Belfast International Airport, had succeeded during the 1990s in attracting significant foreign direct investment. This was manifest in high levels of employment growth and a high job density. Antrim enjoyed relatively low levels of deprivation, although it did also have the fourth lowest level of average wages in the Province, suggesting that while many jobs may have been created between 1997 and 2001, a significant proportion of them were relatively low wage. The case of Antrim demonstrates that low deprivation does not always go hand-in-hand with high wages.

Beyond these six most successful areas, the other District Council Areas which score relatively well are Down, Lisburn, Newtownabbey, Ballymena, Belfast and Newry and Mourne. With the exception of Newry and Mourne, these areas are all in the mid-east of the region relatively close to Belfast. At the other end of the success spectrum, seven of the eight District Council Areas identified as the least successful local economies are concentrated in two geographical clusters: one in the north west and the other around the north east coast. Derry, Strabane, Limavady and Moyle performed consistently badly in respect of all nine success outcomes, and Carrickfergus, Ballymoney and Larne performed poorly or only modestly in respect of six. The other area in this least successful group, Craigavon, performed poorly against all but three of the success outcomes indicators (job density, mean earnings and concentration of business services being the exeeptions); For four District Council Areas in particular in the group of least ecomomically successful District Council Areas, their lack of economic success in 2001 represented a decline in the relative economic position which they had historically occupied within Northern Ireland: Larne (the second least successful local economy in Northern Ireland in 2001), Craigavon (the fifth least successful), Carrickfergus (the seventh least successful) and North Down (the ninth least successful). Strabane, Moyle and Derry continued to occupy the positions of relative economic disadvantage in which they had been situated since the establishment of the Northern Ireland state.

Map 8.4 suggests that by 2001 a new geographical disparity had emerged within Northern Ireland to replace the traditional east/west divide: a north/south divide. Ten of the fourteen least successful local economies were located within a northern coastal arc running from Strabane in the north-west to Ards in the east. While the Belfast commuter belt continued to perform strongly, the number of successful local economies located in the west and south of the Province is striking. The performance of Magherafelt, Dungannon, Armagh and Omagh, apparently in spite of multiple deprivation, low wages, an historic lack of private and public sector investment and greater distance from Belfast, appears to have been particularly significant. Their "stories" will be examined in greater detail in Chapter Eleven.

Council	Vat Reg	Rank	Pop Change	Rank	Employ Change Shift Share	Rank	Low depriv-ation	Rank	Job Density	Rank	Redund-ancies	Rank	Mean Earnings	Rank	Total bus stock Shift share	Rank	Bus service stock	Rank	Av of Ranks	Index Rank
Antrim	25.54	9	6.86	15	751.96	3	13.34	5	0.83	3	26.37	12	324.00	22	22.13	15	14.10	12	10.67	4
Ards	21.66	21	12.53	3	-60.87	24	12.56	3	0.45	25	2.60	5	350.70	11	12.60	21	14.33	11	13.78	16
Armagh	30.96	5	4.21	23	377.11	11	17.50	13	0.65	13	0.49	4	344.30	14	57.50	3	10.85	20	11.78	5
Ballymena	22.10	20	3.73	25	507.95	7	13.64	7	0.91	2	40.24	18	352.50	10	17.45	17	14.49	10	12.89	10
Ballymoney	23.90	14	11.45	4	-252.57	26	19.65	15	0.54	18	0.00	1	318.00	23	35.97	10	10.45	22	14.78	19
Banbridge	24.68	11	23.69	1	193.63	19	13.43	6	0.46	23	47.13	20	357.30	9	32.40	11	10.90	18	13.11	13
Belfast	27.04	7	-5.38	26	319.03	14	35.87	25	1.25	1	30.90	15	433.50	1	-13.19	26	30.97	1	12.89	10
Carrickfergus	17.53	25	13.76	2	253.22	16	13.99	8	0.41	26	126.97	24	367.10	5	11.84	22	16.04	8	15.11	20
Castlereagh	17.12	26	8.19	8	923.49	1	9.54	2	0.74	6	7.11	8	378.40	2	6.21	24	20.29	3	8.89	1
Coleraine	22.43	18	7.29	12	375.08	12	16.23	10	0.72	7	53.05	21	326.90	20	22.35	14	18.01	6	13.33	14
Cookstown	32.78	3	4.95	20	626.39	4	25.98	21	0.59	16	0.00	1	294.40	25	40.70	6	9.84	24	13.33	14
Craigavon	20.10	23	7.29	12	139.80	22	20.89	17	0.81	4	143.38	26	360.40	8	14.43	19	15.38	9	15.56	22
Derry	23.41	16	7.93	10	186.47	20	35.38	24	0.71	10	53.21	22	330.50	17	12.87	20	19.10	4	15.89	23
Down	26.04	8	9.41	7	500.96	8	17.37	12	0.55	17	17.93	11	324.20	21	29.27	12	13.40	13	12.11	7
Dungannon	35.31	2	5.21	19	609.70	5	21.65	18	0.76	5	9.88	9	332.90	16	57.03	4	11.69	17	10.56	3
Fermanagh	25.17	10	5.57	17	251.21	17	19.74	16	0.72	7	69.40	23	373.20	4	40.35	7	10.37	23	13.78	16
Larne	20.33	22	4.01	24	-115.41	25	16.68	11	0.52	20	44.80	19	367.10	5	20.96	16	12.20	15	17.44	25
Limavady	22.41	19	10.24	5	421.83	10	22.52	19	0.52	20	38.53	17	343.00	15	26.13	13	10.53	21	15.44	21
Lisburn	23.54	15	7.94	9	302.36	15	16.10	9	0.63	15	37.79	16	364.80	7	14.48	18	18.56	5	12.11	7
Magherafelt	35.71	1	9.69	6	454.07	9	18.22	14	0.65	13	16.32	10	330.20	19	79.29	1	10.89	19	10.22	2
Moyle	24.59	12	7.47	11	202.66	18	26.78	22	0.46	23	0.00	1	230.90	26	39.23	9	7.89	26	16.44	24
Newry & Mourne	31.14	4	4.56	14	539.51	6	27.04	23	0.66	12	30.66	14	330.20	19	39.70	8	11.88	16	12.89	10
Newtownabbey	18.37	24	5.32	18	837.04	2	12.69	4	0.72	7	130.91	25	377.70	3	6.52	23	17.93	7	12.56	9
North Down	22.71	17	4.47	22	155.15	21	8.92	1	0.48	22	3.27	6	349.50	12	-4.50	25	26.54	2	14.22	18
Omagh	28.93	6	4.74	21	350.69	13	25.37	20	0.71	10	6.19	7	346.50	13	58.22	2	13.28	14	11.78	5
Strabane	24.03	13	5.83	16	72.44	23	36.93	26	0.54	18	30.04	13	303.40	24	48.89	5	8.48	25	18.11	26

Table 8.6: The final comprehensive Northern Ireland Local Economic Success Index – District Council Area rankings by variable.

PART THREE

WAS SOCIAL CAPITAL ASSOCIATED WITH LOCAL ECONOMIC SUCCESS?

- **Measures of social capital in Northern Ireland– Chapter Nine.**
- **Social capital and local economic success in Northern Ireland 2001– Chapter Ten**
- **What other variables were associated with local economic success?– Chapter Eleven.**
- **Reflections – Chapter Twelve**

PART THREE: WAS SOCIAL CAPITAL ASSOCIATED WITH LOCAL ECONOMIC SUCCESS?

CHAPTER NINE

MEASURES OF SOCIAL CAPITAL IN NORTHERN IRELAND

9.1 THE SOCIAL CAPITAL CLUSTER

Nine measures of social capital have been selected for analysis. They are:

- The number of active community groups involved in community economic development per 10,000 adult resident population by District Council Area in 2001.
- Credit Union membership per 10,000 adult resident population by District Council Area in 2001.
- The proportion of people in each District Council Area of voting age who registered their franchise in the 2001 District Council elections.
- The square footage of workspace provided by Local Enterprise Agencies per 10,000 adult resident population by District Council Area in 2001.
- The number of community businesses supported by Local Enterprise Agencies, per 10,000 adult resident population by District Council Area in 2001.
- The allocation of grants from the Peace I programme per 10,000 adult resident population by District Council Area, 1996-2001.
- Applications made to the National Lottery Community Fund, per 10,000 adult resident population by District Council Area, 1995-2001.
- The percentage of people aged 16-74 with 5+GCSEs at grades A-C by District Council Area in 2001.
- The percentage of people aged 16-74 who were full-time students by District Council Area in 2001.

A rationale for using each of these indicators is set out in this chapter, followed by an analysis of the territorial patterns displayed by each and their correlation with other potential economic success inputs and outcomes.

Because of the difficulty in determining the extent to which groups within the rest of the cummunity/voluntary sector may or may not have been influenced by religious/cultural affiliation, in Chapter Ten a religious/cultural affiliation control variable will be added to the cluster of nine social capital indicators in an ordinary least squares regression equation to test the association of each with the local economic success index independent of the religious/cultural affiliation of the population. That measure of religious/cultural affiliation is:

- The number of Catholics per 10,000 adult resident population by District Council Area.

The forthcoming analysis in this chapter will show that in 2001 there was a statistically highly significant correlation between seven of the nine measures of social capital selected for this research and the number of Catholics resident in a District Council Area.

9.2 THE PATTERNING OF SOCIAL CAPITAL – IN SUMMARY

Mapping the distribution of District Council Area rankings in respect of the nine social capital indicators (see Figure 9.1) highlights the extent to which there is a consistent territorial pattern displayed by all of the social capital indicators with the exception of the educational attainment indicator (5+ GCSEs – *Qualnew*). The highest social capital indicator rank scores are predominantly in the west or in the south: In the case of active community groups and community businesses, there is a cluster in the north-west; and in the case of the six other social capital indicators, in the mid-west or across the west more generally. Newry and Mourne in the south of the region was ranked in the top six in respect of four of the nine indicators. It is the most "Catholic" of Northern Ireland's 26 District Council Areas. Map ten, in Figure 9.1 overleaf, which records the concentration of Catholics by District Council Area, reveals that across Northern Ireland the areas with highest social capital rank scores in 2001 were predominantly Catholic, the exception being the scores in respect of 5+ GCSEs which were highest in the east in the Greater Belfast commuter belt (and to some extent community-owned Local Enterprise Agency workspace in which predominantly Protestant Larne featured in the top six). These patterns are considered in more detail later in this chapter.

THE PATTERNING OF SOCIAL CAPITAL INDICATORS

Social capital measures

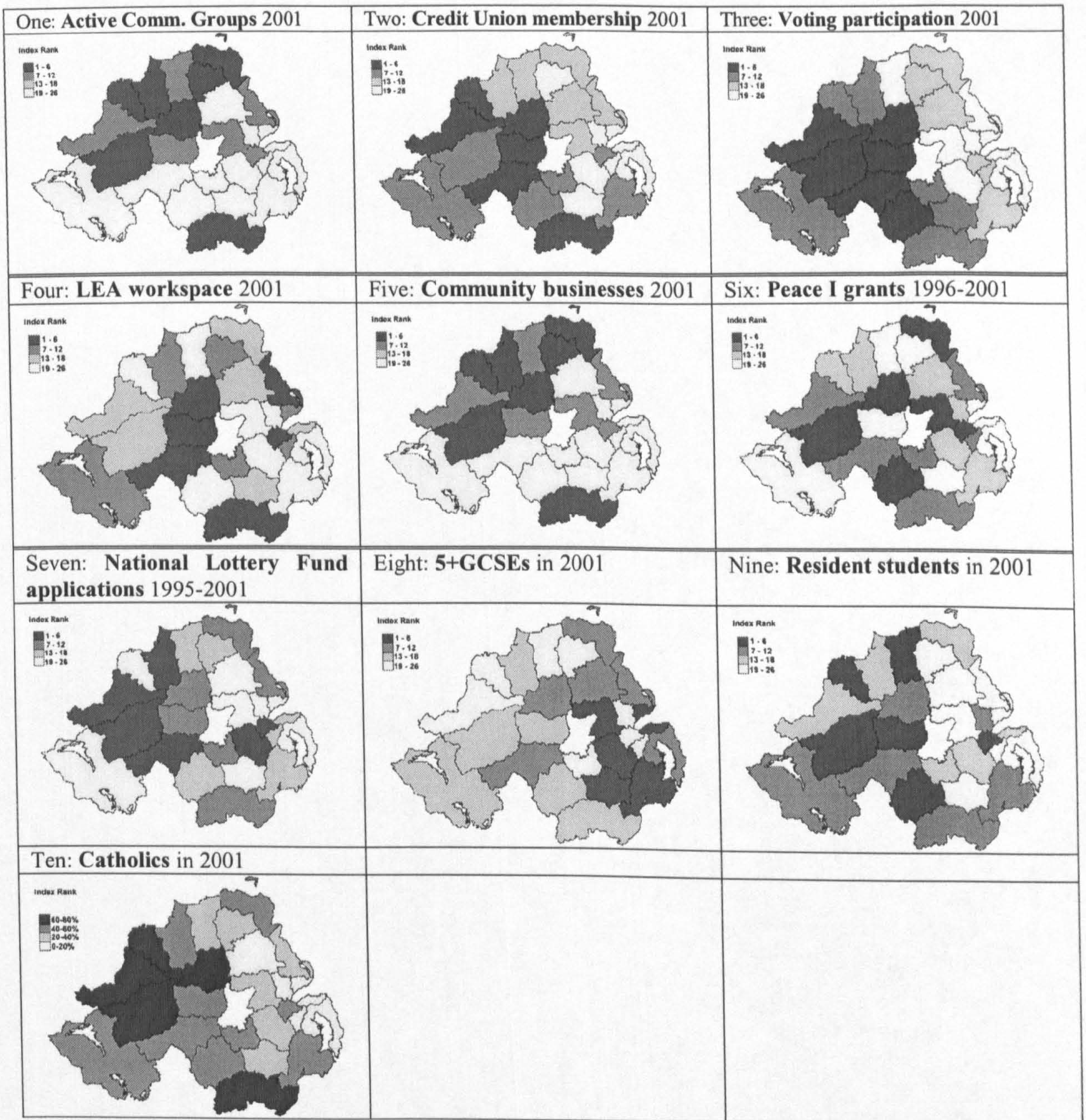


Figure 9.1: Matrix summarising the territorial distribution of District Council Area rank scores against each of the nine social capital indicators (maps one to nine) and religious/cultural affiliation (i.e map ten – Catholics).

Table 9.1 which records the statistically significant correlations between the individual social capital indicators and other variables (including other social capital indicators and the individual local economic success outcomes) provides an insight into the way in which the various dimensions of social capital represented by the nine social capital indicators were manifest in Northern Ireland in 2001. It is not possible to determine the extent to which these correlations represented individual relationships or the extent to which co-linearity was exerting an influence. While the correlation matrix is useful in highlighting patterns of general association it does also throw into sharp relief the limitations of the correlation methodology. Even if overall there was a statistically significant correlation between two variables, in some District Council Areas that association may not have applied. The situation in those areas may have been very different from that in the majority of other District Council Areas. This may explain some of the apparently contradictory correlations. In this section, area profiles will be discussed which seem to typify District Council Areas in Northern Ireland. However, area types are unlikely to be applicable in all cases. That caveat has to preface every observation made in this chapter.

Before considering each social capital indicator's profile in more detail, a number of common features in respect of the overall picture seem to stand out. The first is that, with the exception of the 5+GCSEs measure and the LEA workspace measure, there is a high degree of correlation between the social capital indicators. The social capital indicators which are most correlated with the other measures of social capital are: Credit Union membership, applications to the Lottery Community Fund, and community groups involved in economic development, suggesting that these variables may be a proxy for the distribution of social capital more generally. Casey (2004) had found that the cumulative measures of social capital which he had devised as part of his study of the relationship between social capital and economic performance in Britain were also correlated with each other, leading him to speculate that: "*they are tapping a single underlying dimension*" (P.109).

The relative lack of correlation between both the 5+GCSEs educational attainment measure and the LEA workspace measure and the other social capital indicators could suggest that either these measures are representative of a form of social capital particular to areas in which other forms of social capital are not a feature, or they are not measures of social capital at all. It is notable that 5+ GCSEs and LEA workspace are the only two of the nine social capital indicators not correlated with the distribution of Catholics. Other variables which appear to have been co-linear with the distribution of Catholics are similarly not associated with these two measures. LEA workspace was built with the help of funding provided by the Government, the EU and the IFI. In District Council Areas where local enterprise groups were not already in place deliberative partnerships were established by Government. It is not immediately obvious how much of the community-owned workspace provision across the Province is attributable to endogenous social capital and how much to Government intervention. However, while an LEA workspace presence per se may not have been attributable in all cases to pre-existing social capital, the scale of provision is likely to have been insofar as any subsequent expansion of the modest facilities initially set up with central government funding would have been the product of locally generated action. Local Enterprise Agencies in 2001 remained active some 12 years after most of them had been formally set up, suggesting that the sort of activities in which LEAs were engaged had attracted social capital, even in areas without a social capital track record.

Table 9.1 shows that there was a strong relationship between some individual success outcomes and some indicators of social capital. It appears that there may have been two types of successful local economy in Northern Ireland: one in areas where Catholics were in the majority, which were locationally disadvantaged, where there were high numbers of new and emerging businesses, where wages were low, and where social capital stocks were high; and the other in areas which were locationally advantaged, principally by proximity to Belfast International Airport, which were predominantly Protestant, where there was a high level of employment in professional services and high levels of educational attainment, where there was a higher than average number of residents who were born overseas, and where stocks of social capital were relatively low. These observations will be assessed in greater detail through rest of this chapter.

	Comm groups in eco dev	Credit Union membership	Voter participation	LEA workspace	Community businesses	Peace I grants	Applications to Lottery	5+ GCSEs	Number of students	Catholics
Community group in eco dev		0.7134**	0.6984**		0.3560*	0.4147*	0.4222*		0.4904*	0.7391**
Credit Union members	0.7134**		0.8325**		0.4030*		0.4844*		0.5141*	0.8872**
5+ GCSEs									-0.3419*	
Voter participation	0.6984**	0.8325**					0.4250*		0.4423*	0.7785**
Community businesses	0.3560*	0.4030*				0.4311*	0.4098*			0.5959*
Applications to Lottery	0.4222*	0.4844*	0.4250*	0.4585*	0.4098*	0.4379*				0.5056*
Peace I funds		0.4147*			0.4311*		0.4379*			0.4940*
Number of students	0.4904*	0.5141*	0.4423*					-0.3149*		0.5256*
LEA workspace							0.4585*			
Low deprivation	-0.7227**	-0.8092**	-0.6485*	0.3436*	-0.6194*	-0.3805*	-0.6103*	0.4814*	-0.5073*	0.8243**
Business stock comp diff	0.6447*	0.6315*	0.7805**		0.4064*					0.6903**
New VAT reg 1997-2001	0.6247*	0.6684*	0.6930**		0.3761*	0.3655*	0.3703*		0.5459*	0.7224**
Average earnings	-0.4312*	-0.4885*			-0.5517*					-0.5215*
Stock of business services	-0.4101*	-0.4106*	-0.5692*							-0.4735*
Population change 1991-2001						-0.3458*			-0.3613*	
Job density						0.3800*		-0.4792		
Catholics	0.7391**	0.8872**	0.7785**		0.5959*	0.4940*	0.5056		0.5256*	
Females at home	0.7363**	0.7422**	0.6321*		0.6216*		0.4400*		0.3950*	0.8489**
No. of sick and disabled	0.5939*	0.8263**	0.6985**		0.4916*	0.4325*	0.5644*	-0.4096*	0.4674*	0.8085**
Residents born outside Britain and Republic of Ireland	-0.3928*	-0.4655*	-0.6014*	-0.3425*						-0.4078*
Crime			-0.4414*	-0.4072*						
No. without qualifications	0.5889*	0.6154*	0.6656*	0.4209*	0.3941*		0.3299*	-0.4198*		0.5002*
Degree qualifications	-0.4680*	-0.5692*	-0.5918*	-0.3757*	-0.4479*					-0.5453*
No. studying IT at FE	0.4336*	0.5364*	0.5391*				0.3409*		0.3983	0.5597*
No. studying eng. at FE	-0.3885*						-0.3340*		-0.4329*	
IDB/INI Land and Premises provision										
No. of INI clients		0.5594*	0.5443*							0.3805*
IDB Inward investor visits				-0.3540*						
No. of female small employers								0.3925*		
Hours worked	0.4625*		0.5841*		0.4087*					0.5104*
Self-employed	0.4601*		0.5289*							0.4222*
Private sector wages	-0.6361*	-0.5268*	-0.5337*		-0.4692*					-0.6492*
Location	-0.6958**	-0.4736*	-0.4442*		-0.4366*				-0.3411*	-0.5942*

Table 9.1: *Correlations between indicators of social capital and other variables. Correlation co-efficients:** significant at the 1% level; * significant at the 5% level*

9.3 A MEASURE OF CULTURAL/RELIGIOUS AFFILIATION: THE DISTRIBUTION OF CATHOLICS IN 2001

Gaffikin and Morrisey (2001), Casey (2004) and Cooke *et al* (2005) all contended that social capital in Northern Ireland was a product of the Province's religious/cultural peculiarities.

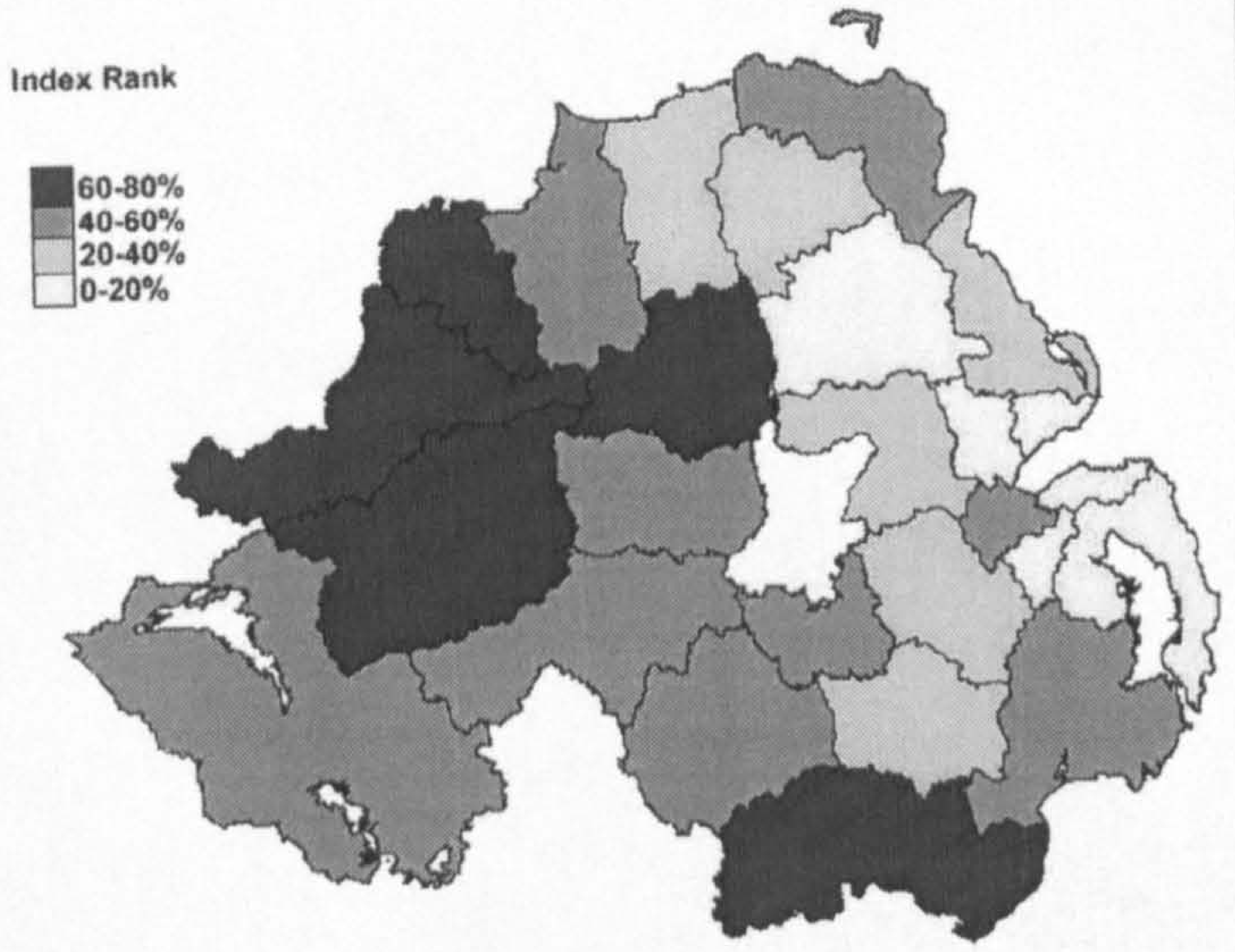
In Northern Ireland a declaration that one was Protestant or Catholic in 2001 was almost certainly more than a statement of religious persuasion. It was also a proxy for political allegiance (the majority of Protestants voting Unionist and the majority of Catholics voting Nationalist), and for a number of other distinct socio-cultural markers: most Protestants and Catholics were educated separately at primary and secondary level, Protestants in State schools, Catholics in Maintained schools; there were two provincial morning newspapers, one whose readership was predominantly Protestant, the other whose readership was predominantly Catholic; particular sports drew their support predominantly from one or other community. So, Gaelic football was the preserve principally of the Catholic community, hockey of the Protestant community.

The Protestant community was made up of a number of distinct denominations, whereas the Catholic community in 2001, in terms of religious affiliation, was effectively homogenous. That homogeneity was reflected in the Gaelic Athletic Association (GAA) which was embedded in the fabric of virtually every Catholic area, with hundreds of financially self-sufficient GAA clubs catering for the participation in Gaelic sport of children and adults of both genders.

In the 2001 census, respondents were given an opportunity to declare their religion. Across Northern Ireland 45.57 per cent of respondents declared themselves allied to a Protestant church, 40.26 per cent said they were Catholic, 0.3 per cent that they were adherents of other religions or philosophies, and 13.88 per cent declared no affinity with organised religions. Protestants and Catholics thus constituted Northern Ireland's two predominant communities. In this thesis "Catholics" has been designated as a proxy for political and cultural affiliation on basis that in Northern Ireland's bi-polar society, given the degree to which the two communities lived separately, by 2001 a relative absence of Catholics implies a predominance of Protestants.

The caveat which has to preface any attempt to link religious/cultural affiliation and social capital is that while the number of groups in an area can be measured, it is not possible to verify whether those groups were single identity groups or whether they had a cross-community membership. Overtly single identity groups, such as the Orange Order and the GAA, have been excluded from this analysis. The best that can be achieved is to identify the extent of co-terminosity between areas with predominantly Catholic or predominantly Protestant populations and the prevalence there of various forms of social capital.

9.3.1The concentration of Catholics in Northern Ireland in 2001



Map 9.1: *Percentage of declared Catholics by District Council Area 2001*
(Source: Derived from the Census of Population 2001)

Newry and Mourne	75.89
Derry	70.89
Omagh	65.10
Strabane	63.09
Magherafelt	61.52
Dungannon	57.35
Down	57.13
Moyle	56.61
Fermanagh	55.52
Cookstown	55.18
Limavady	53.14
Armagh	45.44
Belfast	42.13
Craigavon	41.68
Antrim	35.19
Lisburn	30.07
Ballymoney	29.55
Banbridge	28.60
Coleraine	24.14
Larne	22.25
Ballymena	18.96
Newtownabbey	17.09
Castlereagh	15.83
Ards	10.43
North Down	10.00
Carrickfergus	6.46

Table 9.2: *District Council Areas ranked by the percentage of residents stating their religion as Catholic 2001 (Source: Derived from Census of Population 2001)*

Table 9.2 above shows that in 2001 only 4 of Northern Ireland's 26 District Council Areas had a mix of the two communities in a range between 45 per cent and 55 per cent. In six District Council Areas Catholics constituted less than 20 per cent of the population and in a further five only between 20 per cent and 30 per cent. In five other District Council Areas Protestants constituted between 40 per cent and 25 per cent of the population. Overall, 17 of Northern Ireland's 26 District Council Areas were either predominantly Protestant or predominantly Catholic. Catholics, however, did not constitute as big a majority in any District Council Area as Protestants did in the eight District Council Areas where they made up more than 75 per cent of the population. In three District Council Areas Catholics accounted for just 10 per cent or less of the population; whereas in the most Catholic District Council Area, Newry and Mourne, Protestants constituted 24 per cent of the population. Eleven District Council Areas had Catholic majority populations in the range 53 per cent to 76 per cent. Map 9.1 reveals that, with the exception of Moyle, they all lay in a belt from the north west to the south east of the Province. By contrast those District Council Areas with the largest Protestant populations were concentrated in the east of the Province, particularly in the Belfast commuter belt which extended north along Belfast Lough to Carrickfergus and across North Down to the Ards peninsula. It is notable that while across Northern Ireland as a whole the Protestant population was larger than the Catholic; the Protestant community was concentrated in a smaller territorial zone.

9.4 SOCIAL CAPITAL MEASURE ONE: THE NUMBER OF COMMUNITY GROUPS INVOLVED IN ECONOMIC AND BUSINESS DEVELOPMENT IN 2001

9.4.1 The rationale for adopting community groups involved in economic development as a social capital indicator

Putnam *et al* (1993) and Knack and Keefer (1997) highlighted membership of associations as an important indicator of social capital. They suggested that the denser the membership of associations the higher would be the level of trust and active citizenship in an area. Putnam chose to attribute Northern Italy's economic success relative to Southern Italy in part to the higher density of voluntary associations in the North. Casey (2004) in his study of social capital and economic performance in Britain contended that:

> "*the heart of social capital is membership of associations, which provide face-to-face interaction, nurturing trust and capacities for collective action*" (Casey, 2004, p.106).

In particular he identified economic organisations as:

> "*the institutional linkage between social capital and economic performance*" (Casey, 2004, p.107).

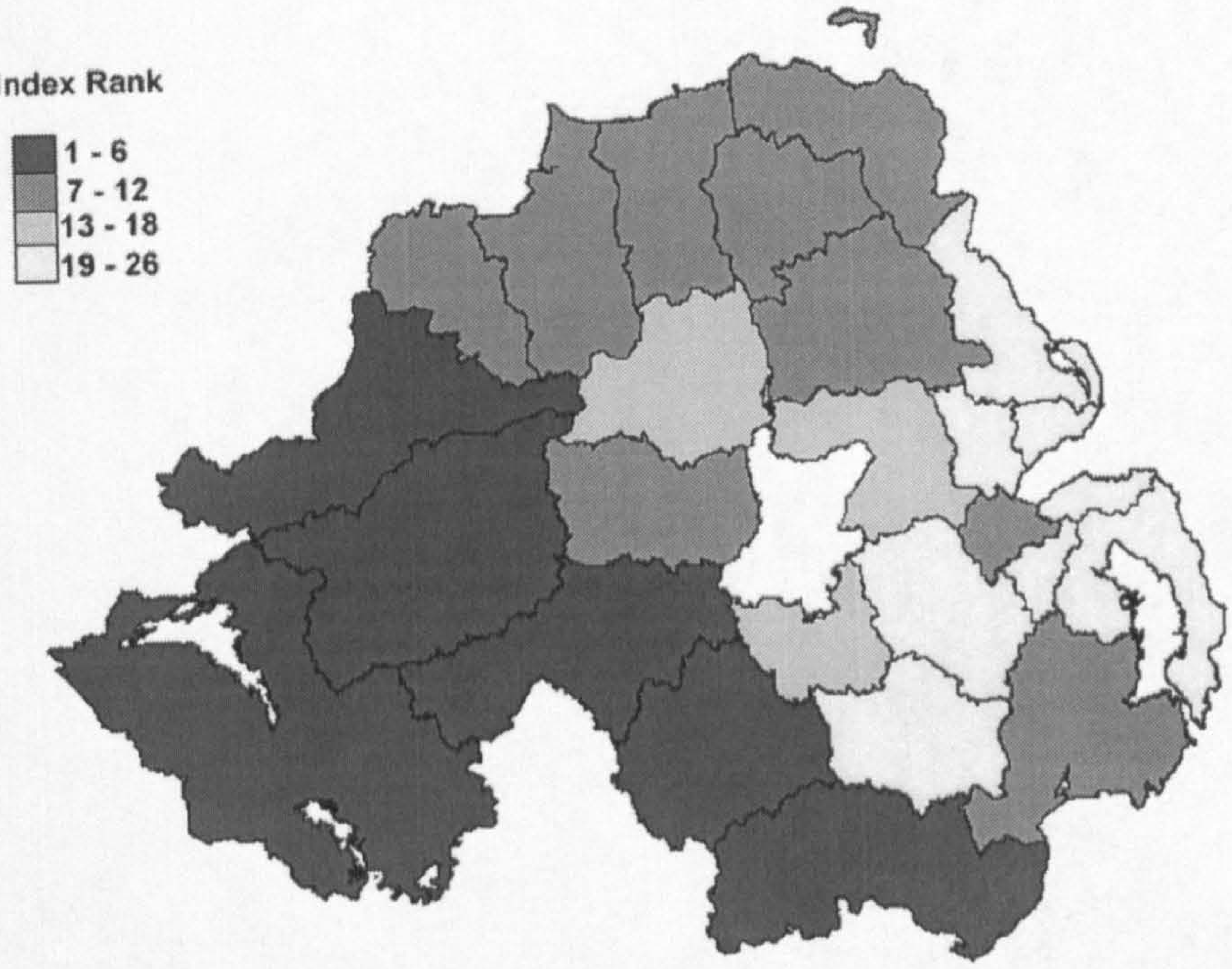
He had found evidence, though limited, of a relationship between civic association and economic performance in Great Britain, although the lack of disaggregated statistics on group membership had, he said, been a problem in pursuing his research.

Fortunately, the Northern Ireland Council for Voluntary Action (NICVA) was able to make available for the purposes of this research a comprehensive database of community and voluntary organisations in Northern Ireland by District Council Area and by principal activity in 2001: a dataset the quality of which simply had not been available to Casey in respect of Great Britain.

In 2001 NICVA had been commissioned by the Department of Social Development in Northern Ireland to undertake a census of community and voluntary organisations in Northern Ireland. Based on direct survey responses and NICVA's own experience in the field, in total 4,724 non-profit-taking community and voluntary groups were registered as active.

This is an important dataset. Given the experience and credibility of NICVA and the relatively small size of Northern Ireland, it is close to a definitive count of the extent of community-led action across Northern Ireland in 2001. The data is broken down by District Council and by category of activity. The number of groups involved in community economic development has been selected for analysis and the figures standardised per 10,000 adult resident population in each District Council Area. This indicator will measure the social capital which was being invested in activities which had been organised by communities to directly contribute to the local economic success of their District Council Areas.

9.4.2The pattern of community group activity in Northern Ireland in 2001



Map 9.2: *The number of active community groups involved in community economic development per 10,000 adult resident population 2001 by District Council Area rank order.*
(Source: Derived from NICVA Survey of Community Groups and Voluntary Organisations)
Ranks 1-6 = Highest number.

Map 9.2 shows that in 2001 the six District Council Areas with the largest number of community groups involved in economic development per 10,000 adult resident population were all located in a contiguous zone of predominantly Catholic District Council Areas stretching from Strabane in the west across the mid-west to Newry and Mourne in the south-east. In rank order those District Council Areas were: Fermanagh, Armagh, Newry and Mourne, Omagh, Strabane, and Dungannon. The areas in which there was least community economic development activity were all predominantly Protestant District Council Areas clustered in the east around Belfast. Those District Council Areas were: Carrickfergus, Newtownabbey, North Down, Lisburn, Larne, Castlereagh, Banbridge and Ards.

9.4.3 The interaction between community groups and other variables

The correlation[9.1] between the number of community groups involved in economic development and other variables appears to confirm that community groups active in economic and business development were more likely to have been concentrated in Catholic areas. There were also more community groups active in economic development in areas with higher than average levels of multiple deprivation, lower than average wages and areas where longer hours were being worked. These were areas likely to have had more people who were self-employed with more females staying at home, more long-term sick and disabled in the population, as well as more people with no educational qualifications and a higher than average percentage of full-time students.

Areas with higher than average numbers of community groups involved in economic development were, in addition, likely to have had higher levels of business stock growth than would have been expected given their sectoral structure and a higher aggregate number of new VAT registrations, 1997-2001.

Credit Union membership, voter participation, the number of applications made by groups to the National Lottery Community Fund, the number of resident students and the number of community businesses all appear to have been higher where there were higher numbers of groups involved in economic development; suggesting that there were high levels of social capital generally in these areas. What may have pre-disposed these areas to have had higher reserves of social capital than others? In Northern Ireland for many reasons Catholic areas were likely also to have been multiply deprived. Were Catholics more likely to engage in community group activity because they were Catholic per se (and may have been culturally better disposed to engaging in collective activity) or might it have been the case that people faced with socio-economic problems, who in Northern Ireland were more likely to have been Catholic, were more likely to have engaged in community group activity, or to be in Credit Unions (something which was strongly correlated with the number of cummunity groups involved in economic

[9.1] Note: The table of Correlations is appended (Appendix Two).

development) because of need rather than ethical inclination? Were they more likely to be motivated to vote because of their desire to change the circumstances which had produced higher levels of relative socio-economic disadvantage in their areas? Similarly, were the correlations between community groups involved in economic development development and business creation and growth indicators attributable to the social capital which community group activity represented? Or were these business growth out-turns attributable to a co-linear variable such as the number of Catholics, lower wages, or longer hours being worked? Correlations are useful because they give rise to such questions – but they cannot provide answers.

9.5 SOCIAL CAPITAL MEASURE TWO: CREDIT UNION MEMBERSHIP IN 2001

9.5.1 The rationale for adopting Credit Union membership as a social capital indicator

Credit Unions have been a focus for the investment of social capital in Northern Ireland since the mid-1960s. In total by 2001 some 25 per cent of Northern Ireland's population (373,382 people) were Credit Union members (either of the Irish League of Credit Unions or the Ulster Federation of Credit Unions). Casey (2004) described this form of civic associationalism as:

"*unquestionably a key element of social capital*". (Casey, 2004, p.107);

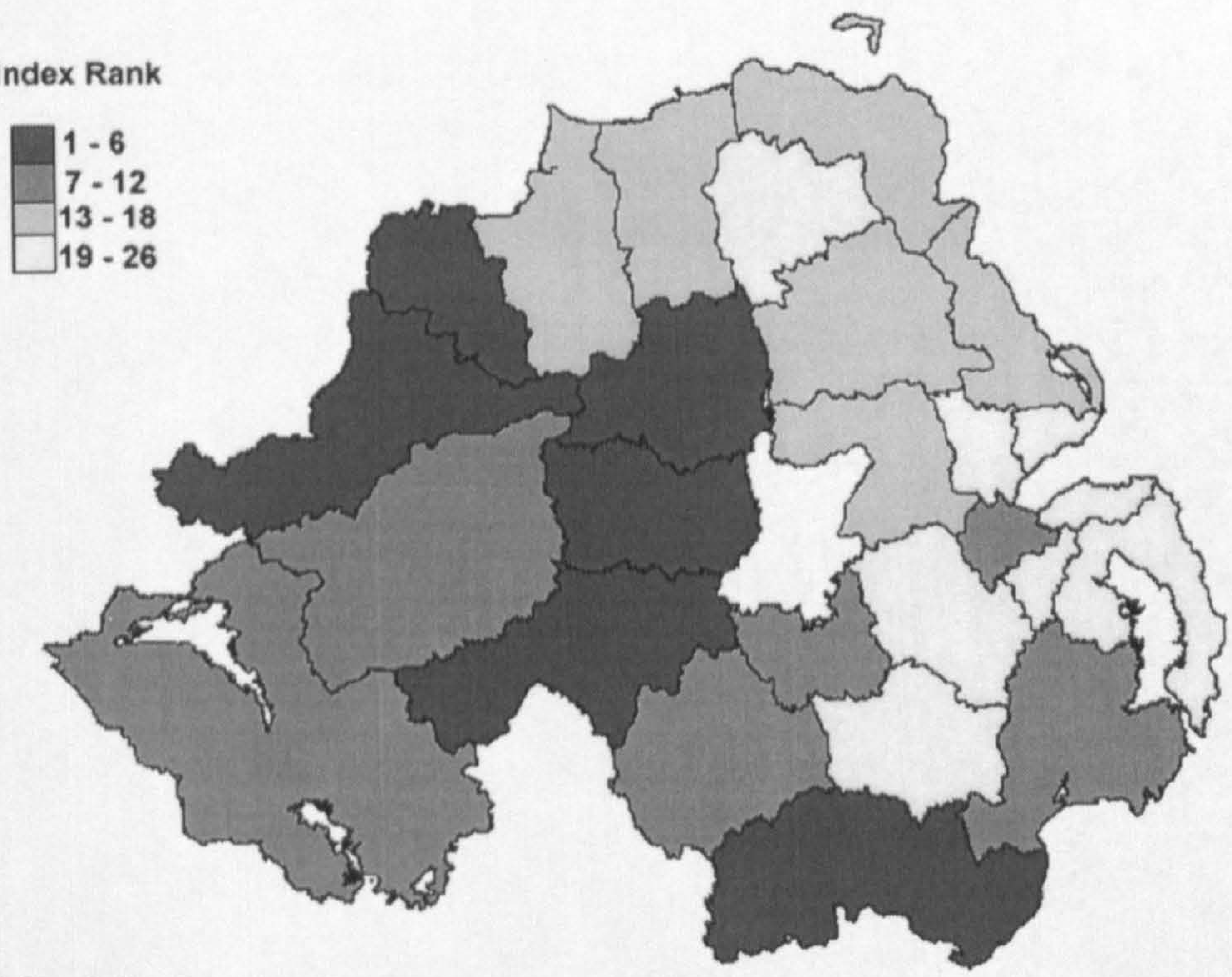
...... while Porter had identified:

"*social embeddedness*" (Porter, 2001, p.998)

...... in the form of effective social networks, which Credit Unions in Northern Ireland undoubtedly represent, as an important economic success factor. Credit Union membership has been chosen as an indicator of social capital because it represents a commitment by people to a co-operative scheme managed on a voluntary basis by fellow-members. That commitment involves most members making their payments through face-to-face visits with their "books" to Credit Union premises. Members share in an annual dividend and benefit from generous death benefits. With other forms of banking readily available in most of Northern Ireland's towns, membership of a Credit Union in 2001 signified that a deliberate decision had been taken by people to commit themselves to the Credit Union model.

When membership of Credit Unions in Northern Ireland per 10,000 adult resident population in 2001 is mapped by District Council Area membership can be seen to be clearly concentrated in the west and south of the Province, suggesting a strong association between the density of Catholics in a District Council Area and the proportion of the population which in 2001 were Credit Union members. The Credit Union movement was a collective initiative which Catholic communities in particular had adopted and developed into a sophisticated community banking network. A Credit Union movement had not by 2001 taken root in the Protestant community to the same degree. An explanation which might be advanced for this is that historically Protestants may have been uncomfortable establishing institutions through which the private financial matters of individuals could be accessed by a group of their peers from within their community.

9.5.2 The pattern of Credit Union membership in Northern Ireland in 2001



Map 9.3: *District Council Areas ranked by Credit Union membership per 10,000 adult resident population, 2001.*
(Source: Derived from DETI Survey of Credit Unions)
Ranks 1-6 = Highest concentrations.

Map 9.3 above confirms that Credit Union membership was weakest in predominantly Protestant District Council Areas: Castlereagh, Newtownabbey, Ards, North Down, Carrickfergus, Ballymoney and Banbridge. The District Council Areas with the highest density of members were Dungannon, Derry, Strabane, Cookstown, Newry and Mourne and Magherafelt. Credit Union membership in Dungannon, for example, equated to almost 63 per cent of the adult resident population and in Magherafelt the figure was almost 48 per cent. Given the proportion of the population in some District Council Areas who were Credit Union members it is clear that participation was not confined to those who were socially and economically disadvantaged or those who endured financial exclusion. Credit Union membership demonstrates that levels of some forms of social capital in some District Council Areas in Northern Ireland were exceptionally high.

9.5.3 The interaction between Credit Union membership and other variables

The correlations recorded in respect of Credit Union membership seem to suggest that areas which had high numbers of Credit Union members were more likely to have been areas with Catholic majority populations which were locationally disadvantaged and which had high levels of deprivation and low average earnings but which also had higher than average numbers of INI client companies. Where Credit Union membership was high this analysis suggests that the number of people with degree level educaton was low, and the numbers of women staying at home and the number of people who were long-term sick and disabled were high. Levels of social capital more generally in these areas were also likely to be high, as measured by voter participation, applications to the Lottery Community Fund, allocations of Peace I funds to community groups, the number of assisted community businesses and the number of resident students.

The pattern of associations between Credit Union membership and individual local economic success outcomes is very similar to that displayed by community groups involved in economic development: i.e. positive correlations with aggregate new business stock (i.e. new VAT registrations 1997-2001) and business growth measures and negative correlations with low deprivation, earnings and white-collar business services.

9.6 SOCIAL CAPITAL MEASURE THREE: CIVIC PARTICIPATION – NUMBERS EXERCISING FRANCHISE IN DISTRICT COUNCIL ELECTIONS 2001 (VOTER PARTICIPATION)

9.6.1 The rationale for adopting voter participation as a social capital indicator

Voter participation, measured by the number of people who exercised their franchise in the 2001 District Council elections, has been adopted as a proxy for civic participation. Civic participation was one of three core elements in Putnam's seminal (1995) conception of social capital (the others being trust and the number and role of associations). Casey (2004) identified voter turnout in elections as the best measure available of civic participation. He said:

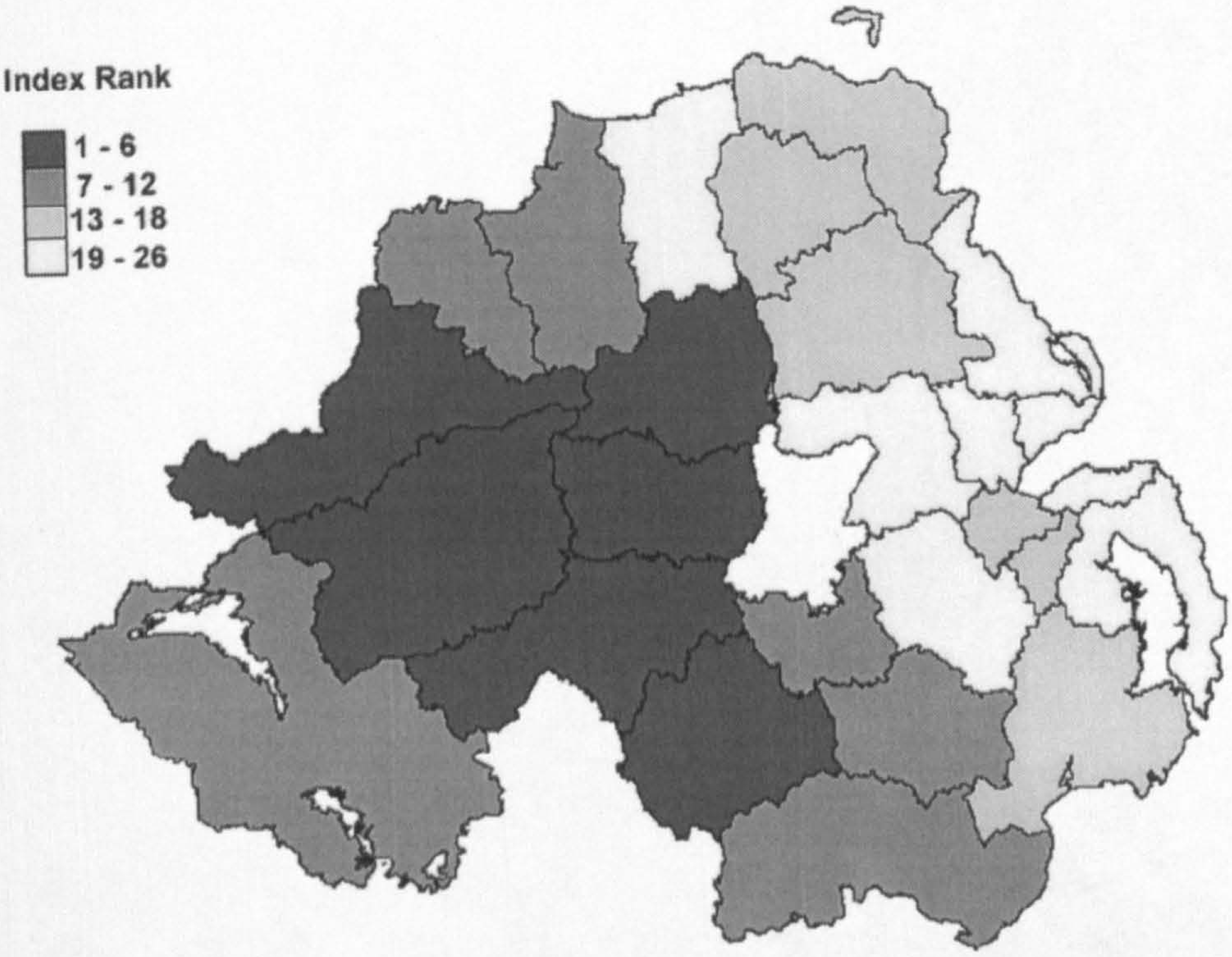
> "*The most obvious measure for civic engagement is voter turnout*" (Casey, 2004, p.104);

...... and he argued that it was important because it indicated:

> "*the extent to which people are interested in and knowledgeable about their community*". (Casey, 2004, p.105).

9.6.2 The pattern of voter participation in Northern Ireland in 2001

Map 9.4 overleaf reveals that voter participation in Northern Ireland's 2001 District Council elections was strongest in the west and south of the Province, particularly in mid-Ulster in District Council Areas West-of-the-Bann which, with the exception of Banbridge, Craigavon and Armagh, were predominantly Catholic. The areas in which voter participation was lowest were concentrated in District Council Areas which housed the suburbs of Greater Belfast and which in effect constituted the Belfast commuter belt, as well as the rest of County Antrim, the Coleraine borough and east County Down (Down and Ards). With the exception of the Moyle and Down Districts, these District Council Areas were all predominantly Protestant.



Map 9.4: *The proportion of people of voting age who exercised their franchise in the 2001 District Council elections, by District Council Area rank order. (Source: Derived from QUB/UU ARK Project) Ranks 1-6 = Highest levels of participation.*

It is not clear whether this apparent Catholic/Protestant difference in voter participation at District Council level reflected attitudes to the political process more generally within Northern Ireland's two communities. While some independent councillors did get elected to Councils across Northern Ireland in 2001, the mainstream Northern Ireland political parties, which apart from the Alliance Party classed themselves as either Nationalist or Unionist, were the predominant force. Although these parties did largely canvas on local issues in District Council elections, they were doing so in the context of wider tensions between and within the two communities, to the extent that performance in local council elections in 2001 was interpreted by the media as having national (i.e. Northern Ireland) implications. The wider political ramifications of a decision to vote or to not vote was most likely to have been a driver in areas where the two communities were vying for political control of Councils as in parts of mid-Ulster. In contrast to that situation there may also have been another phenomenon at work, one which was widely reported in the Northern Ireland press after the 2001 elections: the apparent opting-out of the political process by large numbers of Unionists in so-called middle-class suburban areas in the east, notably in North Down and Ards.

However, all of that notwithstanding, the party manifestos in the 2001 local government elections had focused on local issues. Voting or not was a choice, and the exercise of that choice did reflect a commitment to the political process and to engagement in civic life. While they may not have taken advantage of it, in most areas voters did have a range of political options on the ballot sheet to choose from beyond Nationalism and Unionism, including independents and non-sectarian groups such as the Greens or the Women's Coalition. Given that voters had those choices (as well as the choice not to vote at all), it would be highly presumptious to suggest that they voted the way they did because they felt compelled to do so rather than in the belief that particular local politicians best represented their interests at local level.

9.6.3 The interaction between voter participation and other variables

As well as being strongly correlated with other social capital measures, voter participation was positively correlated with the proportion of Catholics living in a District Council Area and with other variables which appear to have been co-linear with Catholics: the number of females staying at home, the number of sick and disabled residents, the number of hours worked and the number of self-employed. The negative correlations with private sector wages, low deprivation and residents born overseas are also consistent with the correlation with Catholics; as are the negative correlations with three other variables which are themselves correlated: the number of people born outside the UK and Ireland, locational advantage and crime.

Voter participation, like Credit Union membership and the number of community groups involved in economic development, was positively correlated, (in the case of voter participation at the 1 per cent significance level) with the business stock change competitiveness differential and the aggregate number of new VAT registrations between 1997 and 2001, both of which were also strongly correlated with each other. This pattern is consistent with positive correlations, at the 5 per cent significance level, with the number of INI supported business start-ups and the number of INI clients which were themselves positively correlated with the aggregate number of VAT registrations between 1997 and 2001. Voter participation was, like other social capital measures, negatively correlated with low deprivation and business services stock.

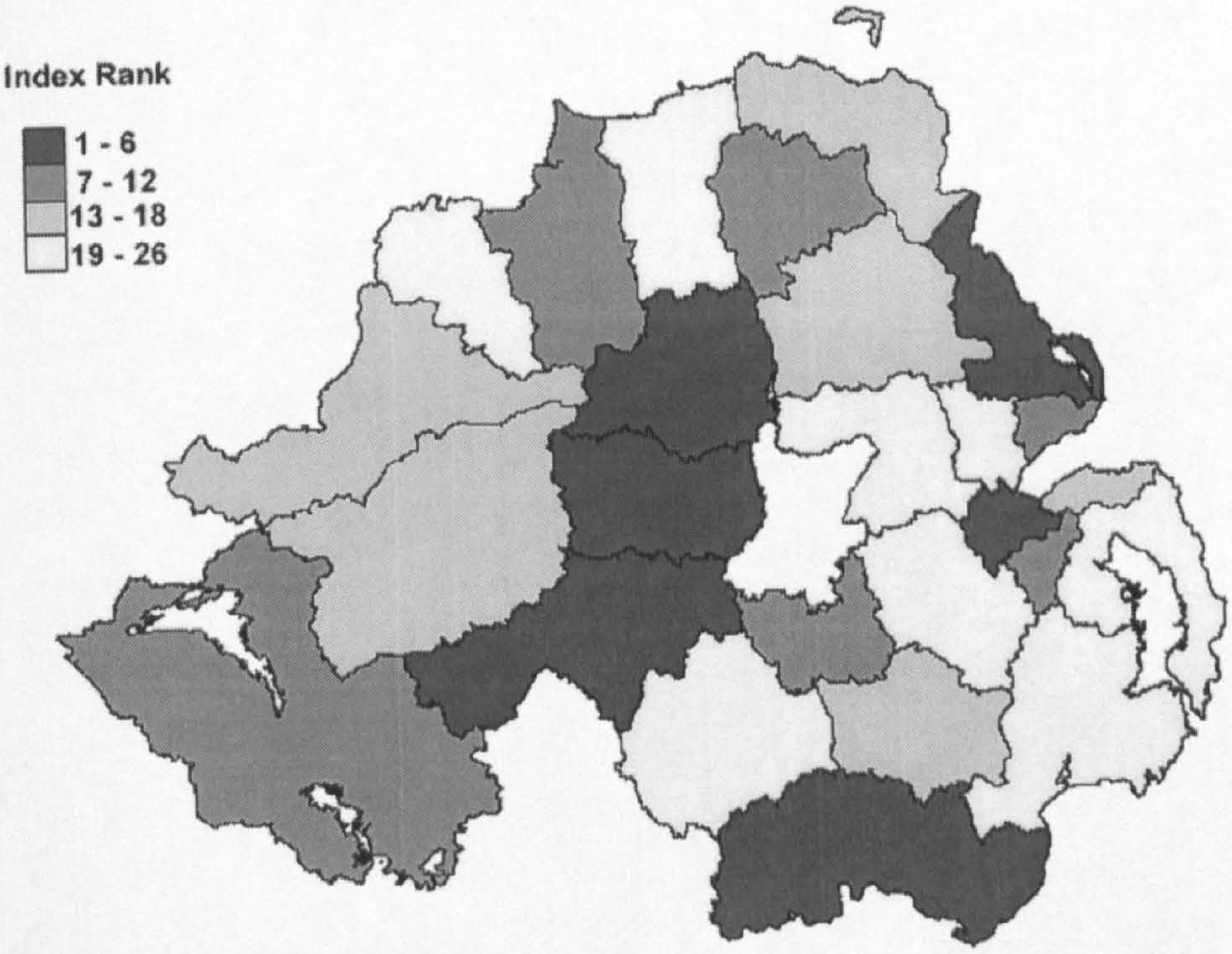
The negative correlation with the number of people with degrees when juxtaposed with positive correlations with the number of people studying IT at Further Education Colleges and with the number without qualifications presents a picture of areas where, while educational attainment at all levels in 2001 appears to have been below average, more people than average were developing IT skills (for which in 2001 there was demand in the labour market); which would seem to be consistent with areas where there was considerable business activity. The stock of business services, a sector which might have been expected to generate a demand for IT skills, however, was negatively associated with voter participation, which could indicate that the numbers studying IT at FE College may not necessarily have been a function of the size of the local business services sector.

9.7 SOCIAL CAPITAL MEASURE FOUR: LEA WORKSPACE PROVISION 2001

9.7.1 The rationale for adopting LEA workspace as a social capital indicator

LEA (Local Enterprise Agnecy) workspace provision was adopted as a social capital variable because LEAs in 2001 were managed by Boards of voluntary directors and were non-profit-taking companies limited by guarantee. While LEAs delivered mainstream Government programmes and were important agents of local economic development policy, they were at liberty to do other things and most did not confine themselves to delivering business development programmes for LEDU or Invest Northern Ireland. LEAs were not core-funded by the State. They had to make bids to Government for programme funds and they were only paid when a unit of contracted output was achieved. The scale of LEA activity manifest in the scale of LEA workspace provision can be attributed, to a significant degree, to the dynamism of the LEA Board, in effect to its stock of social capital.

9.7.2 The pattern of LEA workspace provision in Northern Ireland in 2001



Map 9.5: *LEA workspace provision in square footage per 10,000 adult resident population, 2001, by District Council Area rank order.*
(Source: Derived from figures provided by Enterprise Northern Ireland, the network of Local Enterprise Agencies)
Ranks 1-6 = Largest workspace provision

Map 9.5 shows that LEA workspace measured in square footage per 10,000 adult population was highest in Larne, Newry and Mourne, Belfast, Cookstown, Magherafelt and Dungannon; and lowest in Derry, Newtownabbey, Armagh, Lisburn, Coleraine, Ards, Down and Antrim. On the basis of this territorial pattern there does not appear to have been a strong association with cultural/religious affiliation or the extent to which a District Council was rural or urban, although in respect of the highest ranked areas four of the top six were located in the predominantly Catholic and rural mid-west and south of the Province.

9.7.3 The interaction between LEA workspace and other variables

The only local economic success outcome with which the provision of LEA workspace was correlated, if weakly, was low deprivation. It was also only correlated with one other measure of social capital, applications to the Lottery (also at the 5% significance level). It was negatively correlated, at the 5% significance level, with the number of residents born outside Britain and Ireland, crime, and the percentage of people holding degree-level qualifications. A positive correlation with the number of people with no qualifications is consistent with the negative correlation with the number of people holding degree-level qualifications. There was a weak positive correlation with the number of INI supported business starts and a weak negative correlation also with the number of inward investor visits.

Overall, investments in LEA workspace do not seem to have displayed any obvious territorial pattern. Given that the justification for the huge investment by Government from the 1980s in community-owned industrial property across Northern Ireland was to contribute to economic development, the lack of any strong association with local economic success outcomes in 2001 could be represented, from a policy evaluation perspective, as a disappointment. Unfortunately this snapshot analysis cannot shed any light on what might have happened without this investment in LEA workspace: how much worse might things have been, for example, in less successful areas, or how less well might the more successful local economies have performed?

9.8 SOCIAL CAPITAL MEASURE FIVE: COMMUNITY BUSINESSES ASSISTED 2001

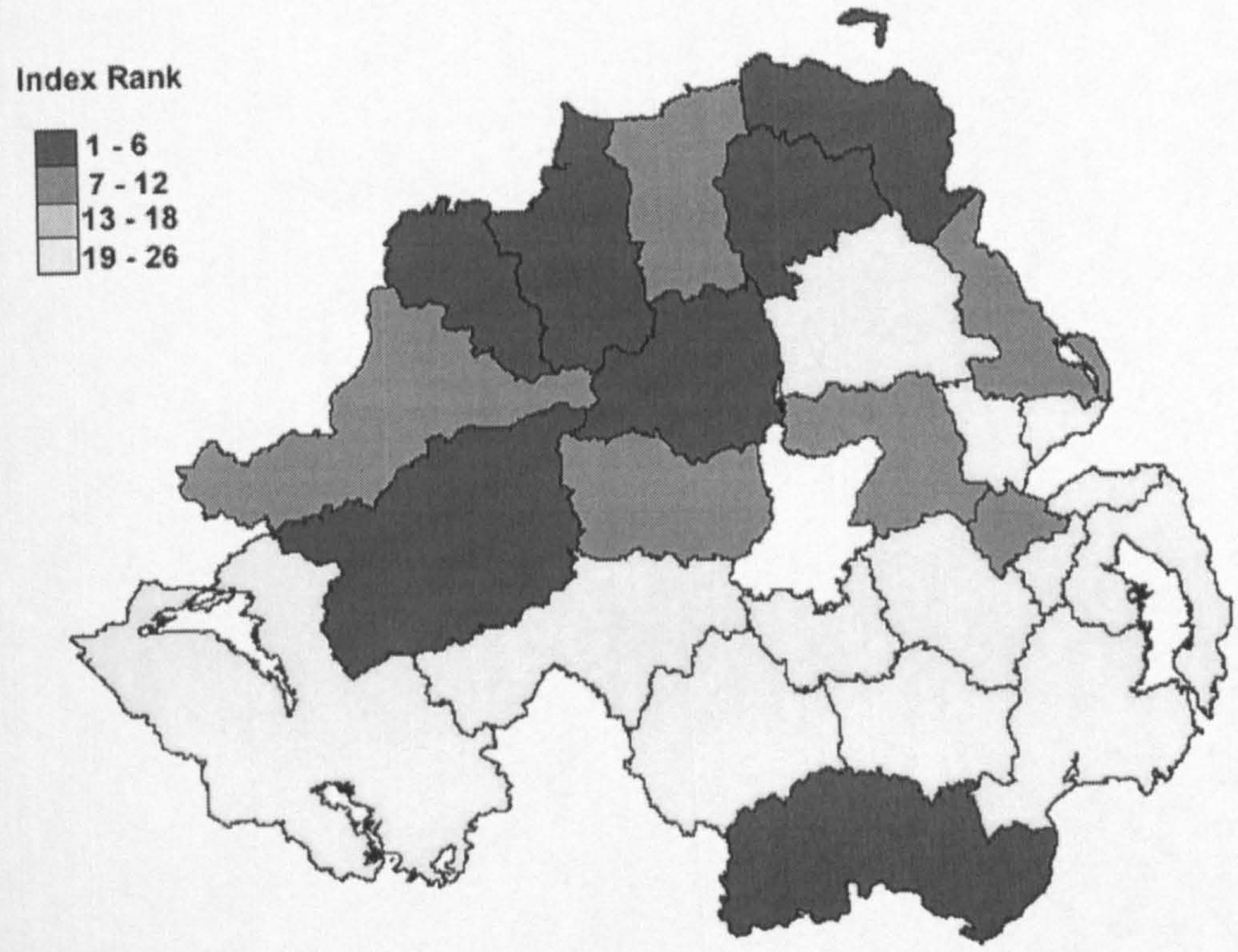
9.8.1 The rationale for adopting community businesses assisted in 2001 as a social capital indicator

Bridge *et al* (2003) described community businesses as:

> "*business ventures that not only return to the community any surplus they create but also benefit the community in other ways, such as by working on projects that enhance the environment or by developing skills of community members in their workforces*" (Bridge *et al*, 2003, p.162).

The "Community Businesses" recorded in this dataset are organisations which had registered with Local Enterprise Agencies to receive support to develop income-generating but non-profit-taking community support initiatives. All were guided by unpaid Boards of voluntary directors who had committed themselves in their memoranda and articles of association not to take any payment for their services and to re-cycle future profits either into the Community Businesses themselves or other community development activities. The Community Business Start-up Programme was the principal vehicle by which Government in Northern Ireland directly supported the Social Economy in Northern Ireland. The Programme offered a package of mentoring support and financial assistance for newly established community businesses. It was delivered on behalf of LEDU/INI across all of Northern Ireland by five of the Province's community-led Local Enterprise Agencies (themselves Social Enterprises), all of which had been appointed because they had the capacity and experience to meet the demand for support from the Social Economy sector in their areas. To be supported by the programme "Community Businesses" had to demonstrate that they had a not-for-profit social purpose and were, therefore, a focus for the investment of social capital. Those Community Businesses were either start-up ventures or in their first year of trading. They had to show that they would be viable as self-financing trading businesses after two years. The number of such Community Businesses in receipt of Government-sponsored support from Local Enterprise Agencies is a useful measure of the level of Social Enterprise activity across Northern Ireland.

9.8.2 The pattern of community business activity in Northern Ireland in 2001



Map 9.6: *Community businesses assisted by LEAs per 10,000 adult resident population by District Council Area rank order, 2001.*
(Source: Derived from figures supplied by Enterprise Northern Ireland)
Ranks 1-6 = Highest number of community businesses.

Map 9.6 shows that the number of cummunity businesses assisted by the Local Enterprise Agency (LEA) network per 10,000 adult resident population was highest in Moyle, Magherafelt, Omagh, Newry and Mourne, Derry, Ballymoney and Limavady; with the exception of Ballymoney these were all predominantly Catholic areas, and aside from Newry and Mourne they were all areas in the north of the region. There were 12 District Council Areas where there were very few LEA-supported community businesses. Those areas included the suburbs of Greater Belfast, as well as Craigavon, and a predominantly rural belt running across the Province from Ards in the east to Fermanagh in the west. Of these twelve areas nine had predominantly Protestant populations. Overall, LEA-assisted community businesses appear to have been concentrated more in predominantly Catholic areas than Protestant.

9.8.3 The interaction between community businesses assisted and other variables

There were positive correlations between the number of Community Businesses assisted by LEAs and two local economic success outcomes (the business stock change competitiveness differential and the aggregate number of new VAT registrations between 1997 and 2001). These were offset, however, by inverse correlations with two other local economic success outcomes, low deprivation and the stock of business services. A Survey of Social Enterprises Across the UK which had been prepared for the Small Business Service in July 2005 by IFF Research Ltd identified a strong association between the distribution of social enterprises and multiple deprivation. It found that 42 per cent of Northern Ireland's Social Enterprises were based in the region's most deprived wards; further confirmation it would seem, that social capital was strong in Northern Ireland's deprived communities.

In 2001, the number of Community Businesses assisted was also positively correlated, at the 5% significance level, with four of the other eight measures of social capital along with the number of Catholics, the percentage of females staying at home and the percentage of sick and disabled residents. A positive correlation with the number of people without qualifications is consistent with a negative correlation with the number of people holding degree level qualifications. Community Businesses were also positively correlated with the number of hours worked and, consistent with that, negatively correlated with the level of private sector wages. Finally areas with higher than average numbers of assisted Community Businesses were likely not to have been locationally advantaged.

It is notable that the density of assisted Community Businesses was not correlated with the scale of LEA workspace. If workspace assets were a proxy for the level of LEA activity in each District Council Area, then the implication seems to be that the distribution of Community Businesses in 2001 was a function of factors which encouraged the devleopment of social capital rather than of the level of

LEA support which was available. It is not possible to clarify within the parameters of this analysis whether this in fact was the case, nor is it possible to determine whether the association between the number of Community Businesses and measures of business creation and expansion was symptomatic of a culture of entrepreneurship which embraced the Social Economy or whether and to what extent it may have been attributable to co-linearity with "Catholics" or other variables.

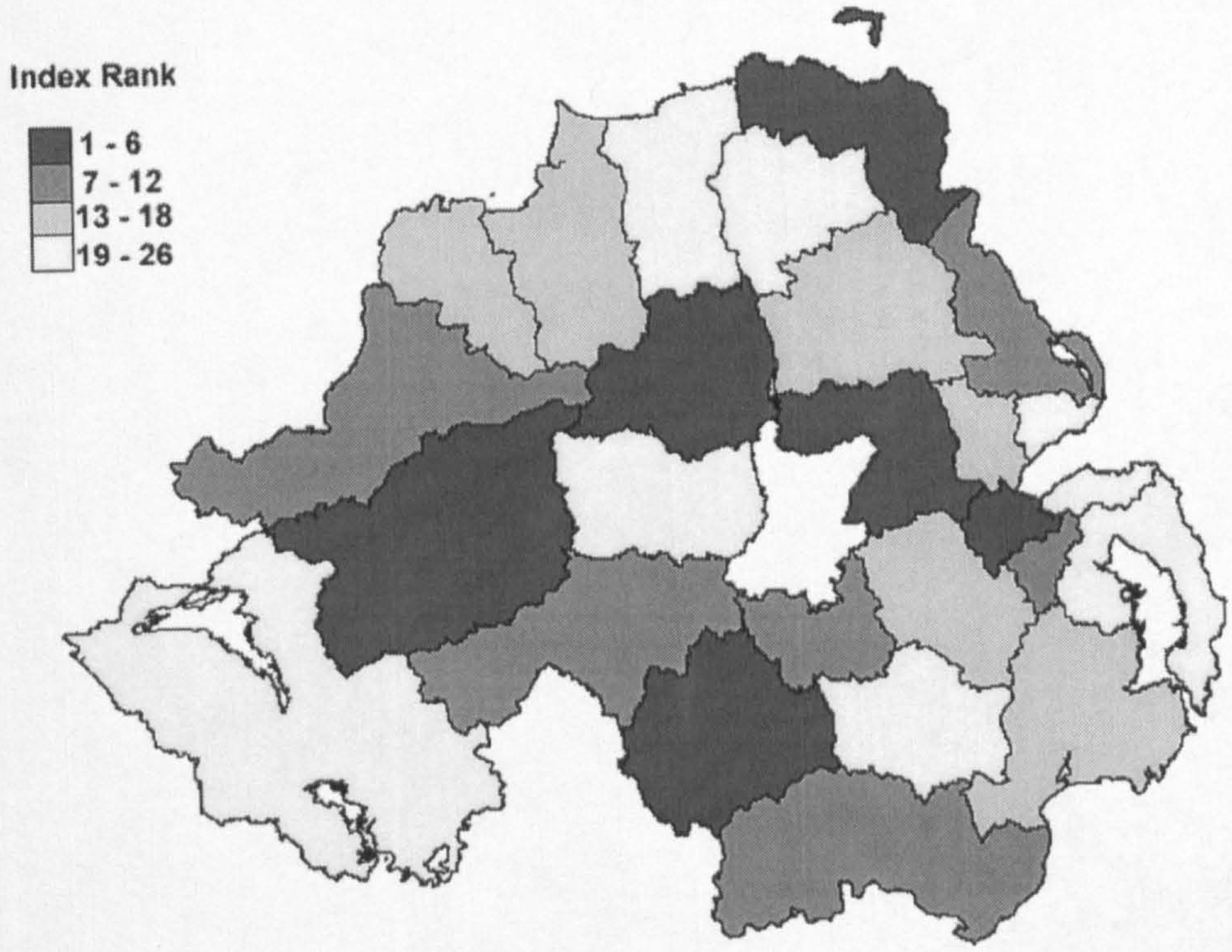
9.9 SOCIAL CAPITAL MEASURE SIX: PEACE I GRANTS 1996-2001

9.9.1 The rationale for adopting Peace I grants as a social capital indicator

Between 1996 and 2001 funds were allocated to community development projects and initiatives in Northern Ireland from the EU Special Support Programme for Peace and Reconciliation by Central Government, a group of so-called Intermediary Funding Bodies (IFBs), and 26 District Council Area-based "District Partnerships". This programme was commonly referred to as "Peace I".

Aggregate data on the investment of Peace I monies in Northern Ireland is held by the Special EU Programmes Body (SEUPB), the institution established under the Belfast Agreement in 1998 to manage the transition from Peace I to Peace II and the subsequent co-ordination of the Peace II programme, not just in Northern Ireland but in the border counties of the Irish Republic. All projects funded under the Peace I programme were entered onto a central database managed by the SEUPB. The result is a very useful source of data. The SEUPB database records all allocations of Peace I funds to the community/voluntary sector, by District Council Area, from all administering bodies. Of the £322m of Peace I funds invested in Northern Ireland's District Council Areas during this period, £34m (10.5 per cent) was allocated directly to community groups. The distribution of these funding allocations has been adopted as a measure because, given the intense competition for funds at this time, the acquisition of Peace I grants would have reflected the strength, competence and dynamism of the community/voluntary sector in each District Council Area. Groups which secured funds would have had to be highly motivated in order to negotiate the protracted application and selection process before they ultimately secured grant aid. To secure funds projects also had to demonstrate that in some way they were going to bridge barriers between the two communities. Approved projects are thus also a useful proxy measure for the distribution of "bridging social capital" in Northern Ireland.

9.9.2 The pattern of Peace I grant allocations to community groups in Northern Ireland 1996-2001



Map 9.7: *Total grants from the Peace I programme to community/voluntary sector groups per 10,000 adult resident population by District Council area rank order, 1996-2001.*
(Source: Derived from figures supplied by the Special EU Programmes Body)
Ranks 1-6 = Most grants.

Map 9.7 shows that the total number of grants from the Peace I programme secured by community/voluntary sector groups between 1996 and 2001 per 10,000 adult resident population was highest in Moyle, Magherafelt, Belfast, Antrim, Armagh and Omagh. The number of grants secured was lowest in Carrickfergus, Cookstown, Coleraine, Banbridge, North Down, Ards, Ballymoney and Fermanagh. More of the areas which ranked highest were Catholic and more of those which ranked lowest were Protestant, although the pattern overall is less definitive, possibly because there had been an attempt by those responsible for allocating Peace I funds to ensure a balanced inter-community distribution.

9.9.3 The interaction between Peace I grants 1996-2001 and other variables

Like other social capital indicators the Peace I grants measure records a mix of positive and inverse correlations with the local economic success outcomes. Inverse correlations with low deprivation and population change were offset by positive correlations with job density and the aggregate number of new VAT registrations between 1997 and 2001; though none of these correlations was very strong.

There were positive correlations at the 5% significance level with three other social capital indicators each of which was in some way a measure of the level of community group and Social Enterprise activity in a District Council Area (community groups involved in economic development, the number of assisted Community Businesses and applications to the Lottery), perhaps not surprising given that it was this activity which the Peace I programme was primarily set up to support. Like all but two of the other social capital indicators there were positive correlations with the number of Catholics and with the number of sick and disabled residents. This set of associations seems to suggest that the allocation of Peace I grants to community/voluntary sector projects was a function of the level of activity in the community/voluntary sector, and that this was most likely to have been greatest in the Catholic areas which were also deprived and in which there was a higher than average level of business creation and expansion; though the correlations on which these suggestions are based were relatively weak.

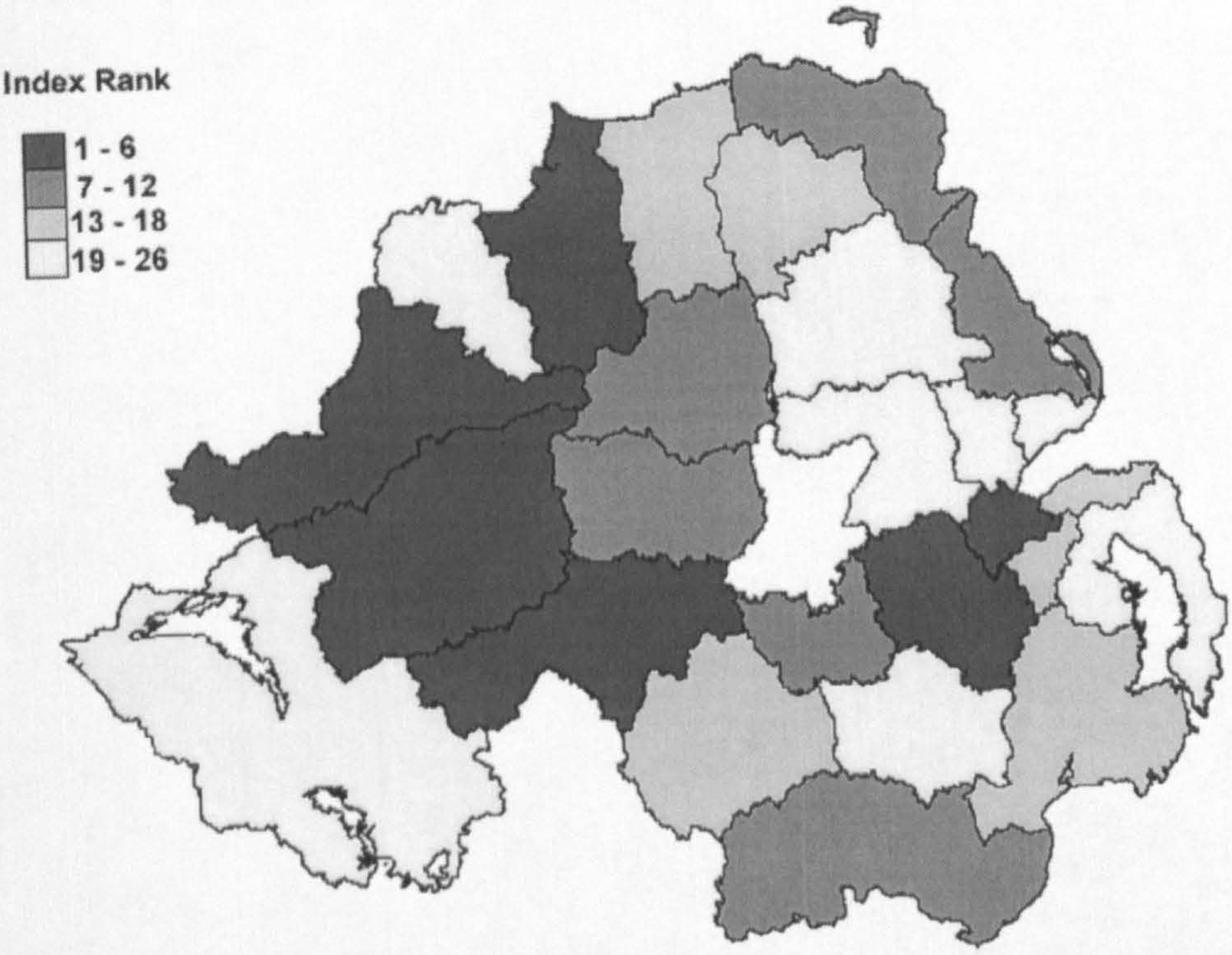
9.10 SOCIAL CAPITAL MEASURE SEVEN: APPLICATIONS TO LOTTERY COMMUNITY FUND 1995-2001

9.10.1 The rationale for adopting applications to the National Lottery Community Fund 1995-2001 as a social capital indicator

Between 1995 and 2001 the National Lottery Community Fund unit based in Belfast publicly advertised Northern Ireland-wide for applications from the community/voluntary sector. The availability of Lottery funding was also promoted through a number of intermediary organisations across the Province whose remit it was to support community group activity. During this period the number of applications made, the size of grants sought and the number and size of the grant packages awarded was recorded by District Council Area. At Northern Ireland level only 30 per cent of the applications submitted for funding were successful in securing grant aid and only 20 per cent of the aid requested could actually be awarded such was the competition for funds.

For the purposes of this research the number of applications made was adopted as a measure of the dynamism of the community/voluntary sectors in each District Council area, the rationale being that the ultimate success of an application was less important to this research than the act of making the application and what that indicated about the ambition and competence of the community/voluntary sector in each District Council Area. The fact that two-thirds of applications were ultimately unsuccessful was, according to the Community Fund, more a function of the 4:1 overbid against available funds than it was attributable to the poor quality of the applications submitted against the scheme criteria. Making an application for financial assistance from the Community Fund required a significant degree of organisation within a group, from intelligence-gathering in respect of funding opportunities, to acquiring an application form, through to completing a complex document which required the sign-off of office bearers within the group.

9.10.2 The pattern of applications to the Lottery Community Fund 1995-2001



Map 9.8: *Total applications made by community groups to the National Lottery Community Fund per 10,000 adult resident population by District Council Area rank order, 1995-2001.*
(Source: Derived from figures supplied by the National Lottery)
Ranks 1-6 = Most applications made.

Map 9.8 shows that the total number of applications made by community groups for funding from the National Lottery Community Fund between 1995 and 2001 per 10,000 adult resident population was highest in Belfast followed by Lisburn, Omagh, Limavady, Dungannon and Strabane. The number of applications was lowest in Carrickfergus, Banbridge, Newtownabbey, Ards, Fermanagh, Ballymena, Derry and Antrim. High levels of activity stand out in two zones, in Belfast/Lisburn and in the west (Omagh, Limavady, Dungannon and Strabane). The low level of activity in south Antrim is also notable (i.e. Newtownabbey, Carrickfergus, Ballymena, and Antrim). However, District Council Areas side by side with a similar profile in respect of deprivation and cultural/religious affiliation recorded very different scores (Strabane and Derry; Banbridge and Lisburn, for example). Why this would have been, whether it was that groups in these areas were more motivated; whether it was that groups were engaged in the type of activities which were eligible for Lottery funding only in some areas; or whether the Lottery Fund may have had a higher profile in some areas than in others – these are questions which cannot be answered by this research.

9.10.3 The interaction between Lottery Community Fund applications and other variables

The total number of applications made by community/voluntary organisations to the National Lottery Community Fund between 1995 and 2001 per 10,000 adult resident population in each District Council Area was negatively correlated with low deprivation and positively correlated with the aggregate number of new VAT registrations between 1997 and 2001. New VAT registrations between 1997 and 2001 were higher in more deprived District Council Areas so the juxtaposition of these correlations is not surprising. However, as with other social capital indicators, a positive correlation with one success outcome appears to have been offset by a negative correlation with another.

The number of applications to the Lottery was positively correlated with six of the eight other social capital indicators; and correlations with other variables appear to have been in line with those recorded by all but two of the other social capital indicators: notably positive correlations with the number of Catholics, the number of females at home and the number of sick and disabled residents, and a negative correlation with the number of people without qualifications. The relatively weak correlations in respect of the number of people studying IT at FE College (positive) and the number of people studying engineering at FE College (negative) were also a feature of two of the other social capital indicators. This may be attributable to co-linearity or it is possible that in areas where the number of people studying IT was high for some reason the number studying engineering was low. Both variables were themselves inversely correlated.

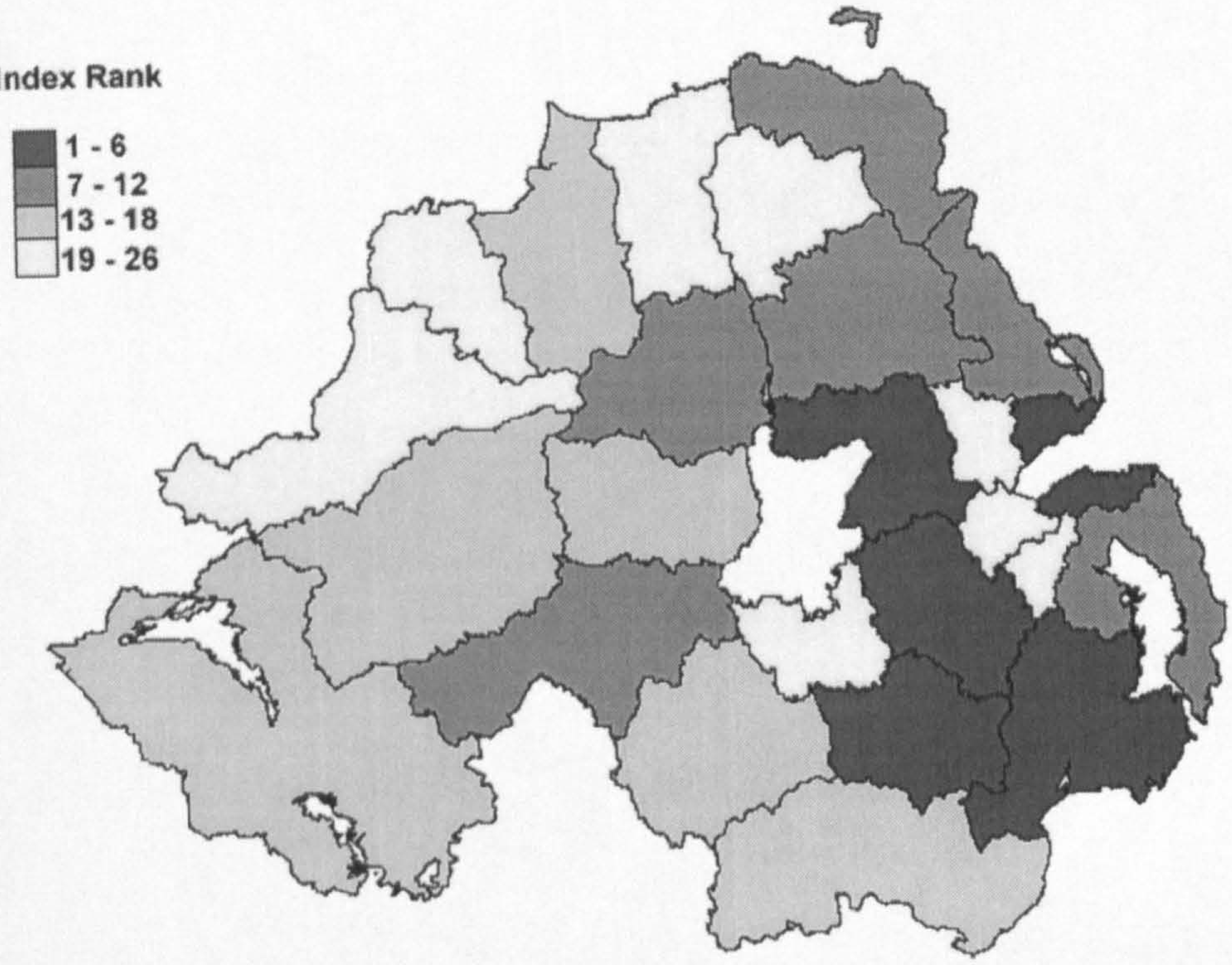
9.11 SOCIAL CAPITAL MEASURE EIGHT: EDUCATIONAL ATTAINMENT (5+ GCSEs) IN 2001

9.11.1 The rationale for adopting GCSE attainment in 2001 as a social capital indicator

Based on assertions in the literature (e.g. Narayan and Pritchett, 2000) that educational attainment is a product of social capital and that communities in which there is a commitment to education will be economically successful, a measure of educational attainment has been adopted as a social capital indicator. It is acknowledged, however, that the extent to which educational attainment is a function of social capital rather than of the educational facilities which are available and the capacity of people to access those facilities, may be open to question.

The 2001 census recorded data on various levels of educational attainment, one of which was the percentage of adults aged 16-74 who had indicated that they had 5 or more GCSEs at grades A-C. 5 GCSEs had been adopted by the Department of Education in Northern Ireland as an indicator of a good basic standard of education, equivalent to a GNVQ intermediate qualification, an NVQ level 2 or one A-level. Most schools in Northern Ireland required at least 5+ GCSEs at grades A-C as an entry requirement for the sitting of A-levels, and 5+ GCSEs was in 2001 the minimum entry requirement for many FE courses and most non-manual jobs in Northern Ireland. As well as being a measure of a community's commitment to the educational process, the number of people holding a minimum of 5+ GCSEs at grades A-C (or equivalent educational qualification) is also an indicator of the repository of knowledge and analytical skills which there would have been within the population of a District Council Area.

9.11.2 The pattern of GCSE attainment in Northern Ireland in 2001



Map 9.9: *The percentage of people aged 16-74 holding 5+ GCSEs at grades A-C, 2001, by District Council Area rank order.*
(Source: Derived from the Census of Population 2001)
Ranks 1-6 = Highest number of people with 5+ GCSEs.

Map 9.9 reveals that the number of people holding 5+ GCSEs or equivalent in 2001 was highest in six District Council Areas all of which constituted part of Belfast's commuter belt. These District Council Areas were Down, Banbridge, Lisburn and Antrim (which formed a contiguous zone) and North Down and Carrickfergus. With the exception of Down, these were areas with low levels of deprivation which were also predominantly Protestant. Those areas with the lowest levels of educational attainment were Derry, Strabane, Coleraine, Ballymoney, Belfast, Newtownabbey, Castlereagh, and Craigavon. While Belfast, Castlereagh, Newtownabbey, Derry and Craigavon were predominantly urban areas, Strabane, Coleraine and Ballymoney were predominantly rural with a mid-sized town (with a population in the range 15,000 – 20,000) as their administrative and commercial centre. Relatively low levels of educational attainment did thus not appear to be a specifically urban or rural phenomenon. Moreover, while high levels of educational attainment were a feature of some

Protestant areas with low levels of deprivation close to Belfast, nevertheless Newtownabbey and Castlereagh, both Protestant areas close to Belfast with low deprivation, were at the other end of the scale. While it remains to be tested, on the basis of their territorial distribution, educational attainment scores appear to have been neutral in respect of cultural/religious affiliation and location; although there may have been a stronger association with low deprivation, an economic success outcome, in that no area which had a high level of deprivation scored well in respect of educational attainment. Areas in which educational attainment was highest in Northern Ireland in 2001 appear to have been areas with low levels of deprivation; whereas levels of other social capital measures were generally higher where deprivation levels were also high.

That this measure of educational attainment did not display the same distribution as other social capital indicators may seem to challenge Narayan and Pritchett (2000) and to suggest that the links observed between indicators of social capital and education in the US by Iyer *et al* (2005) did not exist in Northern Ireland. It may have been that in Northern Ireland, educational attainment, rather than being a social capital input, was an economic success outcome; at its most concentrated in the Greater Belfast commuter belt. Alternatively, it may also have been the case that in Northern Ireland the relationship between social capital and education was more complicated than elsewhere. It is possible, for example, that people in less deprived areas who were socially and economically advantaged had chosen to invest their social capital in education rather than in Credit Unions, for example. Social capital may not always have been the product of deprived communities in which there were large numbers of Catholics.

These questions highlight the problem which can arise in defining social capital. Nevertheless, a judgment has been made in this thesis that it will add value to the analysis to retain educational attainment as a putative social capital indicator; in recognition of the possibility that in the context of Northern Ireland's divided society the orthodoxy in the literature that manifestations of social capital would be linked may not have applied.

9.11.3 The interaction between GCSE attainment and other variables

The absence of a correlation between educational attainment and religious/cultural affiliation from a Northern Ireland policy perspective seems to be a significant finding insofar as it may suggest that by 2001 there was equality of educational outcome for people in Northern Ireland irrespective of whether they were living in Protestant or Catholic areas. The finding appears to be accounted for by the strong performance of predominantly Catholic Down District and the poor performance of predominantly Protestant Castlereagh, Newtownabbey, Ballymoney and Coleraine. Those poor performing Protestant areas seem to have offset the strong performances of Protestant areas in the Greater Belfast commuter belt. More important than religious/cultural affiliation may have been socio-economic status: There was a positive correlation (at the 5% significance level) between this measure of educational attainment and low deprivation.

An inverse association between the number of people with 5+ GCSEs and the number without qualifications is to have been expected. What is surprising, however, is that the correlation is relatively weak. This might be attributable, although this is highly speculative, to Northern Ireland's selective education system which generated high levels of educational attainment for some alongside poor out-turns for others within the same area (socio-economic status being the differentiating factor).

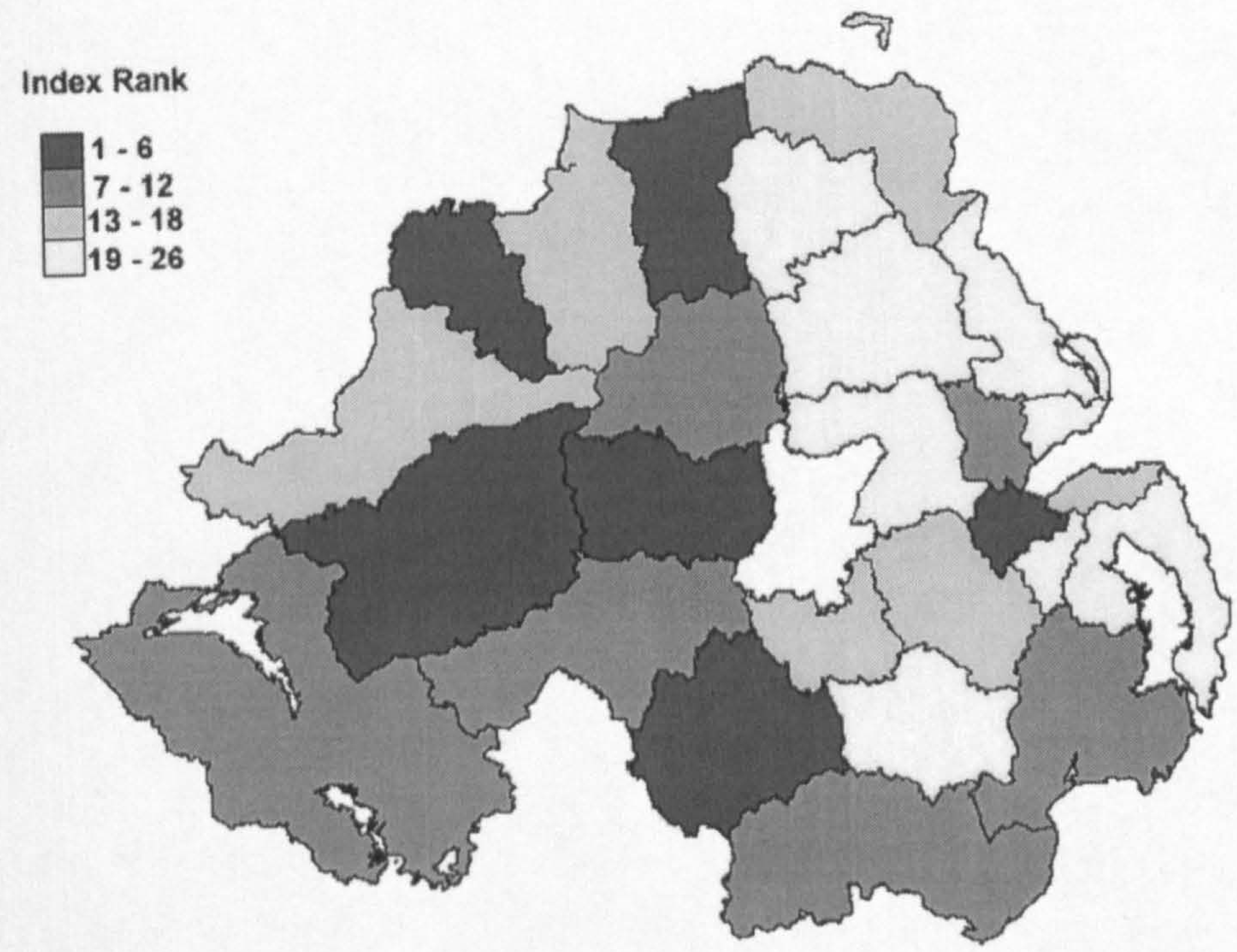
An inverse correlation between GCSE attainment and the percentage of people who were long-term sick and disabled in each District Council Area might be explained by the exclusion from mainstream education of this excluded group. Long-term illness and disability were also associated with deprivation and deprivation appears to have dampened educational attainment. This association would be consistent with the conclusion of Robson *et al* (1994) that low educational attainment, high multiple deprivation and health deprivation were linked in Northern Ireland.

9.12 SOCIAL CAPITAL MEASURE NINE: PERCENTAGE OF FULL-TIME STUDENTS 2001

9.12.1 The rationale for adopting full-time students in 2001 as a social capital indicator

The percentage of full-time students resident in each District Council Area has been adopted as a social capital indicator on the grounds that it reflects the commitment to further and higher education of its population. Full-time students rely on the support of families, the support of Government (through investment in facilities) and the goodwill of host communities. There is a counter-argument that participation in further and higher education is simply a measure of the level of personal ambition in a community. A judgment has been made, however, that this is not a reason to re-clasify the full-time students indicator. Personal ambition and social capital do not have to be mutually exclusive. There is a compelling argument to be made that the more supportive a social/community setting the more people would have activated their ambition and committed themselves to further and higher education. Outside the four District Council Areas which hosted universities, most resident students in 2001 were living at home. It is reasonable to speculate that those students participated in further and higher education with the support and encouragement of their families and the communities of which those families were a part.

9.12.2 The pattern for resident students in Northern Ireland in 2001



Map 9.10: *Percentage of people aged 16-74 who were full-time students in 2001, by District Council Area rank order.*
(Source: Derived from the Census of Population 2001)
Ranks 1-6 = Highest number of resident students.

Map 9.10 shows that the percentage of full-time students was highest in Belfast, Coleraine, Derry, Cookstown, Omagh and Armagh. Belfast, Coleraine and Derry all have university campuses. The high levels in Cookstown, Omagh and Armagh reflect generally high numbers of resident students in the mid-west, south-west and south of the Province. The percentage of full-time students was lowest in Larne, Castlereagh, Ards, Ballymena, Antrim, Ballymoney, Carrickfergus and Banbridge. This pattern is striking in that outside of the District Council Areas where Northern Ireland universities were located, all the areas with high numbers of resident students were predominantly Catholic and all the areas with low numbers predominantly Protestant. This west/east, Catholic/Protestant split was more reflective of the pattern displayed by other social capital indicators than that of educational attainment as measured by the percentage of people holding 5+ GCSEs.

9.12.3 The interaction between resident students in 2001 and other variables

The percentage of full-time students in each District Council Area was positively correlated with three other social capital indicators, though negatively correlated with another (voter participation). Nevertheless its profile of correlations was similar to that of most of the other social capital indicators: Positive correlations with the percentage of Catholics, the percentage of women staying at home, the percentage of long-term sick and disabled and consistent with that a negative correlation with low deprivation. Also consistent with the positive correlation with the percentage of Catholics in each District Council Area was a negative correlation with locational advantage and a positive correlation with the aggregate number of new VAT registrations between 1997 and 2001.

It is notable that there was apparently a higher percentage of full-time students where there were high levels of deprivation and large Catholic populations. The higher number of full-time students in areas of high deprivation may be an indication that more full-time students in deprived areas were living at home because of the costs associated with further and higher education in 2001. It may also have been that the absence of employment opportunities in deprived areas had encouraged more people to move into further and higher education. Alternatively, it could be that there was a culture in these areas which supported participation in further and higher education. It is not possible to tell from the data.

There is no obvious explanation as to why there was a positive correlation at the 5% significance level with the number of people studying IT at FE College alongside a negative correlation, also at the 5% significance level, with the number of people studying engineering at FE College; though interestingly two other social capital indicators also recorded this combination of correlations. These two education and skills-related indicators were themselves negatively correlated, at the 5% significance level, which suggests that where the number of engineering students was high in 2001 the number studying IT was low and vice versa. Speculation as to why this may have been the case and why it would have been reflected in the number of full-time students overall is, however, beyond the scope of this analysis.

9.13 A SYNTHETIC SOCIAL CAPITAL INDEX

Whereas the local economic success outcomes were not as highly correlated as might have been expected, suggesting that each represented a distinctive dimension of success; within the social capital cluster there was a higher level of correlation between the indicators: three in particular displayed a high level of co-variance with the others. This suggests that these indicators may indeed have been manifestations of the virtual currency of collaborative communities, social capital. They also had something else in common: All but two of the nine social capital indicators were positively correlated with the number of resident Catholics in a District Council Area (it is also worth noting at this point that Iyer *et al*, 2005, had argued that religious/cultural affiliation could itself be a form of social capital). The two exceptions were the LEA workspace measure and the educational attainment measure (5+ GCSEs). That these were also the variables which were least correlated with the other social capital indicators would seem to support the inference that the underlying factor which linked the different manifestations of social capital in Northern Ireland and which determined how dense social capital stocks would be in a District Council Area was religious/cultural affiliation, and specifically how Catholic an area was.

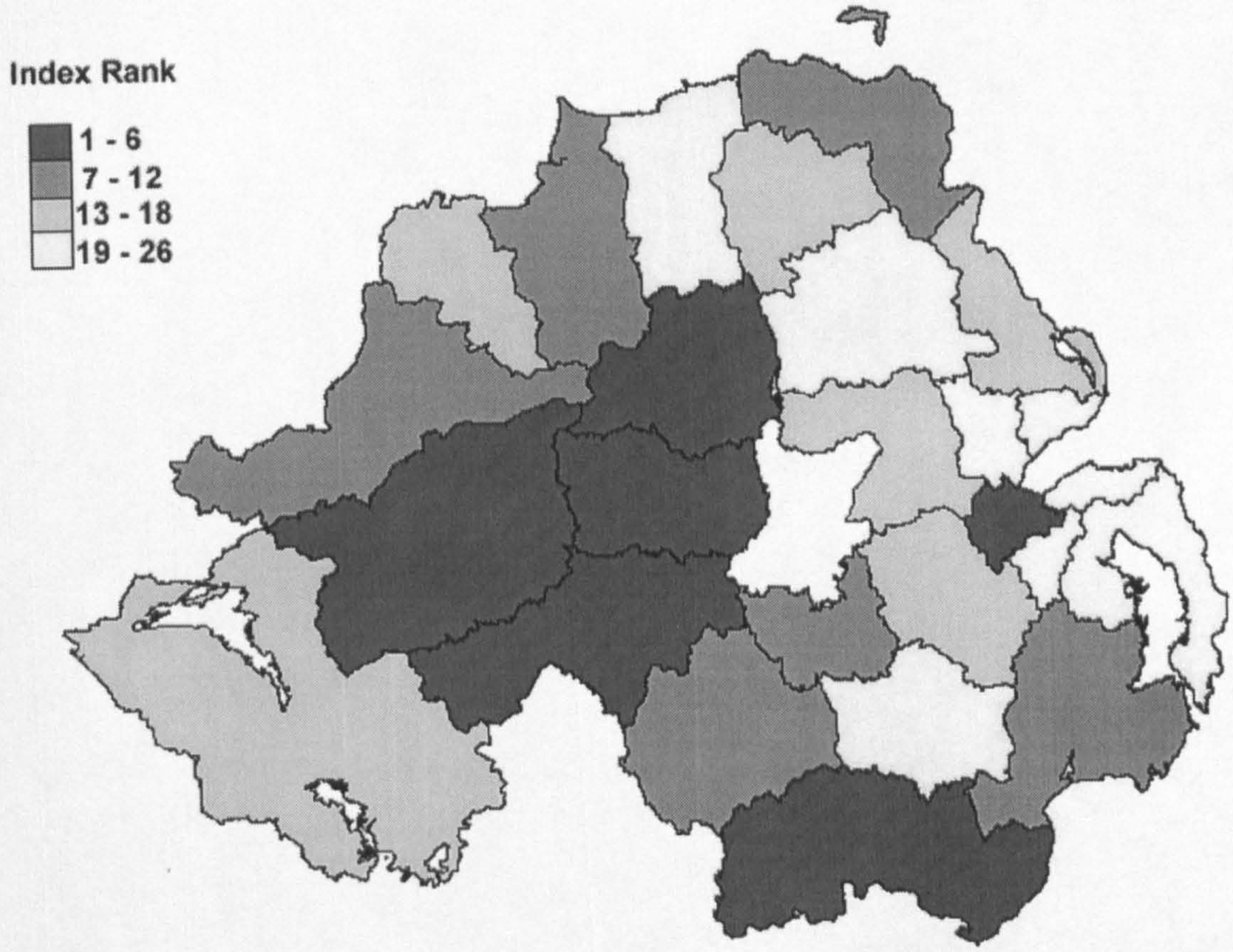
That said, because LEA workspace and 5+GCSEs departed from the pattern of associations displayed by the other social capital variables does not necessarily mean that they were not indicators of social capital. They have been retained as facets of social capital in this analysis because their association with local economic success is worth testing in its own right; and because they are variables which say something about a communmity's collective support for structures which bring benefits to its economy. Combining these measures with the seven other social capital indicators (as with the nine local economic success outcomes, several of which were also quite distinctive in the patterns which they displayed) will establish where in Northern Ireland in 2001 social capital in its various forms was most heavily concentrated. It can then be established whether those concentrations were associated with the Local Economic Success Index, controlling for religious/cultural affiliation. Table 9.3 overleaf records the rank score of each District Council Area with respect to each social capital indicator as well as its social capital index rank score.

NORTHERN IRELAND SOCIAL CAPITAL INDEX

Council	Eccdev-bus	Rank	Credit Union	Rank	Studsall	Rank	comm-bus	Rank	Peace I Fund	Rank	Comm-fund	Rank	Qualnew	Rank	Voter partic-iation	Rank	LEAsqft	Rank	Av of Ranks	Soc Cap Index
Antrim	3.26	16	1804.62	16	6.05	22	1	8	6.25	4	274468.75	19	1686.96	3	62.98	21	11005.43	19	14.22	16
Ards	1.73	19	494.63	24	5.99	24	0	14	2.77	21	182499.13	23	1600.35	8	58.85	24	10398.61	21	19.78	26
Armagh	7.13	2	3860.44	9	7.74	6	0	14	6.14	5	318105.16	18	1543.98	16	78.42	6	8108.11	24	11.11	10
Ballymena	3.72	9	2185.34	15	6.03	23	0	14	3.72	15	231922.54	21	1570.24	12	66.78	14	13129.10	16	15.44	19
Ballymoney	3.90	9	1081.46	21	6.3	21	2	6	2.93	20	504721.46	13	1513.66	21	66.54	16	20731.71	7	14.89	18
Banbridge	2.22	19	1258.54	20	6.46	19	0	14	1.27	23	133570.89	25	1613.29	6	69.60	11	15189.87	14	16.78	21
Belfast	4.93	7	3324.50	12	11.06	1	1	8	6.26	3	2236761.03	1	1211.15	26	66.57	15	23353.29	3	8.44	5
Carrickfergus	1.37	25	555.67	22	6.37	20	0	14	0.34	26	70703.78	26	1633.68	5	57.94	26	16151.20	12	19.56	24
Castlereagh	1.73	19	152.88	26	5.94	25	0	14	4.42	12	376793.65	15	1499.42	23	64.34	18	20384.62	8	17.78	23
Coleraine	3.66	9	1468.88	18	10.72	2	1	8	1.14	24	367146.68	16	1501.83	22	64.04	19	9839.82	22	15.56	20
Cookstown	3.73	9	5457.68	4	7.89	4	1	8	0.83	25	737462.24	9	1550.62	15	82.75	1	22821.58	4	8.78	6
Craigavon	3.46	16	4482.54	7	6.56	18	0	14	5.11	7	806858.48	7	1526.85	20	76.53	8	17298.19	10	11.89	12
Derry	3.51	9	6223.93	2	9.09	3	3	4	3.90	14	235308.97	20	1469.83	24	69.16	12	6501.95	26	12.67	14
Down	3.75	9	3493.54	10	7.49	11	0	14	4.17	13	492780.00	14	1689.79	2	68.05	13	10416.67	20	11.78	11
Dungannon	6.50	3	6287.85	1	7.61	7	0	14	4.52	11	1027843.79	5	1588.14	10	81.44	3	21186.44	6	6.67	2
Fermanagh	8.24	1	3411.90	11	7.55	10	0	14	2.97	19	185665.90	22	1532.72	18	78.18	7	16933.64	11	12.56	13
Larne	1.66	19	1527.39	17	5.62	26	1	8	4.98	8	704439.00	10	1590.04	9	61.21	23	41493.78	1	13.44	15
Limavady	5.39	7	3253.53	13	6.77	17	2	6	3.32	18	1029135.68	4	1553.94	13	72.62	10	18879.67	9	10.78	9
Lisburn	1.95	19	1395.37	19	7.21	14	0	14	3.66	17	1149085.37	2	1639.63	4	63.27	20	9146.34	23	14.67	17
Magherafelt	3.40	16	4785.71	6	7.41	12	4	2	7.48	2	604699.32	11	1581.97	11	81.63	2	22108.84	5	7.44	4
Moyle	4.10	9	2245.90	14	7.13	15	7	1	20.49	1	534378.69	12	1603.28	7	65.99	17	12704.92	18	10.44	8
Newry & Mourne	5.95	3	5102.35	5	7.59	9	3	4	4.85	9	763258.53	8	1534.12	17	75.70	9	25485.13	2	7.33	3
Newtownabbey	0.64	25	381.63	25	7.61	7	0	14	3.67	16	161564.54	24	1531.79	19	61.36	22	7135.78	25	19.67	25
North Down	1.63	19	510.46	23	7.24	13	0	14	1.47	22	336568.14	17	1755.39	1	58.79	25	12745.10	17	16.78	21
Omagh	6.46	3	4302.81	8	7.89	4	4	2	5.90	6	1037371.91	3	1553.65	13	81.38	4	14606.74	15	6.44	1
Strabane	6.01	3	5518.37	3	6.89	16	1	8	4.59	10	926407.77	6	1315.19	25	80.25	5	15194.35	13	9.89	7

Table 9.3: *Northern Ireland Social Capital Index.*

9.13.1 Where social capital was concentrated: The pattern of Social Capital Index rankings in Northern Ireland



Map 9.11: The social capital index by District Council Area rank order.
Ranks 1-6 = Highest concentration of social capital.

The composite social capital index (Table 9.3) when mapped (Map 9.11 above) displays a distinctive geographical pattern. Four of the top six ranked District Council Areas are located in a contiguous zone in mid-Ulster. Of the top twelve ranked District Council Areas, all have large Catholic populations and in ten, Catholics are the majority population. The six areas ranked as having the lowest levels of social capital are all predominantly Protestant and located East-of-the-Bann, notably in a cluster in North Down and South Antrim. Of the six areas with the highest social capital index rankings, three were ranked in the top six in respect of the Local Economic Success Index (Omagh, Magherafelt and Dungannon). Their contiguity geographically, their location West-of-the-Bann, and their large Catholic populations all seem to suggest that, whatever the association which may ultimately be revealed at a Northern Ireland level between social capital and the Local Economic Success Index, at a sub-regional level there was in 2001 an apparent interaction between local economic success, social capital, geographical location and religious/cultural affiliation. This will be considered in more detail in Chapters Ten and Eleven.

9.13.2 The interaction between the Social Capital Index and other variables

The Social Capital Index was highly positively correlated, at the 1% significance level, with District Council Area rank scores in respect of the number of resident Catholics, the aggregate number of VAT registrations (1997-2001), the Business Stock Change Competitiveness Differential, the number of sick and disabled residents, and the number of females staying at home. There was also an inverse correlation at the 1% significance level, with low deprivation. The pattern which these associations suggest seems definitive: social capital in 2001 was concentrated in Catholic District Council Areas, and in areas in which the characteristics which were associated with Catholic areas were also heavily concentrated. Whether those characteristics, high numbers of women staying at home, long-term sick and disabled residents and high numbers of new business formations, were separately associated with social capital, as a cause or as an effect, or whether they were the product of co-linearity, cannot be determined. In Chapter Ten, in an attempt to control for co-linearity, ordinary least squares regression will be used to measure the association between each social capital indicator and the Local Economic Success Index, independent of each other and of the number of resident Catholics.

That the Social Capital Index is correlated with all of the individual social capital indicators of which it is a composite, with the exception of the educational attainment measure (5+ GCSEs – *Qualnew)*, seems to confirm the extent to which educational attainment is a distinctively different social capital indicator, (assuming that educational attainment is in fact a measure of social capital and not just a product of socio-economic class advantage).

9.14 IN SUMMARY

This chapter has revealed:

- A high degree of co-variance between seven of the nine social capital indicators and between them and the religious/cultural affiliation indicator.

- Very little relationship between the measure of educational attainment (5+GCSEs) and the other social capital indicators.

- That the highest concentration of social capital in Northern Ireland is in four contiguous District Council Areas which form a predominantly Catholic sub-region West-of-the-Bann in mid-Ulster (Magherafelt, Omagh, Cookstown, and Dungannon).

- That the Social Capital Index is highly correlated with some but not all of the economic success outcomes and that the outcomes with which it is correlated are those which are also highly correlated with the District Council Area rank scores in respect of the concentration of Catholics.

- That social capital is weakest in predominantly Protestant District Council Areas.

In Chapter Ten regression will be used to determine the extent to which the individual social capital indicators, as well as the composite Social Capital Index, are associated with the Local Economic Success Index, independent of each other and of religious/cultural affiliation.

CHAPTER TEN

SOCIAL CAPITAL AND LOCAL ECONOMIC SUCCESS IN NORTHERN IRELAND 2001

10.1 INTRODUCTION

To avoid problems of co-linearity and "outlier skew" the ordinary least squares regression method has been adopted to measure the independent association between the District Council Area rankings in respect of each of the nine social capital indicators along with the measure of religious/cultural affiliation (Catholics) and the Local Economic Success Index rankings. The Local Economic Success Index is the dependent variable and the social capital indicators and "Catholics" are the independent "influencer" or "predictor" variables. The dependent and independent variables are represented as sets of rank scores between 1 and 26. This method of standardisation enables diverse data to be entered into the model, measuring a range of characteristics from monies allocated to numbers of people, from applications made to the physical scale of workspace assets.

10.2 REGRESSION ANALYSIS

A step-wise ordinary least squares regression equation, with the final Local Economic Success Index rankings as the dependent variable (as set out in Table 8.6 and also Appendix 5) and the nine social capital indicators [10.1] along with the indicator of cultural/religious affiliation (Catholics) as the independent predictor variables, produced a definitive finding (broadly in line with that of Casey, 2004, in respect of Great Britain) which was that the overall pattern of local economic success in Northern Ireland in 2001 was not associated with social capital (see Table 10.1 below).

When the Social Capital Index is correlated with the Local Economic Success Index there is also no statistically significant association and when regression is used to measure the association between the Social Capital Index and the Local Economic Success Index, controlling for religious and cultural affiliation, there continues to be no statistically significant relationship (see Table 10.1 below).

Dependent variable: Final Local Economic Success Index rankings					
Independent Variables	**Number of observations**	**Adj R^2**	**t**	**P>(t)**	**Coeff**
Social capital index	26	-0.0525	0.81	0.425	0.3443809
Catholics	26		-0.56	0.583	-0.2345205

Table 10.1: *Results of an OLS regression with the Local Economic Success Index as the dependent variable and the Social Capital Index and the cultural/religious affiliation variable (Catholics) as the independent predictor variables.*

Why is this? Does it mean that social capital was not associated with local economic success at all? How could that be so when some social capital indicators were associated with some local economic success outcomes? Is it possible that the process of synthesising the success outcomes masked some of these relationships? Six of the nine social capital indicators were negatively correlated with low deprivation. Yet seven of the nine were positively associated

10.1 The nine social capital indicators analysed in this regression equation were: community groups involved in economic development; credit union membership; voter participation; LEA workspace; community businesses assisted; applications made to the Lottery; Peace I grants; number of students; and number holding 5+ GCSEs.

with the number of new VAT registrations between 1997 and 2001. A similarly contradictory picture emerged in respect of the other success outcomes, with some recording negative correlations with some social capital indicators and others recording positive correlations with others. The stock of business services was negatively correlated with three social capital measures, for example, whereas the business stock change competitiveness differential was positively correlated with four social capital indicators. It does seem that in synthesising the success outcomes, the high rank scores recorded by District Council Areas in respect of some outcomes were negated by the low rank scores recorded by them in respect of others – one distribution being overlain by a very different distribution, and so on; the overall effect being that a definitive relationship between the nine social capital indicators and the overall economic success measure did not emerge. Nevertheless, that no social capital indicator was associated with the distribution of the multi-variate index of local economic success is a stark finding.

Casey (2004) had found that there was no association overall between social capital and the performance of regional economies in Britain, concluding that:

> "*the validity of social capital as an explanation for economic performance must stand as 'not proven'*" (Casey, 2004, p.113).

His hypothesis had been that social capital would influence economic performance by generating positive externalities which would push down transaction costs, which, in turn, would drive down production costs; all of which would increase economic performance. But he found that there was insufficient empirical evidence to support the existence of such a chain of causation. He did, however, note that within the limits of his study there had appeared to be significant inter-regional variations in the association between social capital and economic performance with even an inverse relationship in some regions between social capital and some economic indicators.

Casey (2004) had speculated that because there were different types of trust and different types therefore of social capital, an analysis which sought to measure relationships between aggregate measures of social capital and generalised measures of economic performance at the regional scale was likely to miss important local differences or relationships between particular manifestations of social capital and certain forms of economic activity. The problem he said was that social capital theory had been unable to provide a coherent evidence-based answer as to the value of different forms of social capital, other than to suggest that "bridging" social capital was "good". There was no consensus as to how to define this and other forms of social capital. Like Casey (2004), Cooke *et al* (2005) concluded that defining social capital, was a major problem for those seeking to analyse the phenomenon.

Although this thesis did not differentiate between "bridging" and "bonding" social capital, it did attempt to identify manifestations of social capital which appeared to be a product of a collective commitment whose intended outcome was a positive one, economic and social advancement, rather than the preservation of privilege, culture or identity; with some initiatives, such as Peace I projects, likely to have more explicitly sought to "bridge" between the two communities. These were measures of social capital which were, *a priori*, most likely to have been positively associated with economic success. The fact that none of them were, is a significant finding.

Beneath the overall finding that in Northern Ireland there was no association between measures of social capital and the local economic success index, there do appear, however, to have been significant local variations: Chapter Nine showed, for example, that there was significant social capital in District Council Areas with large Catholic populations, and some of the District Council Areas which had recorded high rank scores in respect of a number of success outcomes had also recorded high scores in respect of a number of the social capital indicators. In some circumstances there had been a high level of co-terminosity between the presence of social capital and the achievement of economic success. This was most evidently the case when a District Council Area, as well as having a large Catholic population, was also located in the mid-Ulster region, had low wages, a high level of aggregate business formation, a high level of employment growth, a working population which worked long hours, had below average levels of educational attainment and relatively high levels of multiple deprivation. The areas which ranked highly in respect both of social capital and local economic success and which formed a contiguous sub-region in mid-Ulster were: Magherafelt, Dungannon, Omagh and Armagh. Dungannon and Magherafelt, had ranked particularly highly in respect of Credit Union membership; Armagh, Dungannon and Omagh in respect of the number of groups active in economic development: and all four had ranked highly in respect of voter participation. The Magherafelt, Dungannon, Omagh and Armagh stories are discussed in greater depth later in Chapter Eleven.

Whether there is indeed a lack of "bridging" social capital in Northern Ireland relative to other regions (as suggested by Morrisey and Gaffiken 2001 and Cooke *et al* 2005) and whether the *"peculiarities"* of social capital in Northern Ireland (Cooke *et al* p.1076) mean that it functions differently and is likely to have different effects than social capital elsewhere: these are subjects which are deserving of further separate research. For future research to effectively assess these questions a comprehensive audit of the different forms of social capital which are manifest across Northern Ireland would have to be carried out. Ideally it should identify the cultural/religious affiliation of those who commit their energies to social capital initiatives, clarify their aims and objectives and record the structures and methods which they employ. The distribution of different forms of social capital, the differences in the numbers involved and the differences in methodologies employed – all of these variables once captured can have their association with economic success outcomes measured. A further question which should be tackled is whether and to what extent the distribution of community/voluntary sector activity in the region was shaped by the availability of funds from the EU, the International Fund for Ireland and the UK Government. These researches would allow a more robust answer to be ventured to the question: In Northern Ireland what encourages the creation of social capital and what contribution does it make to society and the economy?

Are there other variables less subject to intra-regional variations than the social capital inputs which may have been more definitively associated with the distribution of Local Economic Success within Northern Ireland? In Chapter Eleven four clusters of other potential input variables will be subjected to regression analysis in an attempt to determine just that.

CHAPTER ELEVEN

WHAT OTHER VARIABLES WERE ASSOCIATED WITH LOCAL ECONOMIC SUCCESS?

11.1 INTRODUCTION

Having found no direct association between the nine social capital indicators and the distribution of the final Local Economic Success Index rankings (see Table 8.6 and also Appendix 5), the association between those Local Economic Success Index rankings and the rankings recorded for clusters of other potential input variables, which reflect the:

> "*component parts*" (Carley, 1980, p.179)

...... of an economy, education and skills, the labour market, social characteristics and economic development policy (as recorded in Apendix 4) will now be analysed in a series of ordinary least squares regression equations. The rationale for selecting these variables was discussed in Chapter Six.

This approach of analysing the association between input variables and the Local Economic Success Index cluster by cluster (described diagrammatically in Figure 11.1 overleaf) has been devised to allow regression to be used and to control for co-linearity in a situation where there are only 26 observations in the sample being studied. If the sample had been significantly larger all of the variables in these four clusters along with the social capital indicators could have been entered into a single regression equation. This cluster method, by restricting the number of independent input variables in a regression equation will limit the statistical significance of the findings to that cluster of influence. It is nevertheless useful to be able to identify those input variables within each of the clusters which were or were not associated with the Local Economic Success Index rankings. By cross-referencing these input variables with other variables with which they were correlated it is possible to speculate as to how their association with local economic success may have functioned. There is value in determining whether, even against a background of intra-regional heterogeneity (a context which seems to explain the absence of a statistically significant association between social capital and local economic success) there were some factors which appeared to be part of the local economic success story across Northern Ireland.

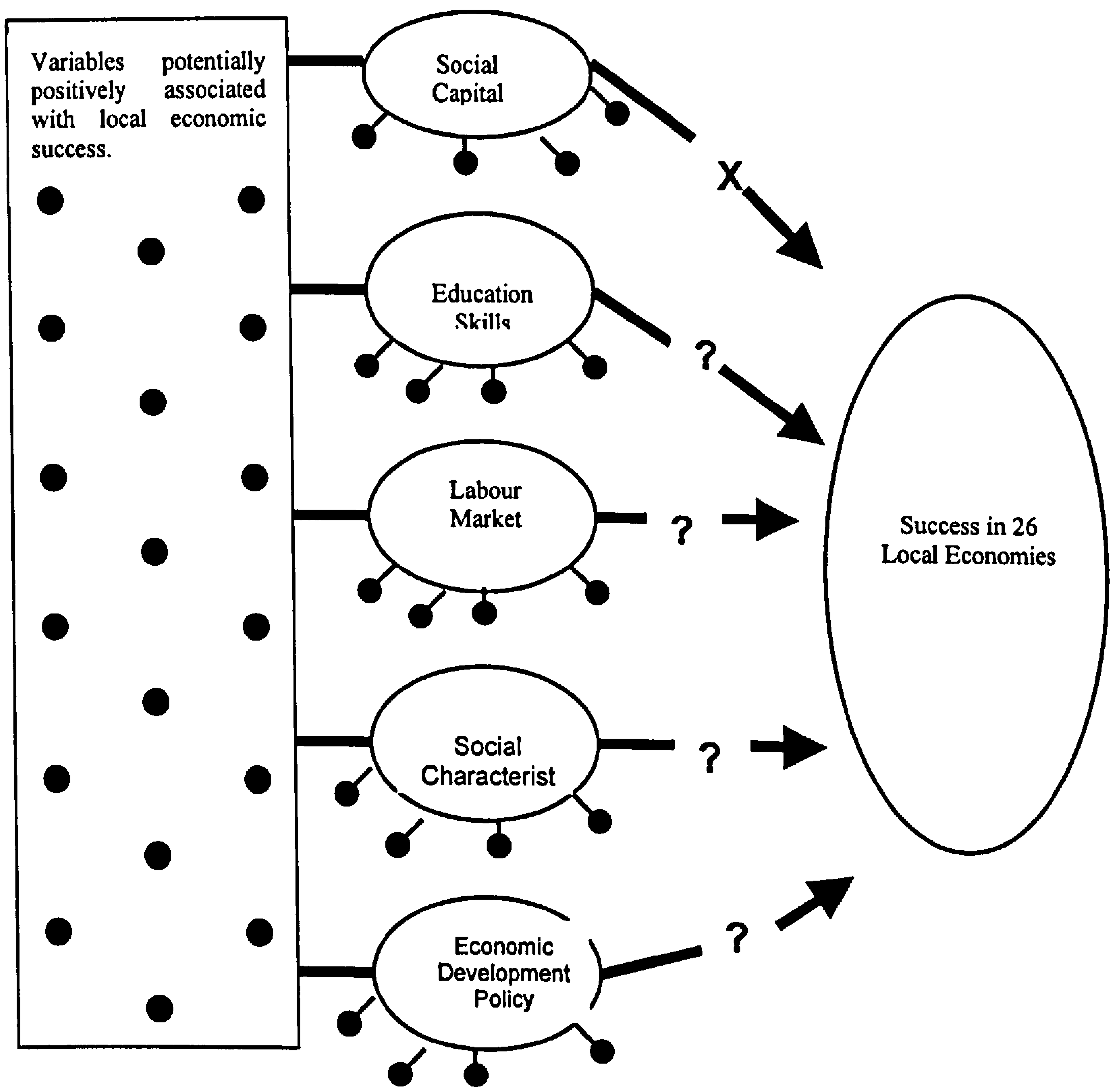


Figure 11.1: *The five bundles of variables whose independent association with local economic success is being tested.*

As in the social capital regression analysis described in Chapter Ten, the 26 Local Economic Success Index rankings will be entered into each ordinary least squares regression equation in this chapter as the dependent variable, with the District Council Area rankings in respect of the input indicators in each cluster entered as independent "predictor" or "influencer" variables. The "stepwise" significance filtering technique will be used to eliminate, step by step, those input variables which do not record a statistically significant association with the Local Economic Succes Index. Only statistically significant results will be presented in the summary findings table for each regression equation. Correlations with other variables which may help to explain each of these statistically significant associations will then be presented.

11.2 EDUCATION, TRAINING AND SKILLS

11.2.1 The variables

The seven education, training and skills-related variables whose independent association with the Local Economic Success Index has been measured using ordinary least squares regression are:

- The percentage of people aged 16-74 with 5+ GCSEs at grades A-C in 2001 by District Council Area (*qualnew*).
- The percentage of people aged 16-74 holding a degree or equivalent qualification in 2001 by District Council Area (*degree*).
- The percentage of people aged 16-74 without formal educational qualifications in 2001 by District Council Area (*noquals*).
- The number of people studying engineering at Further Education College per 10,000 adult resident population in 2001 by District Council Area (*FE eng*).
- The number of people studying information technology (*IT*) at Further Education College per 10,000 adult resident population in 2001 by District Council Area (*FE IT*).
- The number of people studying science at Further Education College per 10,000 adult resident population in 2001 by District Council Area (*FE science*).
- The percentage of people aged 16-74 who were full-time students in each District Council Area in 2001 (*studsall*)

11.2.2 Results of the regression analysis

Dependent variable: Final Local Economic Success Index rankings					
Education and Skills Variables	**Number of observations**	**Adj R^2**	**t**	**P>(t)**	**Coeff**
	26	0.2449			
Percentage with 5+ GCSEs			-	-	-
Percentage of students			-	-	-
Percentage holding a degree			1.91	0.068	1.325573
Percentage without qualifications			-	-	-
Number studying engineering at FE			-2.24	0.035	-0.4301798
Number studying IT at FE			-	-	-
Number studying Science at FE			-	-	-

Table 11.1: *Results of an OLS regression with the final Local Economic Success Index as the dependent variable and seven education and skills-related predictor variables.*

The results of the education, training and skills regression analysis which are set out in Table 11.1 above show that taken together the District Council Area rank scores in respect of the seven education, training and skills-related variables matched 24% of the pattern displayed by the Local Economic Success Index rankings. However, individually five of the seven variables recorded no statistically significant association with the local economic success index rankings. The two variables which did record statistically significant associations were the percentage of people holding a degree-level qualification, which was positively associated at the 5% significance level; and the number of people studying engineering at FE College, which was inversely associated, again at the 5% significance level. Both of these findings are considered overleaf. The fact that five of the measures in this cluster were not associated with local economic success could mean:

- that the level of general education and participation in further and higher education in 2001 was not a local economic success influencer;
- that although levels of general education and participation in education in 2001 may not have been associated with the local economic success index rankings in 2001, there may have been a longer-run relationship between education and economic success.

- that this analysis is too crude to capture the subtle ways in which educational attainment influences economic success outcomes.

It is beyond the scope of this thesis to speculate as to which of these statements is likely to have been true. What can be done, however, is to analyse these results in the context of correlations with other variables as the basis for a set of limited *a priori* inferences, some of which could be tested in future research focused on the relationship between education and economic success.

11.2.3 Numbers studying engineering at Further Education Colleges

The finding that there was a statistically significant inverse association between a District Council Area's Local Economic Success Index ranking and its rank in respect of the number of people studying engineering at Further Education Colleges in 2001 might suggest that the provision of training in engineering and the demand for such courses had not been important in determining an area's economic success ranking. Between 1997 and 2001 employment in the engineering sector had fallen by 7.7 per cent compared to an overall growth in employment across all sectors of 7.68 per cent. Some of the areas in which the number of students studying engineering was high were among the least successful economies in Northern Ireland (Carrickfergus was ranked highest in respect of the numbers studying engineering at Further Education Colleges, Larne 3rd and Derry 5th highest). The inverse correlation reported in Chapter Seven between the number of people studying engineering at FE Colleges and the aggregate number of new VAT registrations would seem to suggest that people were more likely to be studying engineering in areas with relatively low numbers of independently-owned and managed small businesses, areas by implication in which larger employers would have predominated (it was certainly the case in Northern Ireland in 2001 that a significant proportion of larger private sector employers were engineering-related companies). These were also areas in which levels of redundancies in 2001 were above average. If the density of students studying engineering at a Further Education College in 2001 was a proxy for the significance of the engineering sector in a District Council Area, then a strong engineering presence would have been inversely associated with local economic success in Northern Ireland in 2001.

11.2.4 Percentage holding degree-level qualifications

The positive association between a District Council Area's third level educational attainment rank score (measured by the percentage of adults aged 16-74 in a District Council Area who held degrees in 2001) and its Local Economic Success Index ranking would seem to suggest that a repository of people with degrees in an area could make a contribution to its prospects of economic success: important, if that were to have been the case, given the cost to the taxpayer of funding higher education. An implication which would flow from this would be that economies which failed to commit to higher education would be less economically successful. Martin (2005) suggested that areas where educated and highly qualified people lived were likely to continuously refresh their knowledge base and to generate commercial technology spill-overs in a self-reinforcing cycle of advantage:

> "*a well-educated workforce is likely to be more productive, more innovative and creative, and more enterprising*" (Martin, 2005, p.41).

He described educational standards and vocational skills as:

> "*possibly the prime fundamental for long-run regional competitive growth*" (Martin, 2005, p.41).

...... although Gudgin expressed concern (1996 p.19), that a:

> "*low level of local demand for highly educated manpower means that many well-educated young people leave the region*" (Gudgin, 1996, p.19)

...... the implication being that high levels of education alone could not drive an economy and that demand for higher education skills in an economy had to match their supply.

A closer look at how District Council Area rank scores in respect of the number of people holding degree level qualifications in 2001 were correlated with rank scores in respect of other variables reveals that there were significant positive correlations in respect of three success outcomes: earnings, the stock of financial, property and business services in an area, and low deprivation; suggesting that where quality of life was good and where good wages were on offer along with the white-collar professional employment offered by the business services sector, the proportion of people with degrees was likely to have been above average. It is perhaps to be expected that third-level educated people within Northern Ireland would have been living in areas where there was employment and remuneration on offer which they had completed their higher education in the hope of securing.

Other correlations suggest that in 2001 areas in which degree-educated people were concentrated were likely to also have had general educational attainment levels which were above average and to have had below average stocks of social capital (proxied by Credit Union membership and voter participation). This latter observation seems to suggest that social capital in Northern Ireland was not being generated in communities which had fewer more highly educated people than average; communities which also had fewer business formations and more people in employment (as opposed to self-employment) and who were working shorter hours than average; a potentially controversial corollary of which is that communities in which highly educated people were concentrated may have been less entrepreneurial (i.e. if self-employment, the number of INI sponsored business starts and the business stock change competitiveness differential are accepted as proxies for entrepreneurship). If this finding indeed reflected reality, it would be significant, given the resources which had been committed by Government in Northern Ireland to accelerate entrepreneurship through further and higher education (reflected in the Accelerating Entrepreneurship Strategy, 2003; and the Further Education Means Business Strategy, 2005).

A snapshot association between degree level qualifications, local economic success and other variables in 2001, however, provides insufficient evidence to support conclusions as to cause and effect. There simply is not enough data to determine whether the repository of people with degrees in these areas had been an effect or a cause of economic success. Nevertheless, that there was an association at all, if only in one year, is an interesting finding.

11.3 THE LABOUR MARKET

11.3.1 The variables

The five labour market-related variables whose association with the Local Economic Success Index has been measured using ordinary least squares regression are:

- The percentage of people aged 16-74 who declared that they were self-employed in 2001 (*allslfemp*).
- The percentage of females aged 16-74 who stayed at home and were not economically active in 2001 (*femaleshome*).
- The percentage of females aged 16-74 who described themselves to be small employers in 2001 (*smlempfem*).
- The average hours worked per employee by District Council Area in 2001 (*allhrsworked*).
- Average gross weekly earnings in the private sector by District Council Area in 2001 (*wagepriv*).

11.3.2 Results of the regression analysis

Dependent variable: Final Local Economic Success Index Rankings					
Labour Market Variables	**Number of observations**	**Adj R^2**	**t**	**P>(t)**	**Coeff**
	26	0.2745			
Self employment			2.92	0.008	4.365312
Females at home			-2.33	0.030	-2.108802
Female small employers			-1.97	0.062	-6.665942
Hours worked			-	-	-
Private sector wages			1.98	0.061	0.0458114

Table 11.2: *Results of an OLS regression with the final Local Economic Success Index as the dependent variable and five labour market-related predictor variables.*

The results of the labour market regression analysis which are set out in Table 11.2 above show that taken together the District Council Area rank scores in respect of these five labour market variables matched 27% of the pattern displayed by the Local Economic Success Index rankings. Individually four of the five labour market variables recorded a statistically significant association with local economic success, two inverse (i.e. both measures of female economic activity) and two positive (self employment and the level of private sector wages). The variable pattern of average hours worked was not, however, related to the local economic success pattern.

Although the question of causality in respect of whether these variables were contributors to or products of economic success has to remain open, correlations with other variables will shed sufficient light on the nature of these associations to allow some *a priori* inferences to be made.

11.3.3 Self-employment

The significant positive association recorded between a District Council Area's rank score in respect of self-employment and its Local Economic Success Index ranking suggests that in 2001 more people were likely to be self-employed in District Council Areas which had a high local economic success index ranking. Whether it was the case that the more people who chose to be self-employed the more successful an area would be or whether economically successful areas presented a set of propitious conditions which happened to favour the owner-manager; whether one scenario may have prevailed in some areas while the other prevailed in others; indeed whether the relationship was coincidental or attributable to co-linearity with other variables: these questions of cause and effect cannot be directly answered by this research, though the correlations with District Council Area rank scores in respect of other variables do present some intriguing clues.

The self-employment variable's vector of influence on the Local Economic Success Index appears to have been through its association with low redundancies and with outcome indicators related to the number of new businesses being created in an area.[11.1] The positive correlation with these economic success

[11.1] Self-employment was positively correlated with aggregate new VAT registrations between 1997 and 2001, the business stock change competitiveness differential, and a low level of redundancies.

outcome indicators seems to have been sufficiently strong to offset negative correlations with mean earnings and business services stock.

Self-employment appears to have been a feature of areas in which long hours were worked for lower than average wages, where there were relatively low concentrations of people who were third-level educated, where crime was low and where the number of people resident who had been born outside Ireland and Britain was also low, (suggesting that an area's propensity to favour self-employment may have been an endogenous phenomenon). These areas were more likely to have been Catholic and to also have been areas in which the number of female small employers was higher than average, where voter participation was above average and where community groups actively involved in economic development were concentrated.

High levels of self-employment were not, however, a feature of all economically successful areas. In rural, predominantly Catholic areas West-of-the-Bann, relatively high levels of self-employment coincided with high overall economic success scores (e.g. Magherafelt was 2nd highest in respect of local economic success while having the 2nd highest concentration of self-employment among Northern Ireland's 26 District Council Areas; Omagh was 5th in respect of local economic success and 6th in respect of self-employment). Most farmers would have registered as self-employed in 2001, which may explain why the areas in which the self-employed were concentrated were predominantly rural. On the other hand, mainly urban Castlereagh, which ranked as the most successful local economy in Northern Ireland, ranked 22nd in respect of self-employment; and Antrim which was the 4th most economically successful District Council Area overall, ranked only 17th in respect of self-employment. Although self-employment may not have been an ingredient associated with local economic success in <u>all</u> cases; it was in a sufficient number of cases to be important.

11.3.4 The gender dimension

Might gender be associated with economic success? This research suggests that in 2001 it may have been, given the inverse association between the Local Economic Success Index and rank scores in respect of the percentage of females in 2001 staying at home and the percentage of females who were small employers. If these associations reflected a longer-term pattern that would be significant from a policy perspective because a priority of the UK Labour Government from 1997 had been to facilitate more female participation in the labour market and to encourage higher levels of female entrepreneurship, particularly in Northern Ireland which had the lowest levels of female economic activity in the UK.

The District Council areas with the highest levels of women staying at home were all predominantly Catholic – Newry and Mourne (1), Strabane (2), Derry (3), Limavady (4), Cookstown (5), and Fermanagh (6); and the areas with the fewest women staying at home were predominantly Protestant and concentrated in or close to the Greater Belfast Area – Castlereagh (26), Newtownabbey (25), Carrickfergus (24), North Down (23), Banbridge (22), Craigavon (21), Ballymena (20). However, while the percentage of females staying at home was negatively associated with the Local Economic Success Index the percentage of resident Catholics was positively associated with it. This could have been because economically successful Catholic areas had fewer women staying at home than other Catholic areas (Magherafelt ranked 8th, Dungannon 9th, Omagh 10th, Armagh 13th in respect of the percentage of women per 10,000 adult resident population staying at home); whereas three of the six Protestant areas with very low levels of females staying at home were in the group of least successful local economies (Carrickfergus, Craigavon and North Down). Whether women taking the initiative to become economically active had contributed to the economic success of some areas, or whether economic success had caused fewer women to stay at home – these are questions to which answers cannot be reliably ventured on the basis of this limited analysis.

The District Council areas with the highest percentage of females who were small employers were Fermanagh (1), Moyle (2), Down (3), Dungannon (4), Banbridge (5), and Omagh (6), all but one predominantly Catholic and all rural. The District Council areas with the fewest female employers were Belfast (26), Derry (25), Newtownabbey (24), Castlereagh (22), Carrickfergus (22), Craigavon (21) and Strabane (20). These were all either predominantly urban areas or areas which were a short commuting distance from Northern Ireland's two largest urban centres, Belfast and Derry. Only two of the areas in this group of seven were predominantly Catholic. High percentages of females who were small employers appear to have been a feature of rural Catholic areas: rather than being a phenomenon in all Catholic areas (as noted, Derry and Strabane had very low percentages of females who were small employers) or all rural areas (Ballymena ranked 16th, for example, and Limavady 18th). It appears that the negative association with the Local Economic Success Index may be attributable to a combination of economically successful areas in the Greater Belfast region which had low percentages of females who were small employers alongside less economically successful rural Catholic areas which had relatively high percentages of females who were small employers.

If these associations are related (i.e. the negative associations between both the percentage of females who were small employers and the percentage of women staying at home and the Local Economic Success Index), this would suggest that, although fewer women in 2001 may have stayed at home in more economically successful areas, increased levels of female economic activity did not translate into higher levels of female entrepreneurship (assuming that the percentage of females who were small employers was a proxy for female entrepreneurship). By contrast, while in apparently less economically successful areas fewer women may have chosen to leave the home to become economically active, nevertheless these areas had higher than average percentages of females who were small employers. Whether this means that women were less inclined to run small businesses in response to the opportunities presented in more economically successful areas but were more inclined to do so when other economic options were restricted, as in less economically successful areas (i.e. that women were motivated more by necessity than opportunity) cannot be answered from this limited data. Nor is it possible to determine whether some of the women in economically successful areas who chose not to stay at home and to instead become economically active would at some point in the future have made the transition into becoming small business managers.

While there is a defensible equity argument which can be made for a female entrepreneurship policy, this research suggests that having relatively high percentages of females who were small employers in an area did not confer an economic success advantage; although what benefits they may have brought in the future cannot be known. In successful local economies in Northern Ireland in 2001 while more women were leaving the home fewer were managing businesses than elsewhere which suggests that, relative to other areas, being an employer and managing a business was preferred less by women in economically successful areas and by implication being in employment was preferred more. If these findings were to be supported by future research, they would pose some important questions in respect of female entrepreneurship policy in Northern Ireland, not the least of which would be: If the aims of the policy were to achieve equality of opportunity for women and to add value to the Northern Ireland economy, was concentrating on the creation of more female owner-managers, rather than facilitating more female participation in the labour market, the right approach? In 2004 Invest Northern Ireland sponsored a high profile promotional campaign (which included TV advertising), *Go For It – Start a Business*, in which women were prominently featured. This followed the publication of the Northern Ireland GEM Report in 2004 which had suggested that women were less than a third as likely as men to be entrepreneurs in Northern Ireland; and that while overall in Northern Ireland women were more likely to be opportunity entrepreneurs than necessity entrepreneurs, necessity entrepreneurship was significantly higher among Northern Ireland women than it was among women entrepreneurs elsewhere in the UK. The imagery which characterised the *Go For It* campaign was of metropolitan women directing operations or reflecting on plans over a coffee, imagery with strong lifestyle overtones. It featured none of the multi-tasking challenges which the GEM Study had found were factors in discouraging women from being entrepreneurs in Northern Ireland. The association uncovered in this analysis between higher levels of female economic activity (as measured by fewer women staying at home), lower numbers of female employers and local economic success suggests that there is a need for more research into how and why women's economic participation has varied across Northern Ireland, and into women's attitudes to running a business and staying at home and the extent to which those attitudes might be influenced by cultural/religious affiliation or socio-economic status (this is discussed further in Chapter Twelve).

11.3.5 Private sector wages

The statistically significant positive association between District Council Area rank scores in respect of the level of private sector wages and the Local Economic Success Index rankings would seem to suggest that economic success had generated higher than average wages. Alternatively it is also possible that economic success in some District Council Areas in 2001 had been the product of pre-existing advantages among which might have been high levels of employment in the public sector. This would have been reflected in wage levels set nationally and not determined by local economic conditions. Inflated public sector wage levels would have helped to prop up a local economy by generating increased spending power, increasing local demand for goods and services and creating reserves of capital seeking investment opportunities. However, there is simply insufficient evidence to speculate on causality in this respect.

Correlations between private sector wages and other variables suggest that wages were higher in locationally advantaged areas, where there were more people with third-level education and more white-collar business services jobs available (these were also the areas where Northern Ireland's public sector employment was concentrated). Private sector wages were more likely to have been low in predominantly Catholic areas where there was a high rate of new business formation and self-employment, where long hours were worked, and where social capital stocks were high. The strong association between the Local Economic Success Index and the concentration of Catholics, suggests that the relationship between private sector wages and the Local Economic Success Index was not a straightforward one in which areas with high private sector wages would be ranked as economically successful and areas with low private sector wages would be ranked as economically unsuccessful.

Economically successful Catholic District Council Areas located West-of-the-Bann all had relatively low private sector wages, notably Armagh, Omagh and Magherafelt; whereas the District Council areas which had the highest private sector wages were in the east and with the exception Belfast, had very small Catholic populations: Newtownabbey, Carrickfergus, Larne, Ballymena and Castlereagh. Only Castlereagh from this group was amongst the top ranked groups in respect of local economic success. It appears that there were enough Protestant District Council Areas with high wages in the upper half of the Local Economic Success Index rankings to account for the association between private sector wages and local economic success; whereas Catholic areas West-of-the-Bann were ranked highly in respect of the Local Economic Success Index in spite of recording low wages. For that reason, despite a statistically significant association in the regression analysis, private sector wages would seem to be an unreliable predictor of local economic success as defined in this thesis.

11.4 SOCIAL CHARACTERISTICS

11.4.1 The variables

The five social characteristics-related variables whose independent association with the Local Economic Success Index has been measured using ordinary least squares regression are:

- The percentage of the population who declared themselves Catholics in 2001, a proxy for cultural/religious affiliation (*Catholics*).
- The percentage of females aged 16-74 staying at home and not economically active in 2001 (*femaleshome*).
- The percentage of people aged 16-74 who were long-term sick or disabled in 2001 (*all sick-d*).
- The percentage of people who were born outside of Ireland and Britain in 2001 (*foreignall*).
- The total number of offences recorded by the police in 2001 in each District Council Area standardised per 10,000 adult resident population (*crime*).

11.4.2 Results of the regression analysis

Dependent variable: Final Local Economic Success Index Rankings					
Social Characteristics Variables	**Number of observations**	**Adj R^2**	**t**	**P>(t)**	**Coeff**
	26	**0.3234**			
Catholics			**3.51**	**0.002**	**0.0047247**
Females staying at home			**-3.12**	**0.005**	**-3.791825**
Sick and disabled			**-2.18**	**0.040**	**-2.309442**
Born outside Great Britain and Republic of Ireland			-	-	-
Crime			-	-	-

Table 11.3: *Results of an OLS regression with the final Local Economic Success Index as the dependent variable and five social characteristics predictor variables.*

The results of the Social Characteristics regression analysis which are set out in Table 11.3 above show that taken together the District Council Area rank scores in respect of these five variables matched 32% of the pattern displayed by the Local Economic Success Index rankings. Individually, of the five variables one, the number of Catholics, was positively associated, at the 1% significance level, with the local economic success index rankings; and two were inversely associated, the percentage of females staying at home (at the 1% significance level) and the percentage of long-term sick and disabled adults (at the 5% significance level).

The two variables which were not associated with the distribution of the Local Economic Success Index rankings were the percentage of residents born ouside Ireland and Britain and the level of crime. That District Council Area crime rankings were not related in any way to the Local Economic Success Index rankings appears counter-intuitive insofar as, *a priori,* crime would be expected to be associated with economic disadvantage and lack of success. It may be that in a society which in 2001 was characterised by conservatism and a strong sense of community, and in which paramilitaries still held considerable sway, "ordinary" crime was low generally and kept lower than otherwise by paramilitary control, particularly in so-called working-class communities. It could also be that the under-reporting of crime in Catholic areas may have skewed the figures.

The lack of an association with residents born overseas is also somewhat counter-intuitive in that again an *a priori* assumption would be that the number of overseas-born residents would be higher in more successful local economies where wages, population growth, quality of life and demand for labour would be highest. However, in 2001 in-migration in Northern Ireland was still a relatively new phenomenon and numbers overall were relatively low. There may simply not have been a sufficient track record of economic success built up by areas outside of Belfast to have attracted people from overseas. It is also likely that because many residents born overseas in 2001 would have been employed in the health service, or have been part of the Chinese community (the largest non-British/Irish ethnic group in Northern Ireland in 2001), their distribution historically would not have been a direct function of economic success.

Possible explanations for the statistically significant association between the Local Economic Success Index and the percentage of resident Catholics, the percentage of females staying at home and the percentage of sick and disabled adults are considered in the remainder of this section:

11.4.3 The Catholic dimension

The finding that in 2001, five years on from the formal end of paramilitary violence and three years on from the Belfast Agreement, predominantly Catholic District Council Areas were more likely than predominantly Protestant District Council Areas to have ranked highly in respect of the 2001 Local economic Success Index, appears to be a significant finding. This is because Northern Ireland remained in 2001 a divided society, a region in which economic development had been contested, where there had for decades been significant socio-economic inequalities and where these and the spatial development disparities which resulted had been advanced by some as a rationale for political violence.

Beneath this overall finding, however, there seems to be a more complex story: the very poor local economic success rankings of some Protestant areas and the very high rankings of particular Catholic areas. An analysis of the individual success outcome indicators suggests that Catholics in 2001 were more likely to have been multiply deprived and to have had lower mean earnings; disadvantages which seem to have been offset by their higher rank performances in respect of business formation and employment growth. While some predominantly Protestant areas close to Belfast did perform very well (Castlereagh and Antrim); by 2001 other areas with locations close to Belfast, which had predominantly Protestant populations and which had between the second world war and the 1980s attracted a large proportion of Northern Ireland's stock of inward investment, were not ranked as economically successful, notably Larne, Carrickfergus, North Down and Ards. Other areas, less close to Belfast, wherein were resident large Catholic populations, with relatively high levels of deprivation (e.g. Magherafelt, Dungannon, Omagh), by 2001 were ranking highly in respect of local economic success. In these cases are encapsulated the structural change which appears to have taken place in Northern Ireland by 2001. Economic weakness, as measured by the 2001 local economic success index, was no longer a uniquely West-of-the-Bann or Catholic phenomenon; a number of Catholic areas had apparently been able to overcome a legacy of deprivation and relative locational disadvantage to not just achieve relative economic success in 2001 but by creating more new businesses and more new jobs than other areas to also have begun to lay down what were, according to some analysts (Dunford and Hudson 1996; Martin, 2005), the foundations of long-term economic advantage.

Among the six most economically successful District Council Areas there were three which had substantial Catholic majority populations. Omagh, which ranked joint 5th in respect of economic success, was the 3rd most Catholic District Council Area in Northern Ireland; Magherafelt, the 2nd most successful local economy in Northern Ireland, was the 5th most Catholic District Council Area; and Dungannon, the third most successful local economy, was the sixth most Catholic District Council Area in the Province. Nevertheless, some predominantly Protestant areas also performed very well (Castlereagh was ranked 1st, and Antrim 4th) while some predominantly Catholic District Council Areas performed very poorly (e.g. Strabane 26th, Moyle 24th and Derry 23rd).

Those Catholic District Council Areas which were ranked highly in respect of new VAT registrations were also ranked highly in respect of the business stock change competitiveness differential: Magherafelt, Dungannon, Omagh and Armagh. It seems that the Catholic areas which performed well in respect of the business stock-related indicators were not the same Catholic areas which had the highest level of deprivation and the lowest earnings (those areas were: Strabane, Derry, Newry and Mourne, and Moyle), although all Catholic District Council Areas did have higher than average levels of both.

If as suggested by this analysis predominantly Catholic District Council Areas had higher than average aggregate numbers of new VAT registered businesses between 1997 and 2001 and had higher than expected sector-adjusted growth in their stock of businesses over the same period, was this because Catholics per se were more likely to start and expand businesses? Or was it that people were more likely to start and expand businesses in areas where there was less opportunity to access well-paid fulfilling employment and where deprivation was high, and that more of those areas in Northern Ireland happened to be Catholic (that this was then a case of co-linearity)? Even if predominantly Catholic areas had displayed certain characteristics it does not necessarily mean that those characteristics were attributable only to the Catholics who lived there. To shed some light on the extent to which business formation rates differed between the two communities, separate research would be necessary to compare the business creation and expansion out-turns over time of Catholics with those of Protestants, living in areas with high and with low levels of deprivation, controlling for as many other influences as possible.

The statistically significant association between the concentration of resident Catholics in 2001 and the Local Economic Success Index appears to be at odds with a set of significant correlations between Catholics and indicators of social capital (none of which were associated with the Local Economic Success Index). This may be because while Catholic areas which were economically successful had high levels of social capital so did Catholic areas which were economically less successful; whereas Protestant areas, whether or not they were economically successful, all had relatively low stocks of social capital in 2001 as defined by these measures. Similarly, the percentage of females at home and the percentage of sick and disabled adults in an area, which were both positively correlated with the distribution of Catholics, both recorded inverse associations with the Success Index. The very low density of females at home in most of the predominantly Protestant District Council Areas (and in particular in the most economically successful Protestant areas) might explain why females at home was inversely associated with the Local Economic Success Index while at the same time being positively associated with Catholics. The percentage of people with degrees and locational advantage were also negatively correlated with Catholics while being positively associated with the Local Economic Success Index rankings.

Correlations between Catholics and these other variables show that not all Catholic areas had the same education and skills, labour market, social characteristics, or economic development policy profile. In some areas, such as Dungannon, Magherafelt, Omagh and Armagh, very particular sets of circumstances seemed to prevail: There will be a more in-depth consideration of these four cases later in this chapter.

11.4.4 The long-term sick and disabled

The significant inverse association between the Local Economic Success Index and the percentage of adults who were long-term sick and disabled suggests that sick and disabled people were concentrated in the weakest local economies in Northern Ireland. Close analysis of the data reveals, however, that the association between long-term sickness and disablement and economic success was not quite that straightforward: Not every economically successful area had low numbers of sick and disabled people (Dungannon and Omagh, for example); and not all of the less successful areas had high numbers of long-term sick and disabled (Larne, for example). This then seems to suggest that the presence of relatively high numbers of long-term sick and disabled people in some areas was an economic challenge which could be overcome. Whether the presence of a relatively high number of long-term sick and disabled people in an area mitigated against it being economically successful or whether, conversely, a lack of economic success and the deprivation and the low wages associated with it had contributed to levels of long-term illness and disablement cannot be directly answered by this analysis, although correlations with other variables may help help to shed some light on the association.

Areas which were ranked as having large Catholic resident populations were also likely to have had large populations of long-term sick and disabled adults (with some exceptions – notably Dungannon and Armagh). There was also a strong negative correlation between low deprivation rank and the percentage of long-term sick and disabled adults. Given that the deprivation measure included within it a health deprivation domain and that those who were long-term sick or disabled were more likely to also have been benefit dependent and to have had low incomes (two other multiple deprivation domains), the correlation between deprivation and the number of long-term sick and disabled is not surprising. Catholic areas were more likely to have been multiply deprived and to have had low incomes. The negative correlation between the percentage of long-term sick and disabled adults and the percentage of people with degrees is also consistent with the positive correlation between the percentage of people with degrees and low deprivation.

It appears that in areas with above average numbers of long-term sick and disabled residents there were likely to have been higher than average aggregate numbers of new VAT registrations. However, the other correlations in this analysis suggest that this is likely to have been a function of the phenomenon whereby business formation rates were high in areas in which levels of disadvantage were also high.

While the interweave of correlations presented here cannot provide direct answers in respect of cause and effect, they do demonstrate the complexity of the relationships between variables as well as helping to explain associations which appear to be counter-intuitive.

11.5 ECONOMIC DEVELOPMENT POLICY

11.5.1 The variables

The six economic development policy-related variables as well as the locational advantage index whose independent association with the Local Economic Success Index has been measured using ordinary least squares regression are:

- IDB/INI industrial land and premises provision per 10,000 adult resident population in 2001/2002 (*totlandhold*)
- The number of INI client companies per 10,000 adult resident populationin 2001/2002 (*INIclientcos*)
- The number of jobs promoted by the IDB per 10,000 adult resident population in 2001 (*IDBjobs*)
- The provision of financial assistance from the IDB per 10,000 adult resident population in 2001 (*IDBass*)
- The number of IDB-sponsored inward investor visits per 10,000 adult resident population in 2001 (*visits*)
- Peace I funds allocated to community/voluntary sector projects between 1996 and 2001 per 10,000 adult resident population (*peaceIfunds*).
- The locational advantage index (*airport*).

11.5.2 Results of the regression analysis

The results of the economic development policy regression analysis which are set out in Table 11.4 below show that taken together the District Council Area rank scores in respect of these seven variables matched almost 26% of the pattern displayed by the Local Economic Success Index rankings.

Dependent variable: Final Local Economic Success Index					
Economic Development Policy Variables	**Number of observations**	**Adj R^2**	**t**	**P>(t)**	**Coeff**
	26	**0.2589**			
INI land/premises provision			-	-	-
INI client companies			2.08	0.049	0.4247325
IDB financial ass to clients			-	-	-
IDB promoted jobs			-	-	-
IDB Investor visits			-	-	-
Peace I funds			-	-	-
Locational advantage			2.17	0.040	0.3755299

Table 11.4: *Results of an OLS regression with the final Local Economic Success Index as the dependent variable and six economic development policy-related predictor variables and a distance-decoy control variable "location".*

Only two variables in this economic development policy cluster recorded a statistically significant association with the distribution of the Local Economic Success Index rankings: the number of INI client companies per 10,000 adult resident population and the locational advantage measure; both at the 5% significance level. However, given the limited number of variables deployed in the analysis and its narrow timeframe it seems likely that other factors were interacting with these variables to produce this pattern of associations. Some of those other factors might be suggested by the pattern of correlations between these economic development policy inputs and the other variables which were part of this research.

11.5.3 INI client companies

While economically successful areas in 2001 appeared more likely overall to have had relatively high counts of INI client companies in 2001-2003, this was not the case in every economically successful area: Castlereagh, Northern Ireland's most successful local economy, for example, ranked only 16th in respect of its number of INI client companies, while Omagh, joint 5th most successful local economy, was 12th in respect of its stock of INI client companies. Nor was it the case that every less successful area had a low number of INI client companies: Derry, which had ranked 23rd in respect of economic success had the 7th highest number of INI client companies per 10,000 adult resident population in Northern Ireland and Cookstown the 14th most successful local economy in Northern Ireland had the second highest number of INI client companies.

Correlations between District Council Area rank scores in respect of INI client companies and those in respect of other variables suggest that areas with high numbers of INI clients were more likely to have had higher than average stocks of social capital, as measured by the number of community groups active in economic development, Credit Union membership and voter participation. VAT registration rates and job density were both also likely to be higher in District Council Areas with above average numbers of INI client companies. The rank scores in respect of all of these variables were strongly correlated with those for the distribution of Catholics (the percentage of Catholics was positively correlated, at the 5% significance level, with the distribution of INI client companies). Dungannon, the third most successful local economy in Northern Ireland, which was both predominantly Catholic and located West-of-the-Bann, had more INI client companies than any other area of Northern Ireland. Magherafelt, likewise predominantly Catholic and West-of-the-Bann, had the second highest number of INI client companies per 10,000 adult resident population in Northern Ireland. Whether the distribution of INI client companies may in some way have been influenced by a community's propensity to invest social capital or to start new businesses; whether it may have reflected a pro-active policy by INI to support firms in such areas (i.e. West-of-the-Bann); whether it was that there were simply more dynamic companies able to attract INI support in District Council Areas with successful local economies; or whether this was simply a case of coincidental co-terminosity: This research is not on a scale to reliably support answers to these questions. Within the parameters of this analysis it seems that the significant positive correlation between two measures of social capital and the stock of INI client companies (i.e. the number of Credit

Union members and voter participation) is attributable to the particularly strong performance of District Council Areas West-of-the-Bann wherein Credit Union membership and voter participation was particularly high.

11.5.4 Location

The association between the rankings in respect of locational advantage and the Local Economic Success Index appears to be attributable to two scenarios: one in which the District Council Areas in the north west and around the north coast, which were the most locationally disadvantaged areas in Northern Ireland vis-à-vis both Belfast and Dublin performed poorly in respect of the Local Economic Success Index; and the other in which a number of the most locationally advantaged District Council Areas close to Belfast were also some of Northern Ireland's most economically successful areas: Castlereagh, Antrim, Magherafelt, Lisburn, Belfast itself, Newtownabbey and Ballymena.

Correlating the locational advantage rankings with those in respect of other variables suggests that the areas which were locationally advantaged in 2001 were more likely to have been Protestant, to have had higher than average wages, higher than average numbers of people who were highly educated, higher concentrations of white-collar business services, and above average numbers of residents born overseas. While theses areas were likely to have had low levels of deprivation, they also had low levels of new business formations and low levels of social capital. This is not the profile of economically successful District Council Areas West-of-the-Bann but rather of economically successful District Council Areas in the Greater Belfast region.

Those areas which were advantaged by the inclusion of a proximity to Dublin weighting in the locational advantage indicator were Armagh, Newry and Mourne, Banbridge and Down. Despite their relative proximity to Dublin, their locational advantage within Northern Ireland was not significantly altered. The most striking effect of the Dublin factor was to magnify the relative locational disadvantage of the north west.

The fact that proximity to the border did not appear to confer any particular local economic success advantage may reflect the fact that while trade and movement of workers between Northern Ireland and the Irish Republic was easier than at any time since partition, in 2001 the border remained a substantive barrier to trade and economic interaction: it was a currency border, a fiscal border, a political/administrative border and still in 2001 a security border. The populations of both jurisdictions had through almost 30 years of troubles developed back-to-back; a situation which was of such concern to the British and Irish Governments that they established under the auspices of the 1998 Good Friday Agreement a body whose remit it was to intervene to boost cross-border trade, Inter-trade Ireland.

11.5.5 The relative lack of association between policy and local economic success

The economic development policy regression analysis found that District Council Area rank scores in respect of five of the six variables in the economic development policy cluster were not associated with the Local Economic Success Index rankings. Those five variables were:

- IDB/INI land and premises provision per 10,000 adult resident population 2001/2002.
- IDB promoted jobs per 10,000 adult resident population, 2001.
- Total IDB investment per 10,000 adult resident population, 2001.
- IDB-sponsored inward investor visits 2001, per 10,000 adult resident population.
- Funds allocated under the Peace I Programme between 1996-2001 per 10,000 adult resident population.

The regression analysis of social capital variables reported in Chapter Ten had found that the investment by Government, the IFI and the EU in some two million square feet of workspace owned and managed by LEAs had not been reflected in an association with the Local Economic Success Index rankings. This taken together with a similar finding in the economic development policy regression analysis whereby there was no association between the Local Economic Success Index and INI/IDB land and premises provision (in which Government investment had been on a much bigger scale) would appear to suggest that investment in industrial infrastructure did not have an influence on an area's local economic success status. The assets which comprised the IDB/INI land and premises dataset would have been the product of investments made over many years. For that reason there is less chance that these rankings would have been a one-year aberration. The difficulty in speculating as to causation, however, is that it is impossible to determine what the situation would have been in local economies across Northern Ireland if these investments had not been made: How much less successful without them might some local economies have been? And while the areas which ranked as the most successful local economies in Northern Ireland seem from this data to have attained that success without large-scale public sector investment in workspace, it is possible that they would have been more successful had publicly-funded workspace been provided there on a larger scale.

IDB financial assistance constituted a significant element of Government intervention in support of local economic development in Northern Ireland in 2001. While these were one year spend figures only, they would have been the product of casework preceding, perhaps by as much as 2-3 years, the actual investment of funds. They do therefore reveal something about the level of IDB activity across Northern Ireland over that sort of timescale rather than in just one year. The pattern of associations recorded in respect of IDB financial assistance and IDB promoted jobs were closely related. This may have been because the IDB financial assistance figures would have included grant aid to promote jobs; although, with some IDB investments more focused on the introduction of new technology than on jobs, until these two sets of figures had been analysed it could not be assumed that they would display similar distributions.

The allocation of IDB financial assistance in 2001 was negatively correlated with low redundancies and the percentage of females who were small business managers. The implication seems to be that redundancies were higher in District Council Areas where IDB investments were being made. This would not have been surprising given that it was the IDB's remit to help companies who were threatened by or in the midst of redundancies, although there is insufficient evidence to conclude whether this is indeed the explanation. Similiarly there is insufficient evidence to determine whether the inverse relationship with the number of female small business managers means that companies managed by women had not been of a scale or in sectors favoured by the IDB. There is an absence of other correlations involving IDB assistance with which these associations can be cross-referenced. Other than low redundancies the distribution of IDB financial assistance was not associated with any other local economic success outcome and there was no obvious pattern when the geographical distribution of IDB assistance in 2001 was mapped: Newtownabbey in the Belfast suburbs, for example, ranked 1st, while Limavady and Derry in the north-west ranked 2nd and 3rd.

IDB-supported inward investor visits were not associated with the Local Economic Success Index rankings. Whether this pattern of visits reflected an attempt by the IDB to open up more areas to investor interest, whether there were other factors not included in this analysis which attracted prospective inward investors, or whether 2001 was atypical; these are questions which cannot be answered by analysing these data. It is not possible to determine the extent to which these visits may have been directed by the IDB; although it is likely that prospective investors would have set out criteria for the selection of locations rather than requesting specifically to visit Omagh, Ballymena or Armagh, for example (although it is possible that this may have happened in some cases). If the choice of venue had been investor-driven that would suggest that the economic success factors which comprised the 2001 Local Economic Success Index, while they may have been significant from a policy and quality of life perspective, were not important in the calculations of inward investors. The distribution of IDB-supported inward investor visits was associated with two of the individual economic success outcomes: there was a positive correlation with the stock of business services and a negative correlation with the business stock change competitiveness differential. This is in line with the profile identified in Chapter Seven whereby areas in which business services were concentrated were likely to have created fewer new businesses than expected given their sectoral structure. Correlations with other variables suggest that the areas which inward investors preferred to visit in 2001 were also areas in which self-employment and hours worked were relatively low, where the number of residents born outside Britain and Ireland was above average and where the number of people studying science at FE Colleges was high; all of which would be consistent with areas where white-collar business services were concentrated.

The District Council Areas which received most investor visits in 2001 were Belfast, Derry, Craigavon, Newtownabbey, Omagh and Antrim. These, with the exception of Omagh, were the District Council Areas in which Northern Ireland's industry had historically been concentrated. They also contained within them what were, by Northern Ireland standards, large urban areas with the potential to provide a critical mass of prospective employees. The areas which received the fewest visits were Magherafelt, Ballymoney, Moyle, Ballymena, Dungannon and Banbridge. Within that group of largely rural District Council Areas were two areas West-of-the-Bann which had ranked 2nd and 3rd in respect of the Local Economic Success Index.

Peace I allocations to community groups appear to have been higher in areas which had above average stocks of social capital. Whether social capital was more developed in these areas in 2001 in part because of investments made by the Peace I programme during the preceding six years or whether social capital stocks had been higher in those areas in any case enabling them to more successfully access Peace I funds cannot be answered from this data. Rank scores for Peace I allocations were positively correlated with those for new VAT registrations between 1997-2001 and job density. However, these appear to have been offset by negative correlations with low deprivation and population change. Beneath this somewhat contradictory pattern, however, there were four areas which had ranked in the top six in respect of local economic success which also ranked in the top six in respect of Peace I allocations, three of which were located West-of-the-

Bann (Magherafelt 2nd highest Peace I allocations; Armagh 5th highest; and Omagh 6th highest). While this might suggest that in some District Council Areas the Peace I programme could have made a difference, the data simply is not comprehensive enough to allow a judgment to be made as to how significant if at all the contribution of the Peace I programme might have been to the local economic success rankings of individual areas or to support speculation as to what might have happened had Peace I funds not been available.

What can be concluded from this analysis of the policy variables which were not associated with the Local Economic Success Index is that individual policy interventions appeared to respond to different demands in different ways and that, overall, policy did not appear to favour either one of Northern Ireland's communities over the other.

11.5.6 Policy and Catholics

Through the 1990s the position of the Catholic community had improved in respect of employment. By 2001 this seems to have been reflected in a significant positive association between the number of Catholics living in an area and its Local Economic Success Index ranking. The success of four predominantly Catholic District Council Areas West-of-the-Bann, will be considered in some detail in the next section.

If this relatively strong performance by Catholic District Council Areas indeed reflected a sustained improvement, as the sector-adjusted five year change in business stock and employment numbers and the change in unemployment between 1991 and 2001 would seem to suggest, this would be a finding of considerable policy significance, given Northern Ireland's contentious history of polarised economic development. Intra-regional development disparities had been one of the principal grievances cited by the largely Catholic Civil Rights Movement in the late 1960s. The UK Government had, as discussed in Chapter Four, attempted to address these issues, following the proroguing of the Stormont Parliament and the institution of Direct Rule in 1972, by restructuring local government, establishing new central government departments, enacting fair employment legislation, and introducing other initiatives such as Targeting Social Need (TSN). All of these initiatives sought to ensure a more equitable distribution of resources between the two communities. In addition, large-scale EU regional assistance, along with aid from the USA and other donor countries through the International Fund for Ireland (IFI), had been used from the late 1980s to underpin Government policy in respect of tackling internal development disparities.

Might then the association between the number of Catholics living in a District Council Area and its level of local economic success have been partially or even substantially attributable to this long-term commitment by successive Direct Rule administrations, the EU and the IFI, to addressing the economic disparities which had prevailed to the apparent disadvantage of the Catholic community? Or might the local economic success status of Catholics in 2001 have been attributable to the way that the Catholic community intrinsically reacted to circumstances of relatively high unemployment and deprivation, low wages and a lack of inward investment; by being more entrepreneurial, by embracing self-employment and by starting and developing higher than average numbers of their own businesses?

Substantive, robust answers to these questions would require a substantive piece of separate analysis to track the change in Northern Ireland's local economies and in the fortunes of the two communities over an extended period. Where the research reported in this thesis is significant is in its apparent confirmation that, as of 2001, the relative fortunes of the Catholic and Protestant communities in general in Northern Ireland, and strikingly so in some areas, had changed vis-à-vis their respective situations in 1991 and 1981.

11.6 WEST-OF-THE BANN SUCCESS STORIES: MAGHERAFELT, DUNGANNON, ARMAGH AND OMAGH

Magherafelt, Dungannon, Armagh and Omagh, all areas located West-of-the-Bann in mid-Ulster, in which there were strong reserves of social capital, achieved overall local economic success rankings of 2nd, 3rd, joint 5th and joint 5th respectively (see Table 8.6 and also Appendix 5).

Magherafelt, the second highest ranked District Council Area in Northern Ireland, was an area in 2001 in which mean earnings were relatively low and multiple deprivation was above the Northern Ireland average (see Appendix 4). It was also, however, an area in which, relative to its population size, large numbers of businesses had been formed between 1997 and 2001, more than would have been expected given its sectoral structure; in fact more so than any other part of Northern Ireland (Magherafelt was ranked as the most successful District Council Area in Northern Ireland in respect both of the aggregate number of new VAT registrations between 1997 and 2001 and the sector-adjusted business stock change competitiveness differential between 1997 and 2001). In addition, Magherafelt was an area which created more jobs over five years than would have been expected given its sectoral structure; in which the level of redundancies had been below the Northern Ireland average; and in which there had been significant population growth between 1991 and 2001 (it had the 6th highest increase in population among Northern Ireland's 26 District Council Areas between 1991 and 2001). To what extent its population growth was a product of its level of business and job creation and to what extent population growth may have been fueling its high rate of business and employment creation cannot be measured directly within the parameters of this research.

It is notable that low average earnings and higher than average levels of deprivation did not appear to have detracted from Magherafelt's business and job creation performance. While the area's modest score in respect of job density in 2001 does seem at odds with its sector-adjusted growth in employment, this may have been because many residents of Magherafelt commuted from the District to work in Derry, Cookstown, Dungannon and even Belfast; and the area's relatively low stock of financial, property and business services companies did not seem to have had a deleterious effect on its capacity to create businesses or employment; though this is in line with the trend observed right across Northern Ireland whereby stocks of business services were inversely correlated with the overall business stock change competitiveness differential.

Dungannon performed particularly strongly in respect of the two competitiveness differentials: employment change (5th), and business stock change (4th), as well as the aggregate number of new VAT registrations 1997-2001 (2nd), job density (5th), and low redundancies (9th). Like Magherafelt, it recorded relatively poor scores in respect of deprivation, earnings and stock of financial, property and business stock. Dungannon also showed that high levels of relative deprivation and low wages were no barrier to the creation of businesses or new employment. Where Dungannon did depart from Magherafelt was in its poor showing in respect of population change alngside a relatively strong performance in respect of job density. These out-turns may have been linked: while Dungannon's population had grown by less than the Northern Ireland average its stock of employers had grown at a rate which was substantially above the Northern Ireland average, which would have generated a high ratio of jobs to residents. The most likely explanation for this is that Dungannon's status as a sub-regional magnet for commuters allowed its entrepreneurs to create and expand relatively high numbers of businesses in the absence of significant endogenous population growth. Why the population of Dungannon had not grown at the same rate as elsewhere, however, is a much more complex question and beyond the scope of this research to answer.

The performance of Armagh and Omagh against the nine success outcome indictors was remarkably similar to that of Magherafelt and Dungannon. Both performed modestly or poorly against deprivation and earnings (Armagh 13th and 14th respectively and Omagh 20th and 13th respectively) as well as in their stock of finance, property and business services companies (Armagh was 20th and Omagh 14th). Like Dungannon both areas had experienced very low levels of population growth: Armagh had ranked 23rd in respect of population change and Omagh 21st. The indicators against which Armagh and Omagh, like Magherafelt and Dungannon, had performed strongly were the business stock change competitiveness differential 1997-2001 (Omagh ranked 2nd, Armagh 3rd) and the aggregate number of VAT registrations between 1997 and 2001 (Armagh ranked 5th Omagh 6th). Their performance in respect of the employment change competitiveness differential 1997-2001, however, was less remarkable, being at or just below the Northern Ireland average.

What is striking is how closely the performance of these areas in respect of the business stock change competitiveness differential reflected their performances overall in respect of local economic success. Magherafelt ranked 1st in respect of the business stock change competitiveness differential and 2nd in terms of overall local economic success, Dungannon 4th and 3rd respectively, Armagh 3rd and joint 5th respectively and Omagh 2nd and joint 5th respectively. Yet that correlation did not seem to have been in evidence in the predominantly Protestant District Council Areas in the east of the Province: Castlereagh and Antrim; further confirmation it seems that the profile of economically successful areas was very different in the predominantly Catholic sub-region West-of-the-Bann and in the predominantly Protestant east.

It does appear that there was a particular dynamic at work in this mid-Ulster area: job and business creation rates were high at the same time as wages were low and deprivation was high. What had these four District Council Areas in common which might explain this? In respect of religious/cultural profile, Omagh was the 3rd most Catholic District Council Area in Northern Ireland, Magherafelt the 5th, Dungannon the 6th and Armagh the 12th. Three of the four areas were relatively disadvantaged in respect of location: Omagh was ranked as only the 22nd most locationally advantaged of the 26 District Council Areas, Dungannon was 17th and Armagh 16th (Magherafelt's relative proximity to Belfast International Airport near Antrim had increased its locational advantage rank to 8th). What stands out, however, is the strength of social capital in these areas. Together they were ranked highly in respect of five of the nine social capital indicators: they had above average numbers of community groups involved in economic development (Armagh was ranked 2nd in Northern Ireland, Dungannon joint 3rd, Omagh joint 3rd); had higher than average numbers of Credit Union members (Dungannon had the highest number of Credit Union members per 10,000 adult resident population in Northern Ireland), they all ranked in the top 6 in respect of voter participation, they had higher than average numbers of full-time students (although the percentage of people with degrees was at or below average) and they had all secured higher than average allocations of Peace I funds.

Across other potential predictor variables, what these areas also had in common was that they had higher than average levels of self-employment; employees worked longer hours than average (though they had lower than average private ector wages), they hosted a higher than average number of INI client companies (though the number of IDB assisted jobs was at or below average) and they hosted a below average number of inward investor visits.

In summary, the picture which emerges in respect of these four areas is that:

- they had high stocks of social capital;
- they had large Catholic populations;
- they were locationally disadvantaged;
- long hours were worked by employees for lower than average wages;
- self-employment was higher than average;
- overall educational attainment was below average;
- other than hosting higher than average numbers of INI client companies there was little evidence of economic development policy and investment having favoured these areas,.

The local economic success in 2001 of Magherafelt, Dungannon, Omagh and Armagh apparently cannot be attributed to their location vis-á-vis Belfast or Dublin, to economic development policy support, or to superior educational achievements. It does seem to be attributable to the Northern Ireland-wide pattern of predominantly Catholic areas with high levels of self-employment and high numbers of INI client companies attaining relatively high Local Economic Success Index rankings. Where Magherafelt, Dungannon, Omagh and Armagh depart from the rest of Northern Ireland, however, is in the high levels of social capital which they recorded. Not only were stocks of social capital higher than in other economically successful areas, they were also higher than in most other District Council Areas with large Catholic populations. While it is not possible to assert, based on this data, that there was a causal relationship between social capital in these areas and their economic success, it is possible to point to the high level of social capital as a phenomenon which differentiated them from the rest of Northern Ireland. What this research does suggest is that the role of social capital in the economic success story of these District Council Areas merits further separate research.

It would seem defensible, in conclusion, on the basis of this analysis, to contend that in Magherafelt, Dungannon, Omagh and Armagh, areas which had been historically deprived, where wages and educational attainment continued to be low, where external investment was also low, and where the commitment of social capital was high, local economic success had been largely self-generated. It seems that the people of these areas had faced up to a number of apparent comparative disadvantages and achieved economic success through sheer graft: through unglamorous but effective endogenous effort invested in long hours worked for low wages, and in their Credit Unions and active community groups.

11.7 IN SUMMARY: LOCAL ECONOMIC SUCCESS FACTORS IN NORTHERN IRELAND

Drawing all this analysis together, social capital in the form of the nine individual social capital indicators and the composite Social Capital Index was not associated with the distribution of the Local Economic Success Index rankings; although the process of combining the separate success outcome indicators into the Local Economic Success Index did mean that positive associations between some social capital indicators and some economic success outcomes were cancelled out by negative associations between others. Social capital indicators, for example, had been positively correlated with the aggregate number of new VAT registrations between 1997 and 2001 as well as the sector-adjusted business stock change competitiveness differential but inversely correlated with earnings and low levels of deprivation.

Those Catholic areas which had achieved high Local Economic Success Index rankings had done so because of high scores in respect of business and job creation outcomes (as opposed to earnings, low deprivation or the presence of white-collar business services). In fact, enough predominantly Catholic areas achieved high rankings against those success outcomes for Catholics to poll strongly overall in respect of the Success Index. Notable in particular was the performance of a group of four areas with relatively large Catholic populations West-of-the-Bann which ranked in the top group of six. In those areas a high level of social capital was in evidence. In certain circumstances (i.e. Catholic areas West-of-the-Bann, with a history of high levels of multiple deprivation, and an apparent absence of attention from inward investors), high levels of social capital were co-terminus with economic success. It could reasonably be imputed from this that there is likely to have been a causal relationship between the presence of social capital and the achievement of economic success in those areas.

The other factors which were associated with the distribution of the local economic success rankings, are highlighted in figure 11.2. What this suggests is that District Council Areas in Northern Ireland were more likely to have been ranked as economically successful if they had a high number of people who were born overseas in the population, a high number of Catholics in the population, a high number of people with degree level education, a high number of INI client companies, a high number of people who were self-employed, a high level of private sector wages, and to have been locationally advantaged vis-à-vis Belfast and Dublin international airports. The factors most associated with a lack of economic success were having a high percentage of women staying at home, having a high percentage of females who were small employers, having a high percentage of people who were long-term sick and disabled, and having a high number of people who were studying engineering at an FE College.

How important these variables were individually in determining local economic success, relative to each other and relative to other factors which may not have been included in this analysis, is not known. Nor is it possible to determine whether the distribution of these variables may have been a proxy for something else which was exerting a causal influence. The usefulness of the regression equations in this chapter is that they were able to control for some of the co-linearity which had been highlighted as a potential issue in the correlation analysis in Chapters Seven and Nine. As an example, in general in Northern Ireland Catholic areas were likely to have had high numbers of women staying at home and high numbers of people who were sick and disabled. However, the regression analysis suggested that those Catholic areas most likely to have been economically successful were those with low levels both of women staying at home and of people who were long-term sick and disabled. So, while co-linearity with unknown variables may remain an open question, co-linearity among the variables in each of the clusters was successfully addressed in this chapter, such that it is possible to say that self-employment, independent of location and number of Catholics, was positively associated with the distribution of the Local Economic Success Index rankings.

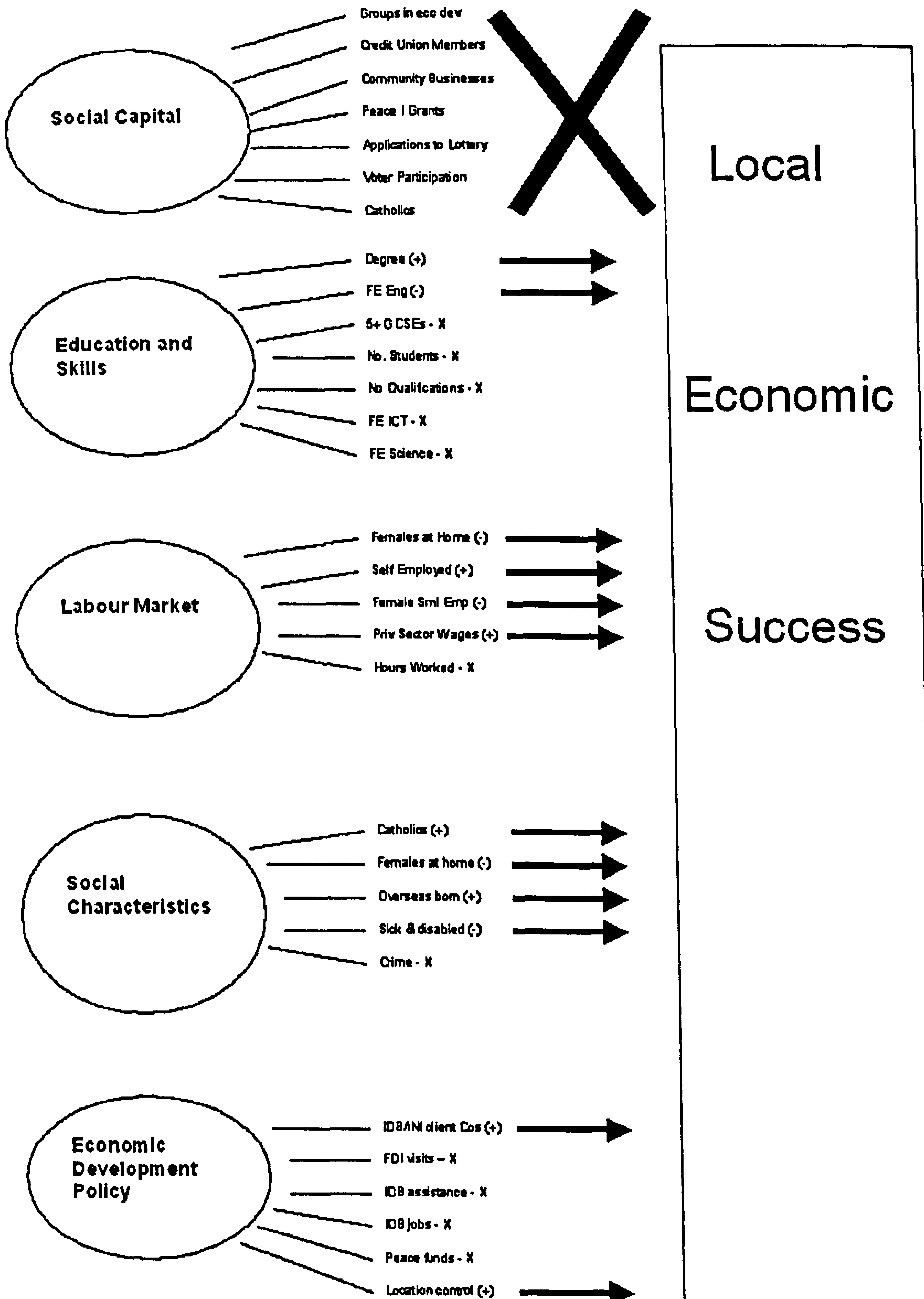


Figure 11.2: Variables associated with the distribution of the Local Economic Success Index rankings.

The most that can be concluded in this thesis is that a series of factors were either more likely to have been present in areas with high or in areas with low economic success rankings. Why that might have been the case can be speculated on, from a practitioner perspective, but causal relationships cannot be proven. Proof in this field, as discussed in Chapter Four, is simply not achievable.

That social capital may have been important in the success attained by some District Council Areas and not others is not surprising given the extent of the intra-regional differences in the Province, in the culture and social practices of the two communities, in the development history of District Council Areas, in their institutional structures and in their political, social and by implication economic relationship with the rest of the island. This thesis has shown that Northern Ireland in 2001 was a far from homogenous place. Having uncovered in Chapters Seven and Nine the extent of the region's internal heterogeneity, its complexity, it now seems that it may have been an unrealistic objective to try to secure linear pan-Northern Ireland statistical associations as a measure of the contribution which social capital made to local economic success. Findings in respect of this conflicted region were always likely to be equivocal, to suggest that circumstances would apply only in some areas, in some settings, and only if a battery of other conditions applied; and all of that subject to the caveats imposed by the limitations of the data.

The heavily qualified findings in this thesis are nevertheless of value because they raise questions in respect of a number of orthodoxies which have prevailed in the world of economic development policy-making, politics and academia in Northern Ireland. They question the continued appropriateness of claims that in Northern Ireland Catholic areas are less economically successful and have gloomier economic prospects than Protestant areas, that areas West-of-the-Bann are less economically successful than areas East-of-the-Bann, and that women in business will be associated with economic success. That said, some findings seem to lend support to other orthodoxies: that self-employment will be positively associated with economic success, that women becoming economically active will be associated with economic success, that proximity to an international airport and a large metropolitan centre will be associated with economic success, that the presence of people born overseas and the social mixing and infusion of new ideas which come with them will be associated with economic success and that having a high percentage of people who are sick and disabled will be associated with a lack of economic success.

11.8 CONCLUSION: SOCIAL CAPITAL AND LOCAL ECONOMIC DEVELOPMENT POLICY IN NORTHERN IRELAND

Having set out all the caveats with respect to the data and its analysis, if the findings of this research reflect reality (and the practice experience of the author suggests that they do) there are a number of implications for local economic development policy in Northern Ireland. In particular, there are implications which flow from the finding that social capital does seem to have been a feature associated with economic success in some rural Catholic areas whose performance was not obviously attributable to other factors such as external intervention or an advantageous location. This suggests that the propensity to act co-operatively which generated social capital had also contributed in some way to the generation of economic success outcomes. It is likely to be for that reason that social capital initiatives whose purpose it was to contribute to economic development had also achieved considerable success in those areas.

An obvious implication for policy is that the functioning of social capital needs to be much better understood – why is it evident in some areas and not in others and why, more importantly, is it associated with economic success in some areas? What catalyses social capital and how does social capital in turn catalyse a community to attain economic success? Given its apparent significance, especially in rural areas with relatively high levels of multiple deprivation which had been prioritised for economic development intervention, an understanding by policy-makers of social capital may be more important for the future of those areas than studies of technology transfer, or the so-called 'knowledge-based economy'.

There were a series of short-term policy experiments with social capital undertaken by the first post-Good Friday Agreement Assembly in Northern Ireland (i.e. between 1998 and 2001). These were centred on a series of deliberative partnerships which had been established to disburse European Union funds (i.e.: Peace I, Leader and INTERREG). As well as having a significant local economic development impact, these initiatives were also the first to foster substantive collaborative working between the two communities and in particular between those parties which had politically been at the extremes, a process which ultimately led to the historic St Andrews Agreement in 2007. It is unlikely to have been a coincidence that this commitment to harnessing social capital (which was also manifest in the establishment by the first Assembly of a Northern Ireland Civic Forum) had been associated with the accession to government of locally elected political representatives. Might it be that the second Assembly, which took its first faltering steps in May 2007, will once again recognise the value of nurturing and then exploiting social capital?

The change in the distribution of local economic success which brought Catholic areas in mid-Ulster into the top performing group of local economies also saw the slipping back into the group of worst performing local economies of a number of Protestant areas in the east located close to Belfast. In those areas this research has shown that social capital was very weak. The challenge for the post-2007 Assembly is how to bring economic success to these areas given their very low levels of new business formation and job creation. As historically staple sources of employment (such as the public sector and manufacturing industry) have contracted in these areas, the shortage of new businesses and new sources of employment has been a major concern for local economic development policy-makers.

How can new employment and income-generating opportunities be sourced? By building new advance factory units? This study suggests that such investments were not associated with the attainment of economic success. Is the answer to attract more inward investment? Inward investment can, of course, bring an infusion of new jobs and income quickly and decisively into an area. But this study has shown that investors preferred (as measured by their reconnaissance visits) areas which were close to large population centres but which also had higher than average numbers of third-level educated residents and higher than average numbers of business services companies. This was not the profile of less successful Protestant areas such as Larne, Carrickfergus and Ards (or for that matter less successful Catholic areas such as Strabane and Derry).

This research suggests that social capital, as well as having the potential to directly achieve economic success outcomes, tends to be associated with a propensity to self-reliance and "graft" which in turn determines the level of new business formation in an area. Investing in the infrastructure of partnership-working, in community institutions, would seem to be a direction that policy-makers should seriously consider, not least because investing in such institutions, particularly in the capital assets which help them to be sustainable in the longer term, if the experience of Magherafelt, Dungannon, Omagh and Armagh is anything to go by, can be better value for money than spending huge sums to incentivise foreign direct investors whose motive to maximise profit may ultimately take them away again to new investment pastures in the future, leaving behind not a legacy of self-reliance but a legacy of dependency. The return on investment which can be secured from the social economy potentially offers policy-makers an enormous opportunity.

This research does also seem to suggest that where the community/voluntary sector was most developed and social capital stocks were highest, efforts to secure development funds were at their most dynamic. It seems that in these areas the return on those development fund investments (such as those made by the Peace I programme) was high with respect not just to economic success outcomes, but also to social cohesion, as measured by low levels of crime and a commitment to civic participation. In areas such as Magherafelt, Dungannon, Omagh and Armagh this was not attributable to higher levels of public spending, to their location or to historic economic advantage.

This research presents a challenge to those who have been purveying what, with the exception of some initiatives instituted by the first Assembly between 1998 and 2001, has been a pretty rigid economic policy perspective. That policy perspective has been concentrated on attracting foreign direct investment, on enhancing the capabilities of large established companies and on encouraging technology transfer between higher education and business. All of these policies while without doubt individually defensible, have nevertheless collectively had a strong metropolitan bias. In their defence policy-makers at the Department of Enterprise, Trade and Investment (DETI) and Invest Northern Ireland have contended that large urban centres are where foreign investors have wanted to be and where the largest employers and universities have been located. Therefore, they have argued, inevitably their policies have had a metropolitan bias. The rationale for the middle-class metropolitan feel to Invest Northern Ireland's female entrepreneurship policy is less obvious, however (see Section 11.3.4).

Overall then there has been little of significance with respect to economic development policy (other than the Department of Agriculture and Rural Development's *Rural Development Programme*) on offer for the rest of Northern Ireland, and certainly nothing specific for those areas on the edge of Greater Belfast where the manufacturing industry and security-related activities which had been an important source of employment have been in significant decline, places like Larne, Carrickfergus and Ards.

What can be offered by economic development policy-makers to these places or to those areas around Northern Ireland's north coast which have become the new areas of relative economic weakness? The strategy suggested by this research is to look to the experience of those areas which historically were economically disadvantaged and isolated from the levers of political power, but which during the second half of the 1990s managed to attain high levels of success with respect to particular economic outcomes; outcomes which seemed to be important in determining an area's prospects of sustaining economic well-being into the future, namely business formation and expansion and job creation. It would seem important that stories of regeneration, of the attainment through collective effort of a level of self-reliance, should be celebrated and promoted; and that those social entrepreneurs who have helped to direct and advance local prosperity should be valued and invested in, just as vigorously as the sharp-suited prospective foreign investors who visit Belfast, for it is they who arguably will offer most in contributing to a balanced and stable economic future across all of Northern Ireland in the longer term.

In the next, final, chapter of this thesis, the scope for further research based on these and other findings and the questions which they raise (as well as the lessons learned in the course of this study) will be reflected upon.

CHAPTER TWELVE: REFLECTIONS

12.1 INTRODUCTION

In the course of this research a number of challenges have been faced and lessons learned which merit further consideration. The importance of clarifying the purpose of the research will be the first reflection considered in this chapter. This will be followed by a reflection on the limitations of Northern Ireland as a case study and the extent to which the local economic success index model developed as part of this research might be transferable to other regional economy settings. This will then be followed by a reflection on the challenge involved in setting timeframe parameters for the study. The existence of different forms of social capital and the possibility that the association of each with economic success might differ will be highlighted as an area which merits further research. This will be followed by a reflection on the challenge faced by researchers attempting to measure the impact of policy. Then, in light of the increasing interest among economic development policy-makers in female entrepreneurship, given the co-linearity (if not association) between social capital and the number of females staying at home and the number of females managing small businesses alongside the inverse association between both variables and the Local Economic Success Index, the case for more research into the role of women the economy will be discussed. The chapter will conclude with a reflection on the limitations of the locational advantage model used in this research.

12.2 CLARIFYING THE PURPOSE OF THE RESEARCH.

When this research began in 2001 its aim was to determine the extent to which collective community-based initiatives could shape the economic development of an area. Over the course of the following five years that aim has been progressively clarified into a series of specific, measurable, achievable, relevant and time-framed research objectives: Firstly, to define what was meant by locally-led initiative, which led to the focus on social capital; secondly, to define local economic success, which was identified as a more measurable concept than local economic development (but also acknowledging that a local economy was itself a disputable concept); thirdly, to concentrate on a specific geographical area to facilitate a more in-depth study, in this case Northern Ireland; and fourthly, to secure a comprehensive stock of data from which could be identified economic success outcomes and the inputs which potentially might have shaped those outcomes. Those parameters constrained the data which was available. That led to the decision to combine one year census snapshot data with time-series data in the analysis.

If substantial time had not been devoted to this process of clarification, the research would have been facile: The complexities of social capital would not have been understood; the issues with respect to defining economic success and a local economy would not have been appreciated; and the caveats which had to accompany findings in respect of the peculiarities of Northern Ireland would not have been recognised. What this process has ultimately generated is a set of potentially important, though heavily qualified, findings which, it is hoped, will be of interest to economists and policy-makers, particularly in Northern Ireland.

12.3 THE LIMITATIONS OF NORTHERN IRELAND AS CASE STUDY

To the extent that all regional case studies will involve the assessment of circumstances particular to certain territories and the people who inhabit them, there are limits on the transferability of findings between different settings. Northern Ireland is no less unique than any other region of 1.7m. But is it, as Cooke *et al* (2005) claimed, more peculiar than other regions? Certainly it is distinctive in a UK context in that another sovereign nation, the Irish Republic, has since the 1998 Good Friday/Belfast Agreement been a partner in some structures of Government and has been a co-funder of some of the bodies which have assisted economic development initiatives in the Province (the International Fund for Ireland, the Special EU Programme Body, and Intertrade Ireland). It is distinctive also as a small territory which was riven by a high profile conflict for almost three decades in the second half of the 20th Century. The violence of that conflict, the number of fatalities and injuries relative to the size of its population, was unique in post-war Western Europe. Segregation of populations and sectarian tensions, of course, are not unique to Northern Ireland. What is distinctive, however, is the comprehensiveness of the separation of two communities which are adherents of Christian faiths, speak the same language and share the same generic racial origins. They are delineated not by race, language or colour, but by where they live and by certain attitudes or cultural practices which are attributed to them. Any assessment of spatial development differentials in Northern Ireland must inevitably take that sectarian dynamic into account; and any assessment of the importance of social capital, the form of which, research seems to suggest, may be shaped by culture, must also take the role of the cultural differences between Northern Ireland's peoples into account as potentially outcome-altering factors. It has been an assumption which has underpinned this research that an analysis of the contribution which social capital may have made to the success of local economies in Northern Ireland could not be detached from such Northern Ireland-specific phenomena.

Research into how economies performed or developed in Northern Ireland has a particular value in Northern Ireland because it can potentially make a contribution to improved political and community understanding within the region. It can also be of value as a test of the appropriateness and effectiveness of particular policies. However, Northern Ireland-based research has to be so heavily caveated in respect of the inter-communal differences which prevail within the region that there are limits on its value for comparative case study purposes (although it could be argued that all regions will have some endogenous circumstances which are unique). It was because Northern Ireland was perceived to be so distinctive in so many ways that Casey (2004) and Cooke *et al* (2005) in their inter-regional studies of social capital decided to exclude Northern Ireland. Casey's rationale was that:

> "*there are too many extraneous factors shaping the economy of that troubled province to even attempt to isolate the impact of social capital*" (Casey, 2004, pp.100-102).

That perspective, however, has resulted in a gap in the international body of research on social capital, with no substantive attempt having yet been made to empirically isolate the impact of social capital in Northern Ireland; something which this research has attempted to rectify.

A Northern Ireland-based study can have external value when it explicitly attempts to reflect the role which cultural affiliation can play in the prevalence of certain circumstances; in the way that the Native American studies reported in Chapter Four were of interest to this research. While few communities, if any, in the European Union can be compared with a Native American reservation; nevertheless the studies of Native American tribes show that if communities are organised in a particular way, with a clear sense of common purpose, they can differentiate themselves from other communities living in similar circumstances. Analysing differentials within a territory, or within a population which has similar cultural affiliations, can generate useful insights into the way that communities react to particular sets of circumstances or the way that economic circumstances may reinforce particular cultural practices (e.g.: the collectivist response to financial exclusion which Credit Unions in Northern Ireland's Catholic community represent). A more detailed case study, perhaps focused on an individual Northern Ireland District Council Area, could be a potentially valuable source of evidence as to whether, within a small territory in which communities were divided, different practices or attitudes had been associated with different outcomes. As the size of the territory being studied increases the greater will be the number of extraneous factors which have to be controlled for. A locally-focused case study can more readily generate attitudinal survey data (for example in relation to trust) to augment the assessment over time of the performance of key actors in the local economy (such as private sector employers, active social enterprises, schools or FE Colleges).

12.4 THE TRANSFERABILITY OF THE RESEARCH

It was hoped when this research was initiated that it would add to the relatively limited body of international research on social capital, accepting that the relevance to other regions of its tentative findings, given the apparent peculiarities of social capital in Northern Ireland (Cooke *et al* 2005 p.1076), might in practice be somewhat limited. The literature review (Chapter Four) revealed that there was a lack of consensus as to how to define and measure social capital. There was agreement, however, that social capital, the form it takes and the significance which it may have in respect of the functioning of the structures of society and of an economy, is context-specific, wherever in the world it is a feature. The association between social capital and economic success outcomes was shown in the literature to have differed across the USA, within Europe, within Britain; and, this research has now suggested, even within a region such as Northern Ireland.

What has also become clear as this study has progressed is that more research is needed into what shapes social capital in its different forms and the way in which those different forms might contribute to particular outcomes. The analyses of social capital which have been carried out to date, including this research, have been attempts to record a static picture of the phenomenon. There is an absence of research on the influence of social capital over time, as an evolving product of human interaction, perhaps because it would be such a challenging, resource-intensive, long-term undertaking. Whatever the reasons for the dearth of research, the result is that there continues to be a lack of understanding as to the way that the collective actions of communities shape the destinies of their economies over time and this in turn restricts the transferability of findings (insofar as the findings which are likely to have wider applicability can be difficult to differentiate from those which are locally-specific).

That notwithstanding, what this research has demonstrated is the diversity of economic experiences which can prevail even within a relatively small region of 1.7 million people, Northern Ireland. Demonstrating the extent to which the success of local economies can vary within a region is a research outcome which will be of interest to the economic development research community generally, and not just those only interested in Northern Ireland. In that context, the local economic success model which was constructed as part of this research does appear to have considerable transferable value. Its composition was itself influenced by a number of earlier research projects: the work of the DORA project (2001) in measuring the economic performance of a sample of European regions, the attempts by various UK Government Departments to measure the performance of programmes of intervention (the DTI, the Treasury, the Office of the Deputy Prime Minister), and the work of Huggins (2003) and others who sought to empirically measure regional competitiveness using synthetic indices. In the literature on this subject there is substantial agreement as to what constitutes economic competitiveness or success. On that basis, the outcome measures adopted in this research could be deployed in other advanced economy settings, although there might be a debate as to whether the nine outcome measures which were adopted in this case would provide a sufficiently comprehensive picture of local economic success in other areas. Notwithstanding the possibility that the datasets from which outcome measures can be composed will differ from one country or region to another (with data, for example, which was unavailable in Northern Ireland, such as GDP per capita at NUTS IV level, perhaps being available elsewhere), the methodology used in this research, of capturing the multi-faceted complexity of economic success by constructing an index made up of a number of economic success outcomes, would appear to be transferable to other regions.

12.5 THE TIMEFRAME ISSUE

To contend with any degree of confidence that social capital or other factors contributed to the success trajectory of a local economy, historic outcome trends would have to be plotted over a significant timeframe, so that actual performance could be measured against expected outcomes (based on past performance). That timeframe, according to Storey (2004) should ideally be at least twenty years.

Unfortunately, measurement of the comprehensive array of variables deployed in this research was not possible over a twenty-year timeframe because some pertinent variables, such as the number of active community groups, job density and multiple deprivation, were simply not measured in 1981 (or for that matter in 1991) and the measurement of others, such as employment data, had changed so significantly over time that longitudinal comparisons were problematic. Moreover, for much of the twenty-year period preceding 2001, the distorting effects of the so-called "troubles" prevailed in Northern Ireland. For that reason, in this thesis success was measured not as a distance travelled over time, from weakness to strength, but rather as a snapshot of the relative position of 26 District Council Areas at a fixed point in time. Although, six time-series datasets were used in this research in an attempt to set that snapshot in a change context, they provided only a very limited insight in respect of the development trajectories of Northern Ireland's local economies and then only over a relatively short timeframe. In seeking to maximise the comprehensiveness of the assessment of the relative success status of Northern Ireland's local economies, a trade-off was made in which long-term trend analysis of the relatively small number of indicators for which data would have been available was sacrificed in favour of a multi-variate snapshot. The resulting picture of Northern Ireland's local economies while detailed lacked sufficient historic empirical evidence to allow anything more than generalised suggestions to be made as to what might have lain behind the patterns of association between social capital (and other variables) and local economic success outcomes. What the 2001 census year snapshot did generate were contemporaneous associations between a range of variables which reflected the complexities of social capital and the heterogeneity of Northern Ireland's local economies. The purpose of identifying associations between inputs and outcomes was not to provide an empirical "proof" (even associations identified following extensive time-series analysis cannot provide proof) but rather to highlight firstly that a set of associations existed and secondly to prompt an analysis which would draw on other research as well as practice experience to produce an *a priori* rationale which, as a body of coherent advocacy, could either challenge or add weight to the perspectives of the academic and policy-making community interested in economic development.

While a more detailed long-term trend analysis might have helped to better reflect the dynamic nature of economic development that would have been an analytical front along which it would in practice have been very difficult to make progress. Uncovering an explanation for a change in trajectory can be particularly problematic: Would the change have been attributable to a single influential event or might it have been the result of a series of events? Would those events of themselves have been enough for a course to have been altered or may there have been other accelerants with which those events interacted?

If, in a comparative study of local economies, the trajectories of some places were found to have altered at different times and at a different pace from others, the prospect of securing an explanation would be reduced even further. A large number of exogenous factors would have to be considered as having possibly exerted an influence, with the very real risk that some of them might be missed or under-rated. To measure the economic performance trajectories over time of Northern Ireland's local economies would have required a very much larger piece of research than that presented in this thesis. A large number of variables would have had to be measured, ideally over a ten, or where possible, a twenty year timeframe. Changes within those reference timeframes, in particular those which departed from the Northern Ireland norm, would have had to be isolated, to determine to what extent they had been associated with other exogenous events; with the exponential rate of exogenous change in recent years adding a further complication. Any researcher attempting to empirically analyse and explain altered trajectories over time would do well to reflect on the scale of the analysis which was necessary in this research just to identify associations between variables within what was principally a one year timeframe.

12.6 DIFFERENT FORMS OF SOCIAL CAPITAL

This research measured the association between local economic success and nine social capital indicators along with a measure of cultural and religious affiliation. Two of those indicators measured associationalism; two measured the effectiveness of community groups; one measured civic participation; one measured educational attainment; and one measured participation in higher education. No measures of "trust", however, were used because no such data was available at District Council Area level in Northern Ireland and it was beyond the capacity of this research to design a trust survey specifically for use in this thesis. The absence of attitudinal data from this intra-regional analysis does distinguish it from the inter-regional comparisons of social capital carried out by Casey (2004) and Iyer *et al* (2005); though Iyer *et al* (2005) did accept that trust measures posed:

> "*problems of robust empirical analysis*" (Iyer *et al* 2005, p.1021).

The Iyer *et al* (2005) study of social capital in the USA measured participation in religious institutions in an attempt to create an indicator of "bonded" social capital. Participation in structures in Northern Ireland which could be categorised as explicitly "bonded" social capital, in which only one religious group or community was likely to have participated, such as church groups, sporting and cultural organisations (like the GAA or Orange Order), might have provided a useful insight into whether deleterious effects had resulted from what Cooke *et al* (2005) described as:

> "*the heightened role that ethnic religious societies and affiliations play in everyday economic life in Northern Ireland*" (Cooke *et al*, 2005, p.1072).

It would have allowed the testing of the assertions by Gaffiken and Morrissey (2001) that much of the social capital in Northern Ireland was ethnically rather than civically based and generated:

> "*a hyper-segregation that deepens inter-communal rivalries*" (Gaffikin and Morrissey, 2001, p.11);

...... and of Murtagh (2001) that:

> "*social capital in Northern Ireland was a product of asymmetrical efforts to survive, protect and grow*" (Murtagh, 2001, p.53).

To that end, it would have been useful to have tested whether Catholic social capital was in any way differently associated with economic success than Protestant social capital.

However, beyond Credit Union membership, which could have been rationalised as more of a Catholic than a Protestant phenomenon, there were no measures in this research of explicitly Catholic or Protestant manifestations of social capital. Even Credit Union membership was not exclusively Catholic. In 2001 there were Credit Unions in Protestant areas which were networked in the Federation of Credit Unions. Asserting that a "Credit Union" was predominantly Catholic or Protestant would have been a judgment call, not an empirical fact, because the religious/cultural affiliation of Credit Union members was not recorded in 2001 (nor was it for community group numbers or voluntary directors of community businesses). Just because a community group or a Credit Union was located in a predominantly Catholic or Protestant area did not necessarily mean that its membership was restricted to members of either community. In fact, by 2001 many groups were actively seeking to encourage "cross-community" participation, with funders increasingly requiring evidence that groups reflected a balance of the two communities in their areas. Because data on participation in voluntary and community sector activity by religious or cultural affiliation was not available, participation in either "bonded" or "bridging" social capital activities was not measured in this research.

While it was a valuable exercise to have assessed whether the social capital manifest in community group activity, the social economy, civic participation and education, was associated with local economic success; in the future it would be, as Cooke *et al* (2005) suggested:

> "*fruitful and interesting*" (Cooke *et al, 2005,* p.1076)

...... for a means to be found to uncover the extent of:

> "*the peculiarities of social capital in Northern Ireland*" (Cooke *et al,* 2005, p.1076).

Given the distinction made in the literature between bonding and bridging social capital, an objective of future research in this area should be to differentiate the various forms of "social" and particularly of potentially "unsocial" capital in Northern Ireland and to test how their association with local economic success differed. If some forms of social capital were shown to have a more positive influence on the achievement of economic success outcomes, that could have implications for the future direction of Government support to the community/voluntary sector and the social economy in the region.

12.7 POLICY

Although policy was considered as a potential local economic success input in the context of the assessment of social capital, it was not a research objective to analyse the impact of policy per se. If it had been, then a more comprehensive set of policy variables would have had to be identified. But deciding how "comprehensive" would not have been easy: How comprehensive would have been realistic? So many policies interlock: Can business support policies be detached from wider fiscal policies, or planning policies, or social security and health policies, or health and safety policies and so on?

To determine whether a policy intervention did or did not have an impact on economic success in a particular area, all the outputs of that policy would have to be measured, controlling for as many other potential influencer variables as possible, relative to other areas in which the policy operated and others in which it did not. A counter factual analysis, in which an attempt is made to extrapolate what an outcome would have been had a policy not been instituted, would be one way of attempting to isolate its impact.

Policy can often take time, considerable time, sometimes a decade or more, to influence a situation. The effects of a policy may not be contemporaneous with the time when it is in place, possibly not being felt until some time after it has been discontinued. Also, tracking a policy impact can be problematic, firstly because some of its effects may be unanticipated and secondly because it can be difficult to isolate the secondary or tertiary effects which may contribute to an outcome.

Policy-makers deploying third-party funds from the European Union, have increasingly been required, as part of an implementation contract (i.e. the "Operational Programme") to specify output targets and to attempt to set those against baselines. While this may not always have produced realistic targets, it has at least generated some measurement data. Other policies such as Northern Ireland's equality legislation, or the Targeting Social Need programme, however, have not been consistently underpinned over time by explicit output measures.

Securing comparable output and outcome data related to the implementation of particular policies is further complicated when policies are amended during their lifetime, as they so often are. Most policies are standardised and are not easily moulded to suit variations in local circumstances. This presents yet another measurement challenge: If local circumstances change during the course of (or after) a policy has been in place, how much of that change might be attributed to the pre-existing differences between areas which anyway existed (these would need to have been identified and measured) and how much might be attributed to the policy?

Assessments of policy impacts have the potential to contribute to a greater understanding of what makes some areas more economically successful than others. However, to measure its impact effectively the policy must be put in a circumstantial context before, during and after its implementation. To do this, other potential influences need to be controlled for. However, controlling for such exogenous change factors requires that a complex model of the real world is constructed. This is difficult enough in a snapshot analysis, as this research has demonstrated; but attempting to do it over an extended time-frame, controlling for changing exogenous circumstances while also tracking changing endogenous factors, and doing that alongside a control group which was not subject to the policy – that is a formidable undertaking; something likely to require a dedicated team of researchers with the resources and rights of access to generate data on what might have to be a truly grand scale. Given such problems, imputation is the approach adopted by most researchers (including this one). The objectives of policies are considered against prevailing circumstances, cross-referenced with the assessments of other experienced commentators and practitioners, and qualified assertions made as to whether policies were or were not likely to have been affected by those circumstances. In the future, a researcher's ability to assess a policy's impact would be greatly improved if policy evaluation frameworks included baseline measures of socio-economic conditions which could be tracked alongside direct policy outputs.

12.8 WOMEN

It is an assumption which underpins economic development policy in Northern Ireland that:

> "*the most entrepreneurial countries are those in which the gender representation in entrepreneurial activity is most finely balanced*" (The Department of Enterprise Trade and Investment, Northern Ireland, 2006, p.104).

DETI's rationale for its women and enterprise policy is based on evidence that the level of entrepreneurial activity among women in Northern Ireland is the lowest of all UK regions (O'Reilly and Hart 2006 – DETI Economic Bulletin p.105); this in the context of a wider concern within Government about the low level of business formation in Northern Ireland generally and the region's over-dependence on public sector employment. The imputation is that women represent an:

> "*enormous pool of untapped potential*" (DETI 2006 p.114),

...... the economic impact of which could be enormous:

> "*If as many women as men were engaged in early stage entrepreneurial activity in Northern Ireland this would lead to 28,500 more female entrepreneurs, making Northern Ireland the leading region in terms of entrepreneurship*" (DETI, 2006, p.118).

However, Wilson *et al* (2004), cautioning that there was a need for a strong economic argument to be made to justify the UK Government's support for a women's enterprise policy, highlighted a lack of robust, academic research evidence on the subject. O'Reilly and Hart writing in the 2006 DETI Northern Ireland Economic Bulletin acknowledged as much:

> "*Understanding female entrepreneurship is therefore critical ...... to what extent is it influenced by the demographics of a region or the structure of its*

economy? Is it the personal activities/characteristics of individuals or the cultural support towards entrepreneurship which are the key drivers?" (DETI, 2006 p.104).

The findings in this research, which are either an intriguing set of actual associations or a product of coincidence, suggest that further research is required into the role of women in the functioning of local economies and in developing and sustaining social capital. Challenging questions which future researchers might consider include:

- Are women involved more in some forms of social capital than others?
- If there are forms of social capital which women favour, what other conditions are associated with their prevalence? What influences might those forms of social capital have on economic outcomes?
- Are women less inclined to run small businesss in economically successful areas?
- If more women run small businesses in less economically successful areas, why might it be that women generally in those areas also appear to be less economically active than elsewhere?
- Are women more necessity than opportunity-driven when it comes to participating in social capital-based activity and in the economy?
- Are women more risk averse than men? If so, why?
- To what extent are the attitudes of women to staying at home, running a small business or investing social capital influenced by cultural/religious affiliation or socio-economic status?
- Are differential patterns of female participation a product of or a contributor to particular sets of economic circumstances?

From a Northern Ireland policy perspective (i.e.: the Investing In Women initiative which forms part of the Accelerating Entrepreneurship Strategy), the role in particular of cultural identity and socio-economic status in shaping differential patterns of female participation in social capital-based activities and in the economy more generally across Northern Ireland must be better understood:

Are females involved in community/voluntary sector activity or in running businesses more likely to be Catholic or Protestant or is religious/cultural identity not a factor? Are Catholic women more likely to stay at home or is it the case that more rural women, of whatever cultural hue, stay at home than urban? Are the women who stay at home more likely to be in well-resourced families which offer them the opportunity to make a lifestyle choice? Or are they more likely to be benefit-dependent, caught in a poverty trap? Or is class not a factor? Are women who stay at home and who are not eocnomically active more likely to be "social-capital active"? This research seemed to suggest that "women staying at home" was more of a Catholic than a Protestant phenomenon. Whether this was the case, over time, and to what extent the decisions of women were a cause or an effect of local economic success is another area which would seem to merit separate future research.

Both the measures of female economic acitivity deployed in this research, while offering tantalising hints of a gender dimension to local economic success in Northern Ireland, provide only a limited insight into how females participate in an economy. Less of a propensity to stay at home, for example, may suggest more of a propensity to be economically active; but in being economically active it is not clear what precise form that economic activity took in 2001; only that fewer women in areas ranked as economically successful were involved in running small businesses.

Future research, as well as analysing these two datasets, should seek to measure the number of women engaged in various forms of social capital-based activity, the levels of female self-employment, female educational attainment, female earnings, female employment by sector and job type, levels of female full and part-time employment, the age of and family status of the female self-employed and employed; and crucially such research should be based on longitudinal datasets, to identify whether the role of women has changed over time. The weakness with the data in this research which related to women is that it was static, focused only on 2001. The absence of time-series trends means that it could not be speculated as to whether higher numbers of female small employers in less economically successful areas might in the future have made those areas more economically successful by inspiring more women to move out of the home and into economic activity; or whether a proportion of economically active women in prosperous areas would at some point in the future have themselves become employers.

How are the attitudes of women to running a small business affected by wider economic circumstances? Do women's attitudes differ from those of men? The Global Entrepreneurship Monitor (GEM) described entrepreneurship as a state of mind and a set of attitudes as well as a *modus operandi*. GEM surveyed the attitudes of women to entrepreneurship across Northern Ireland in 2003, 2004 and 2005. Integrating those attitudinal findings with analysis of census and other data would provide policy-makers with a powerful insight into whether and to what extent there has indeed been a gender dimension to the success of Northern Ireland's local economies.

12.9 MEASURING LOCATIONAL ADVANTAGE

The gravity model used in this research was a relatively crude construction. It took, as a proxy for the magnetism of the Belfast and Dublin economies, the size of their international airports in respect of passenger through-put. It thus made the assumption that there was a read-across from the scale of an airport to the level of economic activity in the greater metropolitan area of which it was a part. Such an assumption is open to question – is an airport's location and size a function of its strategic role in relation to the country as a whole or of its proximity to a large metropolitan area, or a bit of both? Is the level of economic activity in a nearby metropolitan centre likely to be reflected in the activity of an airport? If the airport also serves the rest of the country what effect will differences in economic activity between the metropolitan centre and the rest of the country have on the airport? And what is meant by economic activity?

In the body of the thesis the limitations of the locational advantage indicator were acknowledged. It was only one of 38 variables. As such, the additional resources required to extend its sophistication could not be justified. However, if a locational advantage gravity model were to play a more prominent role in future research it should be more sophisticated, taking account of other important dimensions of an agglomeration economy, such as the number of jobs located there, the level of investment (public and private) which it attracts, the level of research and development centred there, and so on. Ideally a gravity model should also be multi-polar. Although the two large metropolitan centres in Ireland, Belfast and Dublin, are the predominant poles within the economies of their respective States; nevertheless, the extent of that significance relative to other centres should be verified. The bi-polar model developed for this research would not transfer well to north-west England, for example, where there are a number of significant metropolitan centres and a number of airports, all within relatively close geographical proximity.

A further weakness of the locational advantage model used in this research is its use of weighted road mileage to measure the magnetic range of each pole. This assumes that the scope of each pole to "magnetise" is a function of distance across a plane over which economic actors can move unhindered. Of course, in Ireland the border in 2001 still represented a significant barrier to trade and economic interaction between Northern Ireland and the Republic of Ireland. To assume that a road mile between Belfast and Dublin would be an adequate measure of "distance" took no account of these continuing distortions. Far from dividing distance to Dublin by a factor of four, a counter-argument could have been made that the distance should have been increased by a weighting which was a function of the barrier to economic interaction between Northern Ireland and Dublin which the border still represented.

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APPENDICES

APPENDIX 1: THE INDICATORS

ECONOMIC SUCCESS OUTCOME INDICATORS

The number of companies which had newly registered for VAT between 1997 and 2001 per 10,000 adult resident population (*VATreg*)

The Small Business Service supplied data on new VAT registrations across all sectors for each District Council Area for the years from 1997-2001. Agriculture was subsequently excluded from the data set because the number of farmers registered for VAT may have skewed the figures in respect of business formation in rural District Council Areas. The VAT registration figures, excluding agriculture, were added for the five years 1997-2001 to provide an aggregate measure of the scale of business formation in each District Council Area over the five year post-ceasefire period 1997-2001. These figures were then standardised per 10,000 adult resident population.

The competitiveness differential in the total stock of VAT registered companies 1997-2001 (*stockcompchge*)

The VAT registration data supplied for each District Council Area by the Small Business Service included figures on the total number of (existing) VAT registered businesses by Standard Industrial Classification (SIC) sector in each year between 1997 and 2001. The total number of businesses by sector in each District Council Area in 1997 and 2001 was standardised per 10,000 adult resident population. The shift/share method was used to first measure the change which had taken place between 1997 and 2001 in the number of companies per 10,000 adult resident population in each sector in each District Council Area, and then to establish whether that change had been greater than or less than the total Northern Ireland sector change. That difference is described in the thesis as the "competitiveness differential". The rationale for using this indicator is described in more detail in Chapter Seven and a sample shift/share calculation for one District Council Area is set out in Appendix Three.

The proportion of the stock of VAT registered companies in each District Council Area which were business support services in 2001 (*servbus*)

From the VAT registration data supplied for each District Council Area by the Small Service Service, the total number of (existing) VAT registered businesses in SIC sectors J and K were isolated and standardised per 10,000 adult resident population. This group of businesses was defined as "Business Services". The proportion of the total VAT registered stock in each District Council Area (standardised per 10,000 adult resident population) which were Business Services was then worked out.

Employment change competitiveness differential 1997 and 2001 (*empcompchange*)

The Northern Ireland Census of Employment provides data on the numbers employed in each SIC sector in each District Council Area in 1997 and 2001. 1997 was adopted as the post-ceasefire base year against which the change in employment by 2001 would be calculated. These figures were standardised per 10,000 adult resident population. Total Northern Ireland numbers by SIC sector for both years were also calculated. The change in employment numbers in each SIC in each District Council Area which had taken place between 1997 and 2001 was next worked out. The shift/share method was then used to work out to what extent the changes which had taken place had differed from the Northern Ireland rate of change in each sector. The total difference across all sectors in each District Council Area was described as the "competitiveness differential". The rationale for using this method is described in more detail in Chapter Seven and there is a sample shift/share calculation at Appendix Three.

Job density in each District Council Area – 2001 actual figure (*jobdens*)

The Department of Enterprise Trade and Investment in Northern Ireland calculates job density figures for each District Council Area. Figures were obtained for 2001. The job density is defined as the total number of jobs in an area divided by the resident working age population. Total jobs are comprised of employee jobs, self-employed jobs, H.M. Forces and Government-supported trainees. Job density is an indicator of labour demand. Of interest as part of this research was the association between labour demand and local economic success.

Average earnings in each District Council Area – 2001 (*meanearn*)

The Northern Ireland Department of Enterprise Trade and Investment (DETI) New Earnings Survey in 2001 calculated average gross weekly earnings by District Council area based on a sector-standardised sample survey of 2000 employers across Northern Ireland's 26 District Council areas. The New Earnings Survey is a statutory survey carried out annually in Northern Ireland. It provides a range of information on the levels, the distribution and the make-up of earnings, hours worked and earnings by age in the private and public sectors. Figures are attributed to District Council Areas according to the location of the workplaces surveyed.

Low redundancies confirmed redundancies in 2001 in each District Council Area per 10,000 adult resident population (*redund*)

The Department of Enterprise Trade and Investment (DETI) in Northern Ireland gathers data every month on confirmed, i.e. actual as opposed to announced, redundancies by District Council area. Data is published annually. DETI redundancy data for 2001, for the purposes of this research, was standardised for each District Council area, per 10,000 adult resident population. The rationale for obtaining data on the level of redundancies in each District Council Area was that it would highlight the extent to which labour was being shed across Northern Ireland's local economies. However, not all redundancies are the product of businesses closing down completely. Some of them may also be a function of companies restructuring as part of a pro-active competitiveness strategy. In that sense redundancies can be an indication of an economy in the process of modernisation. That said, fewer redundancies do suggest that there is stability in a local economy and that can be taken as an indicator of local economic success. Moreover, redundancies, even when they are the product of a modernisation process, if they are not at least matched by the creation of new employment and business opportunities, will constitute a net loss of income and the creation of an inefficiency in respect of unemployed or under-employed labour; thus constituting a negative success factor. The pattern of redundancies, its association with the pattern of other local economic success factors and the influence of other variables on that pattern was therefore of interest to this research.

Low deprivation – District Council Area Multiple Deprivation scores (i.e. average of ward scores) – 2001 (*depriv*)

The Northern Ireland Statistical research Agency (NISRA) commissioned the Social Disadvantage Research Centre at Oxford University to update the 1995 Robson study of Multiple Deprivation in Northern Ireland using 2001 census data to produce a Multiple Deprivation Measure (MDM) for each ward and each District Council Area in Northern Ireland as a means of designating priority Targeting Social Need (TSN) areas. That index was a synthesis of seven so-called *domain deprivation measures*. The Multiple Deprivation Measure weighted these domains as follows:

> Income 25 per cent; employment 25 per cent; health and disability 15 per cent; education skills and training 15 per cent; geographical access to services 10 per cent; social environment 5 per cent and housing stress 5 per cent.

For the purposes of this research a population weighted average of the combined MDM scores of all the wards in each District Council Area was used. The advantage of this *Average of Ward Scores* measure was that it took account of the presence of the more deprived wards whose more extreme scores may not have been revealed to the same extent if ranks had been used. The relationship between these scores and the local economic success indices for each DCA was of major interest. *A priori* it could be assumed that areas recording high deprivation scores would be those which were least economically successful; although in Northern Ireland there may not have been a straightforward association between deprivation and economic success because some of the deprivation identified in the 2001 TSN analysis may have been attributable to the embedded legacy of economic under-development in some (predominantly Catholic) areas between the 1960s and the 1990s. However, the circumstances of Catholic areas had improved markedly in the 1990s and that trend was continuing through 2001. This was evident in high levels of new job creation and new business formation in Catholic areas. It was, therefore, possible that some District Council Areas may at one and the same time have recorded both high levels of deprivation and a high economic success score. It was an intention of this research to examine the extent to which this may or may not have been the case.

Population change 1991 – 2001 (*popchange*)

The Northern Ireland Statistical Research Agency (NISRA) supplied mid-year estimates of the change in the population of each District Council Area between 2001 and 1991.

SOCIAL CAPITAL INPUT INDICATORS

Number of Catholics resident in each District Council Area per 10,000 adult resident population – 2001 Census (*Catholics*)

The 2001 census of population asked respondents to declare their religious affiliation. 40.26% declared they were Catholic, 20.69% that they were Presbyterian, 15.31% that they were Church of Ireland, 3.51% that they were Methodist, 6.07% that they were Other Christian, 0.3% other religions or philosophies and 13.88% that they had no religion. Another dataset attributed a "community background" to the population of each District Council Area. This recorded higher figures for both communities: Catholics at 43.76% and all Protestants at 53.13%, the difference having been made up by an allocation (controversially) of those who had declared "no religion" to one or other of the two religious/cultural blocs. For the purposes of this research, however, the figures which were used to define resident Catholics were those generated by people who had themselves declared a religious affiliation (i.e. the lesser figures). While the predominance of one or other community in each District Council Area was not changed, these figures show District Councils as marginally less populated by one community or the other. 75.89% of respondents in Newry and Mourne, for example, declared in the census that they were Catholic, whereas 80.64% were also attributed in the census to being of a "Catholic background". The decision to use the former figure has been rationalised on the basis that there was an emerging third community in Northern Ireland which expressly did not want to be allocated to one or other group.

The number of active community groups involved in community economic development per 10,000 adult resident population by District Council Area, 2001 (*eccdevbus)*

The Northern Ireland Council for Voluntary Action was established in 1938, initially as the Northern Ireland Council for Social Services and was renamed NICVA in 1986. It is an umbrella organisation for voluntary and community groups. It has specialised in providing support to community-led projects which tackle social deprivation.

The 2001 NICVA (Northern Ireland Council for Voluntary Action) census of community and voluntary organisations in Northern Ireland recorded the number of active community groups in each District Council Area and categorised them by their primary purpose.

Primary Purpose	%
Education and training	18
Economic/Community Development	15
General charitable purposes	10
Medical/Health/Sickness	7
Arts/Culture	7
Advice/Advisory information	7
Disability	6
Environment/Conservation/Heritage	5
Accommodation/Housing	4
Sport/Recreation	3
Cross border/Cross Community	3
Other	3
Religious Activities	2
Youth Work/Development	2
Relief of Poverty	1
Rural Development	1
Community Transport	1
Counselling Support	1
Animals	0.5
Playgroup/After Schools	0.5
Overseas Aid/Famine Relief	0.4
Volunteering Development	0.4
Urban Development	0.3
Search and Rescue	0.1

Source: (NICVA 2001)

Of interest to this research were those groups whose primary purpose was economic/community development. They represented 15 per cent of all the groups which had been surveyed and were the second biggest category after education and training. The 708 Groups in this category were standardised per 10,000 adult resident population by District Council Area. Given the experience of NICVA and the size of Northern Ireland this represented as close to a definitive count of community-led economic development activity as it was possible to secure and it provided a potentially important measure of the extent of the social capital in each District Council Area which was being directly invested in securing and sustaining local economic success.

NICVA described active as follows:

> *"Quite simply organisations which are deemed to be "active" are ones which we understand to be operational. Of course, organisations are under no statutory or legislative obligation to inform NICVA when they cease to be operationally active. Our means of determining if organisations are active is through surveys, updating databases, membership renewals etc".*

Applications made by community/voluntary sector groups to the National Lottery Community Fund 1995-2002 per 10,000 adult resident population in each District Council Area (*CommFund*)

The "Community Fund" is the operating name of the National Lottery Charities Board which was set up by the UK Parliament in 1994 to distribute money raised by the National Lottery to charities and voluntary and community groups throughout the UK. The first round of grant awards were announced in October 1995.

Between 1995 and 2001 the Community Fund Unit based in Belfast on a number of occasions publicly advertised for applications in morning and evening papers sold Northern Ireland-wide and read by both communities. The availability of funds for projects seeking to achieve specific objectives was also promoted through a number of intermediary organisations across Northern Ireland whose remit was to support community group activity.

During this period: The number of applications made and the size of grants being sought was recorded by District Council Area as well as the actual number of grant packages and the amounts of grant aid awarded globally per District Council Area. At Northern Ireland level only 30 per cent of the applications submitted for funding were successful in securing grant aid and only 20 per cent of the aid requested was actually awarded.

For the purposes of this research the number of applications made was adopted as a measure of the dynamism of the community/voluntary sectors in each District Council Area, the rationale being that the ultimate success of the applications was less important to this research than the act of making the application and what that indicated about the level of community/voluntary sector activity in terms of ambition and competence, and what that suggested about the level of **social capital**, in each District Council Area in Northern Ireland. Making an application for financial assistance from the Community Fund would have required a significant degree of organisation within a group, from intelligence-gathering in respect of funding opportunities, to acquiring an application form, through to completing a complex document which required the sign-off of office bearers within the group. The fact that two-thirds of applications were ultimately unsuccessful was, according to the Community Fund, more a function of the 4:1 overbid against available funds than it was attributable to the poor quality of the applications submitted against the scheme criteria.

Community Groups in Receipt of Peace 1 Funding 2001 per 10,000 adult resident population in each District Council Area (*PeaceIFund*)

The EU Special Support Programme for Peace and Reconciliation was set up by the European Union in 1995 to provide financial assistance to projects which contributed to peace-building in Northern Ireland by promoting social inclusion, boosting economic growth and stimulating social and/or economic regeneration.

For the Programme period which includes 2001, £34m was awarded to community groups across the 26 District Council Areas which represented 10.5 per cent of all the Peace I money invested in the Province. In total the Peace I programme provided support for 584 community group-led projects.

Peace and Reconciliation Programmes in Northern Ireland between 1996 (when the first round of grant awards were made) and 2001 were administered by various Central Government departments and agencies as well as a number of Intermediary Funding Bodies whose responsibility it was to award grants to projects which supported particular target groups (e.g. in relation to women, support to pre-school children, victims of violence). A specific allocation of funds was also made to each of 26 District Partnerships in Northern Ireland, which had been set up to be co-terminus with the District Council Areas. The 1995-2001 Programme was succeeded by a second Peace and Reconciliation Programme which was duly labelled Peace II, (the first programme is now widely referred to as Peace I).

Aggregate data on the investment of Peace I monies in Northern Ireland is held by the Special EU Programmes Body (SEUPB), the institution established under the Belfast Agreement in 1998 to manage the transition from Peace I to Peace II and the subsequent co-ordination of the Peace II programme not just in Northern Ireland but in the border counties of the Irish Republic. All projects funded under the Peace I programme were entered onto a central database managed by the SEUPB, for the purpose of ensuring that projects did not secure grants for the same activity from more than one of the many and overlapping arms of Peace I fund management. The result was a very useful source of data.

Peace I was a very significant source of support for community-led action between 1995 and 2001. The SEUPB database records all allocations of Peace I funds to the community voluntary sector, by District Council area, from all the administering bodies. Thus, for the Programme period which includes 2001, £34m was awarded to community groups across the 26 District Council areas which represented 10.5 per cent of all the Peace I money invested in the Province. In total the Peace I programme provided support for 11,079 projects (an average of £29,000 per project) of which 584 (5 per cent) were community group-led. Interestingly, the average award to community groups was £58,000, suggesting relatively large-scale ambitious community-led projects. The distribution of these funding allocations per capita by District Council area is a measure of the strength, competence and dynamism of the community sector in each area.

Competition for funds within the Peace I Programme was intense. The application procedure was rigorous and criticised by many politicians as being onerous. Only community/voluntary sector groups which could demonstrate that they could manage their grant diligently were awarded funding. These groups had to be able to organise, negotiate and ultimately operationalise. To achieve that required a substantial investment of social capital. These SEUPB Peace I figures were subsequently used by the Community Foundation for Northern Ireland, formerly the Northern Ireland Voluntary Trust, to identify areas respectively with strong and areas with weak community infrastructure, with a view to proposing that support within the Peace II programme should be focused on developing the social capital capacity of areas which had weak community infrastructure. Analysts who advised SEUPB in respect of administering the Peace II Programme also made a definitive link between the success of groups by District Council Area in securing Peace I funds and the level of development of community infrastructure those areas.

Numbers of Community Businesses supported under the auspices of the Community Business Start-up Programme (delivered by Local Enterprise Agencies) per 10,000 adult resident population by District Council Area, 2001 (*commbus*)

The number of community businesses in receipt of Government-sponsored support was a useful measure of the level of community business and social enterprise activity across Northern Ireland. The Community Business Start-up Programme was the principal vehicle by which Government in Northern Ireland, through the small business agency LEDU (up to the end of 2001) and thereafter Invest Northern Ireland (INI), supported the social economy in Northern Ireland. The Programme offered a package of mentoring support and financial assistance for newly established community businesses. It was also delivered on behalf of LEDU across all of Northern Ireland by five of the Province's community-led Local Enterprise Agencies (themselves social enterprises), all of which had been appointed because they had the capacity and experience to meet the demand for support from the social economy sector in their areas. To be supported by the programme organisations had to demonstrate that they had a not-for-profit social purpose and were, therefore, a focus for the investment of social capital. The community businesses supported through the programme were either start-up ventures or in their first year of trading. They had to demonstrate that they would be viable as self-financing trading businesses after two years. They were all guided by unpaid Boards of voluntary directors who had committed themselves in their memoranda and articles of association not to take any payment for their services and to re-cycle future profits into the community businesses or other community development activity.

Credit Union membership per 10,000 adult resident population by District Council Area (*Credit Union*)

Data on Credit Union membership was acquired from the Department of Enterprise Trade and Investment in Northern Ireland. The names of Credit Unions were anonymised. Postcodes allowed the membership to be attributed to District Council Areas. All 194 Credit Unions in Northern Ireland were included. Credit Unions in the Province are affiliated either to the Irish League of Credit Unions or the Ulster Federation of Credit Unions. 25 per cent (343,382 people) of Northern Ireland's population were Credit Union members. These District Council Area Credit Union membership figures were standardised per 10,000 adult resident population. Credit Union membership ranged from an exceptionally high 63 per cent of the adult resident population in Dungannon to a negligible 1.5 per cent in Castlereagh. Credit Union membership was a potentially useful measure of social capital because Credit Unions were run by boards of voluntary directors membership required more active interaction with the organisation and its mission than did being a customer of a high street bank, and membership was drawn from within a tightly defined common bond area so that any local differences could be more readily related to local circumstances.

Number of people holding 5+ GCSEs in each District Council Area per 10,000 adult resident population (*qualnew*)

The 2001 census of population recorded the percentage of persons aged 16-74 in each District Council Area who declared that they had attained 5+ GCSEs at grades A-C.

The percentage of persons in each District Council Area aged 16-74 who declared they were full-time students – 2001 (*studsall*)

The 2001 Census recorded the number of persons aged 16-74 in each District Council Area who declared that they were students studying full-time in further and higher education. These figures provide a measure of participation in further and higher education and the potential within each local economy to generate higher level skills in the future.

The proportion of voters in each District Council Area exercising their franchise in the 2001 District Council elections (*voter particptn)*

2001 District Council electoral statistics were secured from the joint Queen's University Belfast/University of Ulster "Northern Ireland Social and Political Archive" (the ARK Project) – see www.ark.ac.uk/elections.

Local Enterprise Agency workspace square footage per 10,000 adult resident population in each District Council Area (*LEAsqft)*

Local Enterprise Agencies (LEAs) were established as companies limited by guarantee, managed by boards of voluntary directors, to support enterprise development in each District Council Area in Northern Ireland under the auspices of a Government Local Economic Development (LED) programme between 1984 and 1995. Each LEA was financially assisted when it was established to build workspace facilities in the form of single block enterprise centres or larger scale industrial estates or business parks. The scale of the facilities developed by each

LEA was determined by its capacity to contribute resources to the development, its ambition in terms of the scale of provision it was prepared to manage, the availability of sites and the perceived need in its area. It was anticipated that the rental income generated from this workspace would help to support the activities of LEAs in promoting enterprise while building-in a degree of sustainability to the delivery of these services.

There are 32 Enterprise Agencies in Northern Ireland, 24 of which operate in areas contiguous with District Council boundaries and 7 of which operate in the Belfast City Council area, reflecting the sectarian geography of the City. LEAs, led by local volunteers and the foci for the investment of social capital by communities across Northern Ireland, were potentially an important indicator of the extent to which locally-led action was associated with local economic success. Would the investment of social capital through LEAs differ across Northern Ireland? Would this be observable in differential levels of LEA energy and dynamism? How could LEA energy and dynamism be measured? The indicator chosen as part of this research was the square footage of workspace in the ownership of LEAs, the rationale being that the more dynamic LEAs would be expected to have larger workspace assets; having striven to secure additional funds after their initial set-up to expand their workspace assets. Because some LEAs had been established in the early to mid 1990s while others had been established in the mid-1980s, measuring workspace only at 2001 may not have taken account of the plans which the younger LEAs may have had in place but which had not been realised at that point. Therefore, LEA workspace was measured up to mid-2004, on the grounds that the delivery timeframe, from the conception of expansion plans, through the acquisition of funding to construction, would typically be three years.

LEAs are social enterprises intervening to support local economic development. It was a research assumption that if social capital did have an influence on the success of local economies within Northern Ireland this would be manifest in a measure of the dynamism of Local Enterprise Agencies.

LABOUR MARKET INPUT INDICATORS

Average gross weekly earnings in the private sector, in each District Council Area, 2001 (*wagepriv*)

Average private sector wages by District Council Area were taken from the DETI New Earnings Survey as a measure of the extent to which private sector wages varied across Northern Ireland's 26 District Council Area local economies.

Average hours worked per employee by District Council Area, 2001 (*allhrsworked*)

The Department of Enterprise Trade and Investment's 2001 New Earnings Survey also provided data on the average number of hours worked by employees in each District Council Area. These figures were of interest because, taken together with average earnings, they provided a measure of the prevalence of low-value or high-value employment in each District Council Area.

The percentage of females aged 16-74 in each District Council Area who were small employers and own account workers (*smlempfem*)

The 2001 census recorded the percentage of females aged 16-74 in each District Council area who declared themselves to be "*Small Employers and Own Account Workers*". "*Small Employers*" were defined as being:

> "*Persons who employ others (and thus assume some degree of control over them) and carry out all or most of the entrepreneurial and managerial functions of the enterprise but employs less than 25 employees ...... small employers remain essentially in direct control of their enterprises ...... the majority of small employers have only one or two and at most ten employees*"

"*Own account workers*" were included in this group also. They were defined as being self-employed with no employees other than family workers. These figures provide a proxy measure of the level of female entrepreneurship in each local economy in Northern Ireland.

The percentage of persons aged 16-74 in each District Council Area who were self-employed in 2001 (*allslfemp*)

The 2001 census recorded the percentage of all persons aged 16-84 in each District Council Area who had declared themselves to be self-employed (including farmers and agricultural workers). Self-employment was defined as a measure of entrepreneurship by the Global Entrepreneurship Monitor (2004).

EDUCATION AND SKILLS INPUT INDICATORS

The percentage of people holding a degree level qualification by District Council Area, 2001 (*degree)*

The 2001 Census recorded the percentage of persons aged 16-74 in each District Council Area who had declared that they held a degree-level qualification. These figures measure the extent of historic participation in higher education and of higher level skills in each local economy in Northern Ireland.

The number of people per 10,000 adult resident population studying engineering at Further Education Colleges in each District Council Area – 2001 (*FE eng*)

The Department of Employment and Learning supplied data on the number of people in each District Council Area in 2001 who were studying engineering at Further Education Colleges. These figures were standardised per 10,000 adult resident population to provide a measure of specialist skills being developed in each local economy.

The number of people per 10,000 adult resident population studying science at Further Education Colleges in each District Council Area – 2001 (*FE science*)

The Department of Employment and Learning supplied data on the number of people in each District Council Area in 2001 who were studying science at Further Education Colleges. These figures were standardised per 10,000 adult resident population to provide a measure of specialist training being undertaken and specialist skills being developed in each local economy.

The number of people per 10,000 adult resident population studying IT at Further Education Colleges in each District Council Area – 2001 (*FE IT*)

The Department of Employment and Learning supplied data on the number of people in each District Council Area in 2001 who were studying information technology at Further Education Colleges. These figures were standardised per 10,000 adult resident to provide a measure of specialist training being undertaken and skills being developed in each local economy.

The percentage of persons aged 16-74 in each District Council Area with no qualifications, 2001 (*noquals*)

The 2001 Census recorded the percentage of persons aged 16-74 in each District Council Area who declared that they had no qualifications. These figures are one measure of the extent of the skills deficit in the labour market of each local economy.

ECONOMIC DEVELOPMENT POLICY INPUT INDICATORS

Invest Northern Ireland Land holdings 2002/2003 per 10,000 adult resident population in each District Council Area (*totlandhold*)

Invest Northern Ireland's first Annual Report in April 2003 as the Agency responsible for co-ordinating local business development activity in Northern Ireland, provided figures on the acreage of land made available by Invest Northern Ireland for industrial or business use, by District Council Area for the period April 2001 to March 2002. For the purposes of this research these figures were standardised per 10,000 adult resident population.

This data was a useful measure of the provision of Government facilitated industrial workspace infrastructure in each District Council area in 2001/2002. The extent to which industrial/workspace infrastructure was associated with local economic success was of major interest. In addition, in a Northern Ireland context, there was the added interest in the extent to which, if at all, that provision may have reflected the historic resource allocation policies of earlier Northern Ireland administrations and been thus associated with the distribution of Northern Ireland's two primary religious/cultural populations.

Invest Northern Ireland client companies in each District Council Area per 10,000 adult resident population – 2001/2002 (*INIclientcos*)

Invest Northern Ireland was established in April 2002 as a new Government Agency amalgamating five previously separate organisations, including the Industrial Development Board (IDB) and the Local Economic Development Unit (LEDU). Its task was to integrate Central Government economic development provision in Northern Ireland. Invest Northern Ireland/s first Annual Report in April 2003 provided data on the number of client companies which it had inherited in April 2002 from its predecessor agencies, the IDB and LEDU. The number of client companies in total was 2,074, a fraction of the businesses operating in Northern Ireland at that time. However, these were businesses which had been designated as clients because of their perceived importance to the Northern Ireland economy. They were either externally owned companies being supported as inward investors or indigenous companies which had considerable fast track export growth potential. The geographical distribution of these client companies designated as they were by Invest Northern Ireland as the Province's most dynamic, was of interest in that a priori it would be expected that their location would be associated with successful local economies.

The number of visits to District Council Areas by potential investors per 10,000 adult resident population – 2001/2002 (*visits*)

The number of visits to District Council Areas by potential inward investors in 2001/2002 was reported in Invest Northern Ireland's first Annual Report in 2003. For the purposes of this research those figures were standardised per 10,000 adult resident population. This data was of interest because it allowed the assumption that investors had been attracted to more successful local economies to be tested. Evidence reported in the literature review suggested that economic advantage, as reflected in a success index, was a state which was self-reinforcing. Prospective investors showing disproportionate interest in successful areas would be evidence of that. However, because visits do not necessarily convert to projects, it is possible that an area which received a relatively small number of visits could have converted more of them into projects than other areas which were in receipt of more initial visits. Nevertheless, visits might be an indicator of the perceived opportunity offered by an area, and in that sense are a proxy for perceived success.

An important caveat needs to be attached to these figures. Invest Northern Ireland (INI) and the Industrial Development Board (IDB) before it, were required in 2001 to try to direct inward investor interest to designated disadvantaged (TSN) areas in Northern Ireland. In fact, none of the visits reported in the Invest Northern Ireland Annual Report were unaccompanied and none, therefore, were entirely independent of INI/IDB influence. While INI contends that investors only visit areas which they believe have real potential and which genuinely have attracted their interest, it is possible that some of the visits reported in the 2002/03 Annual Report were encouraged by INI and would not otherwise have happened without its intervention. In that sense there may be some skewing of this data although its extent, if any, is very difficult to quantify.

Total IDB financial assistance to companies per 10,000 adult resident population by District Council Area (*IDBass*)

While the IDB was preparing in 2001 for absorption into the new Invest Northern Ireland structure in 2002 it did during 2001 allocate substantial levels of assistance to foreign direct investment projects and large indigenous companies engaged in expansion. For the purpose of this research those figures were obtained by District Council Area and standardised per 10,000 adult resident population.

These figures were *a priori* an indicator of the level of dynamism in the large business sector, the focus for the IDB, in each District Council Area in Northern Ireland in 2001. The extent to which the apparent dynamism of large businesses was associated with other measures of local economic success was of obvious interest.

Locational advantage (*airport*)

AA estimated road mileage distance between the administrative centre of each District Council Area and Dublin and Belfast International Airports (with a weighting in respect of airport size). This measure is discussed in detail in Chapter Six.

Total employment in IDB client companies per 10,000 adult resident population by District Council Area – 2001 (*IDBjobs*)

An indication of the number of people employed in the large business sector in each District Council Area in 2001 can be gleaned from the number of people employed in IDB client companies in that year. IDB clients were companies deemed by Government to be of importance to the Northern Ireland economy, because they were engaged in substantial export activity or were planning to expand. The extent to which there was an association between the presence of these companies, the extent of which could be measured by the numbers they employed, and local economic success, was of interest. A strong association would suggest that large companies continued to be important to an area's economic prospects, directly in providing jobs and perhaps also indirectly by attracting suppliers. A significant presence of large employers could also be an indicator that an area was supporting an agglomeration economy which in turn was able to sustain an ongoing advantage by attracting further investment and jobs. On the other hand, if the association was weak, it could be suggested that large companies were no longer determinants of local economic success and that small companies, predominantly indigenously-owned and spending their earnings locally, as well as perhaps other factors such as social capital, were more important determinants of local economic success.

SOCIAL CHARACTERISTICS INPUT INDICATORS

Number of declared Catholics resident in each District Council Area per 10,000 adult resident population in 2001 (*Catholics*)

See Social Capital Indicators

Total recorded criminal offences in each District Council Area per 10,000 adult resident population – 2001/2002 (*crime*)

Can crime be detached from a local economy's performance? Is crime a product of lack of economic success rather than one of its causes? Are areas with high crime rates affected by lack of economic success? Or are some prosperous areas generating *lifestyle crime* and thus recording relatively high crime figures? Does crime affect a local economy's prospects of success?

The number of total offences recorded by the Police by District Council Area (DCA) in Northern Ireland in 2001 and 2002 was calculated per 10,000 adult resident population to produce a DCA crime quotient. However, a caveat has to be applied to these figures. In 2001 and 2002 the police were not accepted by a significant section of the Catholic community which may have led to some under-reporting of crime in predominantly Catholic areas.

Percentage of females aged 16-74 staying at home in each District Council Area – 2001 (*femaleshome*)

The 2001 Census recorded the percentage of females aged 16074 in each District Council Area who defined themselves as *staying at home to look aftr home/family* and who were as a result economically inactive.

Percentage of persons born outside Britain and Ireland in each District Council Area – 2001 (*foreignall*)

The 2001 Census recorded the declared place of birth of every respondent. The percentage of people born outside Britain and Ireland (i.e. in "*other countries*" or "*elsewhere*") was adopted in this thesis as a proxy for the historic level of in-migration.

Percentage of people aged 16-74 in each District Council Area declaring themselves sick or disabled – 2001 (*all sick-d*)

The 2001 census recorded the percentage of persons aged 16-74 who declared themselves to be long-term sick or disabled. As well as being an indicator of the level of economic inactivity within the population of each District Council Area, this is also a proxy for the prevailing health status of each area.

APPENDIX 2: THE MATRIX OF CORRELATION CO-EFFICIENTS

Note: The upper figure in each cell is the co-efficient of correlation, the lower figure is the t-score.

CORRELATIONS

```
pwcorr  Depriv MeanEarn JobDens Redund ServBus VatReg PopChange ShiftShBus Shift
ShJobs eccdevbus CreditUnion commbusstart commfund peacelfunds qualnew studsall
ElectoralStats leasqft catholics crime foreignall allsickdisabled femaleshome
smlempfem allhrsworked allslfemp wagepriv degree FE_IT FE_engineer FE_science
noquals totlandhold idbjobs idbass iniclientcos visits00_02 Airport
```

	Depriv	MeanEarn	JobDens	Redund	ServBus	VatReg	PopCha~e
Depriv	1.0000						
MeanEarn	0.3955	1.0000					
	0.0455						
JobDens	-0.1148	0.2096	1.0000				
	0.5766	0.3042					
Redund	-0.0802	-0.5304	-0.2711	1.0000			
	0.6971	0.0053	0.1804				
ServBus	0.4345	0.5636	0.3300	-0.3721	1.0000		
	0.0265	0.0027	0.0997	0.0612			
VatReg	-0.5015	-0.4951	0.1401	0.4549	-0.4646	1.0000	
	0.0090	0.0101	0.4947	0.0195	0.0168		
PopChange	0.1920	-0.1443	-0.4933	-0.0598	-0.0868	-0.2303	1.0000
	0.3474	0.4820	0.0104	0.7716	0.6734	0.2578	
ShiftShBus	-0.4701	-0.5866	-0.0565	0.3714	-0.8161	0.7347	-0.0485
	0.0154	0.0016	0.7838	0.0617	0.0000	0.0000	0.8139
ShiftShJobs	0.1282	-0.0241	0.5074	0.0474	0.0988	0.2588	-0.1811
	0.5325	0.9071	0.0081	0.8180	0.6311	0.2017	0.3760
eccdevbus	-0.7227	-0.4312	0.2836	0.2720	-0.4901	0.6247	-0.3577
	0.0000	0.0278	0.1603	0.1789	0.0110	0.0006	0.0728
CreditUnion	-0.8092	-0.4585	0.2690	0.0581	-0.4106	0.6684	-0.2808
	0.0000	0.0185	0.1840	0.7779	0.0372	0.0002	0.1646
commbusstart	-0.6194	-0.5517	-0.0573	0.2759	-0.3414	0.3761	0.0115
	0.0007	0.0035	0.7808	0.1724	0.0879	0.0583	0.9554
commfund	-0.6103	-0.1772	0.1778	0.2432	-0.1248	0.3703	-0.2603
	0.0009	0.3864	0.3848	0.2313	0.5436	0.0626	0.1990
peacelfunds	-0.3805	-0.1067	0.3800	0.1797	-0.1173	0.3655	-0.3458
	0.0552	0.6037	0.0555	0.3797	0.5683	0.0664	0.0836
qualnew	0.4814	-0.0786	-0.4792	0.1773	-0.0308	0.0684	0.1875
	0.0128	0.7026	0.0132	0.3863	0.8814	0.7400	0.3589
studsall	-0.5073	-0.1620	0.3296	-0.0015	0.0613	0.5459	-0.3613
	0.0082	0.4290	0.1001	0.9943	0.7663	0.0039	0.0698
ElectoralS~s	-0.6485	-0.3555	0.2628	0.1770	-0.5692	0.6930	-0.1647
	0.0003	0.0747	0.1946	0.3870	0.0024	0.0001	0.4215
leasqft	-0.3436	0.0559	0.0360	0.1102	-0.2841	0.2362	-0.1182
	0.0857	0.7862	0.8615	0.5919	0.1596	0.2453	0.5652
catholics	-0.8243	-0.5215	0.1833	0.1543	-0.4735	0.7224	-0.1032
	0.0000	0.0063	0.3701	0.4516	0.0146	0.0000	0.6160
crime	0.1385	0.1616	0.3944	-0.3033	0.7142	-0.3429	-0.2323
	0.5000	0.4302	0.0462	0.1320	0.0000	0.0864	0.2534

	Depriv	MeanEarn	JobDens	Redund	ServBus	VatReg	PopCha~e
foreignall	0.3745	0.3745	0.1932	-0.1637	0.8012	-0.3622	-0.0160
	0.0595	0.0594	0.3443	0.4241	0.0000	0.0690	0.9382
allsickdis~d	-0.8947	-0.4328	0.1367	0.1643	-0.4154	0.5651	-0.1346
	0.0000	0.0272	0.5054	0.4224	0.0348	0.0026	0.5121
femaleshome	-0.7798	-0.6435	-0.0606	0.2552	-0.6150	0.6007	0.0061
	0.0000	0.0004	0.7685	0.2083	0.0008	0.0012	0.9762
smlempfem	-0.0200	-0.3683	-0.2836	0.4466	-0.6103	0.4782	0.0484
	0.9229	0.0642	0.1603	0.0222	0.0009	0.0135	0.8142
allhrsworked	-0.2791	-0.4613	-0.0994	0.3649	-0.8086	0.5841	0.0310
	0.1674	0.0177	0.6291	0.0668	0.0000	0.0017	0.8805
allslfemp	-0.2191	-0.5920	-0.2395	0.5712	-0.7969	0.6157	0.1086
	0.2821	0.0014	0.2386	0.0023	0.0000	0.0008	0.5973
wagepriv	0.4838	0.8123	0.1497	-0.5304	0.6663	-0.5610	-0.0581
	0.0123	0.0000	0.4653	0.0053	0.0002	0.0029	0.7781
degree	0.6027	0.5493	0.1819	-0.2004	0.8236	-0.3121	-0.1100
	0.0011	0.0037	0.3737	0.3263	0.0000	0.1206	0.5927
FE_IT	-0.4653	-0.0315	0.2512	-0.0728	0.0906	0.3299	-0.0594
	0.0166	0.8785	0.2159	0.7237	0.6598	0.0998	0.7730
FE_engineer	0.0598	0.2098	-0.2676	-0.3447	-0.1214	-0.5303	0.3943
	0.7716	0.3037	0.1863	0.0846	0.5548	0.0053	0.0463
FE_science	0.0728	0.1128	0.1566	0.0554	0.4756	0.0961	-0.2931
	0.7237	0.5831	0.4449	0.7879	0.0141	0.6406	0.1461
noquals	-0.6971	-0.4280	0.0476	0.1022	-0.6978	0.2759	-0.0998
	0.0001	0.0292	0.8173	0.6193	0.0001	0.1725	0.6278
totlandhold	-0.0129	0.1011	0.2513	-0.6911	0.2119	-0.1277	0.1007
	0.9502	0.6233	0.2156	0.0001	0.2987	0.5342	0.6244
idbjobs	-0.1335	0.4247	0.2462	-0.4922	0.3482	-0.2521	0.0091
	0.5156	0.0306	0.2253	0.0106	0.0813	0.2142	0.9648
idbass	-0.2556	0.3156	0.2592	-0.5831	0.1857	-0.1957	-0.0555
	0.2077	0.1162	0.2010	0.0018	0.3638	0.3381	0.7878
iniclientcos	-0.2716	-0.0654	0.5963	-0.0039	-0.0480	0.4960	-0.3149
	0.1795	0.7508	0.0013	0.9849	0.8160	0.0100	0.1171
visits00_02	-0.0145	0.3298	0.2455	-0.3211	0.6007	-0.1747	-0.1581
	0.9438	0.0998	0.2267	0.1097	0.0012	0.3933	0.4404
Airport	0.6043	0.5186	0.2588	-0.2016	0.5634	-0.2948	-0.0821
	0.0011	0.0066	0.2017	0.3232	0.0027	0.1438	0.6900

	Shift~us	Shift~bs	eccdev~s	Credit~n	commbu~t	commfund	peacel~s
ShiftShBus	1.0000						
ShiftShJobs	0.1009	1.0000					
	0.6240						
eccdevbus	0.6447	0.0630	1.0000				
	0.0004	0.7599					
CreditUnion	0.6315	0.0968	0.7134	1.0000			
	0.0005	0.6382	0.0000				
commbusstart	0.4064	-0.0678	0.3560	0.4030	1.0000		
	0.0394	0.7420	0.0743	0.0412			
commfund	0.2738	0.0215	0.4222	0.4844	0.4098	1.0000	
	0.1758	0.9168	0.0317	0.0121	0.0376		
peacelfunds	0.2643	0.1337	0.2884	0.4147	0.4311	0.4379	1.0000
	0.1920	0.5150	0.1531	0.0352	0.0279	0.0252	
qualnew	0.0068	0.0164	-0.3823	-0.2626	-0.2171	-0.1956	-0.1203
	0.9736	0.9366	0.0539	0.1950	0.2866	0.3384	0.5582
studsall	0.2589	0.2582	0.4904	0.5141	0.2509	0.2664	0.0782
	0.2015	0.2028	0.0110	0.0072	0.2163	0.1884	0.7042
ElectoralS~s	0.7805	0.2109	0.6984	0.8325	0.2876	0.4250	0.2882
	0.0000	0.3010	0.0001	0.0000	0.1543	0.0305	0.1534
leasqft	0.2034	0.0188	0.1639	0.2458	0.2438	0.4585	0.1474
	0.3189	0.9274	0.4238	0.2261	0.2300	0.0185	0.4726
catholics	0.6903	0.1138	0.7391	0.8872	0.5959	0.5056	0.4940
	0.0001	0.5797	0.0000	0.0000	0.0013	0.0084	0.0103
crime	-0.6444	0.0810	-0.2504	-0.1679	-0.1172	0.0926	0.0879
	0.0004	0.6940	0.2172	0.4124	0.5687	0.6526	0.6695
foreignall	-0.7136	0.2528	-0.3928	-0.4655	-0.1802	0.0000	-0.0530
	0.0000	0.2127	0.0472	0.0165	0.3785	1.0000	0.7970
allsickdis~d	0.4653	-0.0674	0.5939	0.8263	0.4916	0.5644	0.4325
	0.0166	0.7437	0.0014	0.0000	0.0108	0.0027	0.0273
femaleshome	0.6738	-0.0304	0.7363	0.7422	0.6216	0.4400	0.1904
	0.0002	0.8827	0.0000	0.0000	0.0007	0.0245	0.3514
smlempfem	0.6412	-0.0819	0.3850	0.1438	0.0331	-0.0771	-0.0454
	0.0004	0.6909	0.0521	0.4834	0.8726	0.7083	0.8257
allhrsworked	0.8366	0.0553	0.4625	0.3842	0.4087	0.2047	0.2770
	0.0000	0.7886	0.0174	0.0527	0.0382	0.3158	0.1706
allslfemp	0.8195	0.0017	0.4601	0.2978	0.3212	0.0626	0.0797
	0.0000	0.9934	0.0180	0.1396	0.1096	0.7614	0.6989
wagepriv	-0.7306	0.0345	-0.6361	-0.5268	-0.4692	-0.1378	-0.1863
	0.0000	0.8670	0.0005	0.0057	0.0156	0.5021	0.3621
degree	-0.6424	0.2315	-0.4680	-0.5692	-0.4479	-0.2684	-0.1891
	0.0004	0.2553	0.0159	0.0024	0.0218	0.1850	0.3550
FE_IT	0.1521	0.0851	0.4336	0.5364	0.0925	0.3409	0.1378
	0.4581	0.6793	0.0269	0.0047	0.6532	0.0884	0.5021
FE_engineer	-0.2390	-0.2007	-0.3885	-0.2752	0.0959	-0.3340	-0.0885
	0.2397	0.3256	0.0498	0.1736	0.6414	0.0954	0.6671
FE_science	-0.3320	0.1357	-0.0522	0.1385	-0.2674	0.1056	0.1993
	0.0976	0.5085	0.7999	0.5000	0.1867	0.6075	0.3290
noquals	0.5644	-0.1788	0.5889	0.6164	0.3941	0.3299	0.1255
	0.0027	0.3821	0.0016	0.0008	0.0464	0.0998	0.5414

	Shift~us	Shift~bs	eccdev~s	Credit~n	commbu~t	commfund	peacel~s
totlandhold	-0.1124	0.1708	-0.1946	0.2168	-0.0984	-0.1033	-0.1020
	0.5846	0.4040	0.3408	0.2875	0.6324	0.6154	0.6202
idbjobs	-0.4462	0.1886	-0.0262	0.0271	-0.1349	-0.1662	-0.0485
	0.0223	0.3562	0.8988	0.8956	0.5111	0.4172	0.8138
idbass	-0.2615	0.2356	0.0565	0.1817	-0.0803	-0.0729	-0.0349
	0.1968	0.2466	0.7840	0.3744	0.6965	0.7235	0.8654
iniclientcos	0.3293	0.3005	0.2584	0.5594	0.1056	0.2521	0.3106
	0.1004	0.1359	0.2025	0.0030	0.6077	0.2140	0.1226
visits00_02	-0.4979	-0.0393	-0.1601	-0.0018	-0.1483	0.0181	0.1067
	0.0096	0.8487	0.4347	0.9931	0.4695	0.9302	0.6040
Airport	-0.5534	0.3443	-0.6958	-0.4736	-0.4366	-0.1534	0.0288
	0.0034	0.0850	0.0001	0.0145	0.0258	0.4543	0.8889

	qualnew	studsall	Electo~s	leasqft	cathol~s	crime	foreig~l
qualnew	1.0000						
studsall	-0.3419	1.0000					
	0.0874						
ElectoralS~s	-0.3255	0.4423	1.0000				
	0.1047	0.0236					
leasqft	-0.1778	-0.1479	0.3251	1.0000			
	0.3849	0.4709	0.1051				
catholics	-0.2414	0.5256	0.7785	0.1610	1.0000		
	0.2349	0.0058	0.0000	0.4320			
crime	-0.0944	0.1127	-0.4414	-0.4072	-0.2021	1.0000	
	0.6466	0.5836	0.0240	0.0390	0.3222		
foreignall	0.1621	0.0807	-0.6014	-0.3425	-0.4078	0.6918	1.0000
	0.4290	0.6952	0.0012	0.0867	0.0387	0.0001	
allsickdis~d	-0.4096	0.4674	0.6985	0.2561	0.8085	-0.0947	-0.3629
	0.0377	0.0161	0.0001	0.2067	0.0000	0.6454	0.0684
femaleshome	-0.2174	0.3950	0.6321	0.1494	0.8489	-0.3121	-0.4703
	0.2860	0.0458	0.0005	0.4663	0.0000	0.1206	0.0153
smlempfem	0.3925	0.0449	0.3014	0.0200	0.2346	-0.5360	-0.4729
	0.0473	0.8276	0.1346	0.9229	0.2486	0.0048	0.0147
allhrsworked	0.2310	-0.0406	0.5841	0.2293	0.5104	-0.5930	-0.5518
	0.2563	0.8440	0.0017	0.2599	0.0077	0.0014	0.0035
allslfemp	0.2085	0.0565	0.5289	0.1754	0.4222	-0.6615	-0.6708
	0.3066	0.7839	0.0055	0.3915	0.0317	0.0002	0.0002
wagepriv	0.0588	-0.2995	-0.5337	0.1802	-0.6492	0.2841	0.4492
	0.7754	0.1371	0.0050	0.3785	0.0003	0.1596	0.0213
degree	0.2393	0.0701	-0.5918	-0.3757	-0.5453	0.5439	0.7612
	0.2390	0.7338	0.0014	0.0585	0.0040	0.0041	0.0000
FE_IT	-0.3638	0.3983	0.5391	0.1508	0.5597	0.0824	0.0102
	0.0677	0.0438	0.0045	0.4622	0.0030	0.6891	0.9606
FE_engineer	-0.0957	-0.4329	-0.2581	0.0523	-0.2287	-0.1822	-0.1706
	0.6418	0.0272	0.2030	0.7997	0.2611	0.3730	0.4048
FE_science	0.1402	0.1858	-0.1480	-0.1856	0.0564	0.4414	0.3914
	0.4946	0.3635	0.4705	0.3639	0.7843	0.0240	0.0480
noquals	-0.4198	0.0748	0.6656	0.4209	0.5002	-0.4632	-0.7217
	0.0327	0.7165	0.0002	0.0323	0.0093	0.0172	0.0000
totlandhold	0.0820	0.1427	0.0101	-0.2147	0.1381	0.2537	0.1050
	0.6904	0.4867	0.9610	0.2922	0.5010	0.2112	0.6096
idbjobs	-0.2980	0.1650	-0.1018	-0.0215	-0.0112	0.1652	0.2587
	0.1392	0.4205	0.6209	0.9171	0.9567	0.4199	0.2020
idbass	-0.3101	0.2162	0.0479	0.0389	0.1068	0.0489	0.1234
	0.1232	0.2888	0.8162	0.8502	0.6035	0.8124	0.5481
iniclientcos	-0.2805	0.2791	0.5443	0.2723	0.3805	-0.0537	-0.2602
	0.1651	0.1674	0.0040	0.1783	0.0551	0.7943	0.1993
visits00_02	-0.1320	0.2856	-0.2364	-0.3540	-0.0011	0.6567	0.5810
	0.5204	0.1573	0.2450	0.0760	0.9959	0.0003	0.0019
Airport	0.2320	-0.3411	-0.4442	0.0308	-0.5942	0.3798	0.4297
	0.2541	0.0881	0.0230	0.8812	0.0014	0.0556	0.0285

	allsic~d	female~e	smlemp~m	allhrs~d	allslf~p	wagepriv	degree
allsickdis~d	1.0000						
femaleshome	0.6800	1.0000					
	0.0001						
smlempfem	-0.0124	0.2704	1.0000				
	0.9521	0.1816					
allhrsworked	0.2859	0.5309	0.6711	1.0000			
	0.1568	0.0053	0.0002				
allslfemp	0.1863	0.4803	0.8545	0.8038	1.0000		
	0.3621	0.0130	0.0000	0.0000			
wagepriv	-0.5234	-0.7060	-0.5373	-0.6210	-0.6725	1.0000	
	0.0061	0.0001	0.0046	0.0007	0.0002		
degree	-0.6212	-0.6903	-0.2484	-0.5855	-0.5179	0.5692	1.0000
	0.0007	0.0001	0.2212	0.0017	0.0067	0.0024	
FE_IT	0.5282	0.3101	-0.1521	-0.0034	-0.1132	-0.1897	-0.0297
	0.0055	0.1232	0.4584	0.9868	0.5820	0.3532	0.8853
FE_engineer	-0.1556	-0.1296	-0.2621	-0.0682	-0.1590	0.2424	-0.1706
	0.4480	0.5281	0.1958	0.7405	0.4379	0.2328	0.4047
FE_science	0.1460	-0.1268	-0.2594	-0.4333	-0.4557	0.1590	0.3156
	0.4767	0.5369	0.2007	0.0270	0.0193	0.4379	0.1163
noquals	0.6205	0.6144	0.1514	0.4565	0.4386	-0.4168	-0.8571
	0.0007	0.0008	0.4604	0.0191	0.0250	0.0342	0.0000
totlandhold	0.0331	0.0769	-0.3390	-0.1341	-0.3191	0.1590	-0.0268
	0.8726	0.7089	0.0902	0.5135	0.1121	0.4378	0.8966
idbjobs	0.0495	-0.0607	-0.4793	-0.4977	-0.4854	0.4472	0.1354
	0.8103	0.7684	0.0132	0.0097	0.0119	0.0220	0.5097
idbass	0.1577	0.0519	-0.5109	-0.3662	-0.4542	0.3783	-0.0130
	0.4416	0.8012	0.0077	0.0658	0.0198	0.0567	0.9498
iniclientcos	0.4382	0.2687	-0.0935	0.1909	0.0631	-0.0776	-0.2716
	0.0251	0.1844	0.6495	0.3502	0.7593	0.7065	0.1795
visits00_02	0.1492	-0.1938	-0.4851	-0.5101	-0.6312	0.1946	0.3569
	0.4670	0.3427	0.0120	0.0078	0.0005	0.3409	0.0735
Airport	-0.4475	-0.7054	-0.4865	-0.4290	-0.4931	0.7088	0.5286
	0.0219	0.0001	0.0117	0.0287	0.0105	0.0001	0.0055

	FE_IT	FE_eng~r	FE_sci~e	noquals	totlan~d	idbjobs	idbass
FE_IT	1.0000						
FE_engineer	-0.3846	1.0000					
	0.0524						
FE_science	0.2793	-0.3839	1.0000				
	0.1670	0.0528					
noquals	0.0988	0.1603	-0.4297	1.0000			
	0.6311	0.4339	0.0284				
totlandhold	0.0038	0.1611	0.1159	-0.0338	1.0000		
	0.9852	0.4317	0.5730	0.8700			
idbjobs	0.0747	0.3529	0.2464	0.0056	0.3621	1.0000	
	0.7169	0.0770	0.2249	0.9783	0.0691		
idbass	0.1378	0.3803	0.1408	0.1957	0.4831	0.9013	1.0000
	0.5022	0.0553	0.4928	0.3381	0.0124	0.0000	
iniclientcos	0.2168	-0.3430	0.1591	0.3070	0.2534	-0.0237	0.0142
	0.2875	0.0862	0.4377	0.1272	0.2117	0.9085	0.9452
visits00_02	0.3023	-0.2073	0.6297	-0.4370	0.3791	0.4041	0.2611
	0.1334	0.3095	0.0006	0.0256	0.0561	0.0406	0.1977
Airport	-0.3182	0.0643	0.2646	-0.5158	0.1822	0.1535	0.0478
	0.1131	0.7549	0.1914	0.0070	0.3730	0.4540	0.8164

	inicli~s	visit~02	Airport
iniclientcos	1.0000		
visits00_02	0.0362	1.0000	
	0.8606		
Airport	0.2090	0.2159	1.0000
	0.3054	0.2896	

Overall Actual NGR		1997	2001	Sector				1997	2001	Sector				1997	2001	Sector			
% increase 1997-2001		AB	AB	Growth Rate	Diff over NGR	Expected no of AB 2001	Difference	CE	CE	Growth Rate	Diff over NGR	Expected no of CE 2001	Difference	D	D	Growth Rate	Diff over NGR	Expected no of D 2001	Difference
4.44 (All sectors)	Northern Ireland	139.72	136.23	-2.50	-6.95	130.02	6.21	0.93	0.97	4.17	-0.28	0.93	0.04	31.50	32.55	3.33	-1.11	31.50	1.05
	Antrim	149.46	142.66	-4.55		139.08	3.59	0.00	0.00	0.00		0.00	0.00	33.97	35.33	4.00		33.59	1.74

	1997	2001	Sector				1997	2001	Sector				1997	2001	Sector			
	F	F	Growth Rate	Diff over NGR	Expected no of F 2001	Difference	G	G	Growth Rate	Diff over NGR	Expected no of G 2001	Difference	H	H	Growth Rate	Diff over NGR	Expected no of H 2001	Difference
Northern Ireland	50.30	58.15	15.60	11.15	55.91	2.24	101.23	97.65	-3.53	-7.97	93.16	4.49	24.24	25.37	4.65	0.20	24.29	1.08
Antrim	55.71	63.86	14.63		61.92	1.94	84.24	84.24	0.00		77.53	6.71	24.46	25.82	5.56		24.51	1.31

	1997	2001	Sector				1997	2001	Sector				1997	2001	Sector			
	I	I	Growth Rate	Diff over NGR	Expected no of I 2001	Difference	J	J	Growth Rate	Diff over NGR	Expected no of J 2001	Difference	K	K	Growth Rate	Diff over NGR	Expected no of K 2001	Difference
Northern Ireland	15.34	17.60	14.68	10.24	16.91	0.68	1.63	2.02	23.81	19.37	1.95	0.07	38.69	51.04	31.93	27.48	49.32	1.72
Antrim	32.61	38.04	16.67		35.95	2.10	0.00	1.36	0.00		0.00	1.36	32.61	42.12	29.17		41.57	0.55

	1997	2001	Sector				1997	2001	Sector				1997	2001	All Sector	All Sector
	LO	LO	Growth Rate	Diff NGR	Expected no of LO 2001	Difference	MN	MN	Growth Rate	Diff over NGR	Expected no of MN 2001	Difference	Total Stock	Total Stock	Exp Tot Stk	Difference
Northern Ireland	14.68	15.27	3.97	-0.48	14.61	0.65	4.00	4.12	2.91	-1.53	3.94	0.18	422.20	440.96	422.54	18.41
Antrim	12.23	13.59	11.11		12.17	1.42	4.08	4.08	0.00		4.01	0.06	429.35	452.45	430.31	22.13

Key:

NGR	National Growth Rate across all sectors
2001	Year of sample
AB	Standard Industrial Classification (SIC)
Diff over NGR	The difference between the Growth Rate and the National Growth Rate (NGR across all sectors)
Growth Rate	2001 total minus 1997 total calculated as a percentage
Expected	Calculated thus: (1997 tot divided by 100) multiplied by - (Diff over NGR) + 1997 tot
Difference	Difference between Expected and the 2001 total
2001 Total Stock	Total stock across all sectors
All Sector Exp Tot Stk	The total of all expected stock across all sectors
All Sector Difference	The difference between the actual 2001 total stock and the expected total stock

APPENDIX 3: Sample Shift Share (business stock change competitiveness differential corrected for population) - Antrim District

APPENDIX 4: DISTRICT COUNCIL AREA RANKINGS IN RESPECT OF ALL THE VARIABLES WHICH WERE PART OF THE ANALYSIS (as in Appendix 2)

Note:In all but 3 cases a rank of 1 indicates a high concentration of the variable in an area (e.g. females at home) and a rank of 26 indicates a low concentration.

In the case of **redundancies** a rank of 1 indicates that redundancies were low and a rank of 26 that redundancies were high.

In the case of **deprivation** a rank of 1 indicates low deprivation and a rank of 26 high deprivation.

In the case of **location** a rank of 1 indicates relative locational advantage, a rank of 26 relative locational disadvantage.

District Council area rankings by variable

Council	qualnew	crime	femaleshome	foreignall	smlempfem	studsall	Location	leasqft	catholics	totIDB landhold	idbjobs	degree	FE eng-eer	FE IT
Antrim	3	2	16	3	17	22	1	19	15	6	17	12	18	19
Ards	8	13	17	11	7	24	11	21	24	22	8	13	14	25
Armagh	16	23	13	19	8	6	16	24	12	21	15	17	22	15
Ballymena	12	10	20	17	16	23	4	16	21	12	6	9	11	21
Ballymoney	21	25	11	25	10	21	19	7	17	22	17	25	8	22
Banbridge	6	21	22	20	5	19	12	14	18	20	17	10	12	6
Belfast	26	1	18	1	26	1	4	3	13	22	1	3	17	7
Carrickfergus	5	20	24	7	22	20	7	12	26	5	5	7	1	20
Castlereagh	23	11	26	4	22	25	4	8	23	26	13	2	9	5
Coleraine	22	3	15	6	11	2	20	22	19	13	17	5	21	18
Cookstown	15	17	5	22	9	4	13	4	10	14	17	23	19	13
Craigavon	20	6	21	14	21	18	10	10	14	1	11	22	15	8
Derry	24	5	3	12	25	3	23	26	2	2	3	14	5	1
Down	2	8	14	13	3	11	15	20	7	8	10	8	16	10
Dungannon	10	22	9	18	4	7	17	6	6	16	12	15	23	9
Fermanagh	18	24	6	23	1	10	25	11	9	7	9	18	10	12
Larne	9	14	19	21	12	26	8	1	20	15	17	16	3	26
Limavady	13	19	4	9	18	17	21	9	11	10	4	24	2	14
Lisburn	4	4	12	4	19	14	3	23	16	4	17	4	20	16
Magherafelt	11	26	8	24	13	12	8	5	5	9	14	20	7	17
Moyle	7	16	7	15	2	15	26	18	8	25	17	19	6	23
Newry & Mourne	17	18	1	16	14	9	18	2	1	10	7	21	26	3
Newtownabbey	19	7	25	8	24	7	2	25	22	3	2	6	4	24
North Down	1	9	23	2	15	13	13	17	25	19	17	1	25	11
Omagh	13	15	10	10	6	4	22	15	3	17	17	11	24	4
Strabane	25	12	2	26	20	16	24	13	4	18	16	26	13	2

District Council area rankings by variable

Council	FE science	allhrsworked	selfemp	sickdisabled	noquals	idbass	Lottery applics	peace1funds	total INI/IDB investment	visits0002	loannos
Antrim	6	5	17	15	22	16	19	4	1	6	15
Ards	8	19	12	21	20	16	23	21	20	7	11
Armagh	7	10	10	10	13	14	18	5	5	14	5
Ballymena	20	16	13	25	6	6	21	15	15	23	26
Ballymoney	23	10	3	12	2	16	13	20	18	24	4
Banbridge	21	7	8	16	17	16	25	23	13	21	2
Belfast	5	26	26	4	16	5	1	3	7	1	18
Carrickfergus	19	24	24	22	19	3	26	26	11	11	25
Castlereagh	14	21	22	24	25	15	15	12	26	16	17
Coleraine	24	20	15	23	18	16	16	24	19	17	20
Cookstown	17	8	4	3	3	16	9	25	8	18	8
Craigavon	13	18	21	5	5	10	7	7	3	3	19
Derry	3	23	25	2	12	4	20	14	2	2	13
Down	1	15	7	14	23	12	14	13	17	8	3
Dungannon	4	9	9	6	7	8	5	11	12	22	14
Fermanagh	25	2	5	17	9	9	22	19	9	15	20
Larne	11	13	18	19	15	16	10	8	16	18	1
Limavady	18	6	16	11	4	2	4	18	6	18	23
Lisburn	12	17	20	18	24	16	2	17	24	10	24
Magherafelt	22	3	2	13	10	13	11	2	10	24	12
Moyle	26	4	1	9	8	16	12	1	25	24	6
Newry & Mourne	9	14	11	7	11	7	8	9	21	12	7
Newtownabbey	10	25	23	20	21	1	24	16	14	4	9
North Down	2	22	19	26	26	16	17	22	22	9	22
Omagh	16	1	6	8	14	16	3	6	23	5	10
Strabane	15	12	14	1	1	11	6	10	4	13	16

District Council area rankings by variable

Council	INI bus starts	IDB/INI clientcos	IDB/INI co growth	commbus	active commgro	groups in eco dev	Credit Union	Housing Assoc	wagepub	wagepriv	Voter particip-ation	Owns House
Antrim	21	4	12	8	21	16	16	10	23	18	21	18
Ards	15	16	4	14	26	19	24	12	12	11	24	11
Armagh	7	7	14	14	1	2	9	9	5	25	6	3
Ballymena	18	10	2	14	15	9	15	15	25	5	14	10
Ballymoney	11	14	8	6	17	9	21	8	9	20	16	16
Banbridge	7	16	23	14	9	19	20	14	8	10	11	4
Belfast	25	9	13	8	7	7	12	1	2	1	15	26
Carrickfergus	18	22	25	14	23	25	22	6	18	3	26	7
Castlereagh	26	16	6	14	20	19	26	13	10	6	18	2
Coleraine	18	16	7	8	5	9	18	15	20	16	19	21
Cookstown	2	2	10	8	2	9	4	15	16	24	1	5
Craigavon	16	5	10	14	11	16	7	5	4	9	8	22
Derry	14	7	17	4	8	9	2	3	19	19	12	25
Down	9	24	19	14	16	9	10	11	7	21	13	14
Dungannon	4	1	1	14	3	3	1	7	21	12	3	15
Fermanagh	6	12	5	14	4	1	11	15	1	17	7	9
Larne	4	14	21	8	24	19	17	15	14	4	23	13
Limavady	9	22	22	6	19	7	13	15	17	13	10	20
Lisburn	11	10	18	14	22	19	19	15	3	8	20	19
Magherafelt	1	2	15	2	18	16	6	15	11	14	2	6
Moyle	24	26	16	1	13	9	14	15	26	26	17	23
Newry & Mourne	3	6	3	4	14	3	5	15	15	15	9	12
Newtownabbey	21	16	26	14	25	25	25	15	22	2	22	8
North Down	21	24	24	14	12	19	23	2	24	7	25	1
Omagh	11	12	9	2	6	3	8	4	13	22	4	17
Strabane	16	16	20	8	10	3	3	15	6	23	5	24

District Council area rankings by variable

Council	VatReg	PopChange	EmpChange	Depriv	JobDens	Low Redund	Bus Serv	MeanEarn	ShiftShBus	ShiftShJobs
Antrim	9	15	9	5	3	12	12	22	15	3
Ards	21	3	24	3	25	5	11	11	21	24
Armagh	5	23	11	13	13	4	20	14	3	11
Ballymena	20	25	10	7	2	18	10	10	17	7
Ballymoney	14	4	26	15	18	1	22	23	10	26
Banbridge	11	1	17	6	23	20	18	9	11	19
Belfast	7	26	19	25	1	15	1	1	26	14
Carrickfergus	25	2	16	8	26	24	8	5	22	16
Castlereagh	26	8	1	2	6	8	3	2	24	1
Coleraine	18	12	12	10	7	21	6	20	14	12
Cookstown	3	20	3	21	16	1	24	25	6	4
Craigavon	23	12	22	17	4	26	9	8	19	22
Derry	16	10	21	24	10	22	4	17	20	20
Down	8	7	5	12	17	11	13	21	12	8
Dungannon	2	19	6	18	5	9	17	16	4	5
Fermanagh	10	17	18	16	7	23	23	4	7	17
Larne	22	24	25	11	20	19	15	5	16	25
Limavady	19	5	7	19	20	17	21	15	13	10
Lisburn	15	9	15	9	15	16	5	7	18	15
Magherafelt	1	6	8	14	13	10	19	19	1	9
Moyle	12	11	14	22	23	1	26	26	9	18
Newry & Mourne	4	14	4	23	12	14	16	19	8	6
Newtownabbey	24	18	2	4	7	25	7	3	23	2
North Down	17	22	20	1	22	6	2	12	25	21
Omagh	6	21	13	20	10	7	14	13	2	13
Strabane	13	16	23	26	18	13	25	24	5	23

APPENDIX 5: DISTRICT COUNCIL AREA RANKINGS FOR EACH SUCCESS INDEX STAGE

Council	Success Index 1	Success Index 2	Success Index 3	Success Index 4 (Final)
Antrim	13	5	4	4
Ards	5	7	11	16
Armagh	13	7	8	5
Ballymena	9	2	5	10
Ballymoney	21	16	21	19
Banbridge	6	17	16	13
Belfast	12	5	2	10
Carrickfergus	3	20	23	20
Castlereagh	1	1	1	1
Coleraine	15	17	13	14
Cookstown	24	20	19	14
Craigavon	11	13	16	22
Derry	22	25	21	23
Down	16	19	13	7
Dungannon	19	10	5	3
Fermanagh	10	11	15	16
Larne	7	13	20	25
Limavady	19	23	25	21
Lisburn	7	9	5	7
Magherafelt	16	15	11	2
Moyle	25	24	24	24
Newry & Mourne	23	22	18	10
Newtownabbey	2	3	9	9
North Down	3	4	3	18
Omagh	16	11	9	5
Strabane	26	26	26	26

APPENDIX 6: THE CENSUS AND UNEMPLOYMENT

NISRA preface 2001 census data with the following statement:

"The Census represents a considerable investment on the part of Government and sets out to provide the most comprehensive and accurate picture of the characteristics of the population possible at the time it is taken, within obvious constraints of course. Accordingly, considerable time and effort is spent developing and consulting on questions to ensure that they reflect current best practice and will deliver the outputs required by users. As the Census is only conducted every ten years it is, as you might imagine, difficult to deliver on this overarching aim and maintain direct comparability over time on every Census variable. In view of, for example, changes to Local Government boundaries, definitional changes, changes to questions, item imputation and the adjustment applied to the 2001 Census or underenumeration, we would generally urge extreme caution when seeking to directly compare outputs from the 2001 Census with those from the 1991 Census. Taking these differences in turn –

1. Changes to local boundaries. The 1991 and 2001 Censuses were produced at times when different local government boundaries sets applied, complicating sub-Northern Ireland comparisons over time. The 26 Local Government Districts were generally unchanged, with the exceptions of Newry & Mourne and Banbridge, and so LGD levels comparisons are possible.

2. Definitional changes. The 1991 and 2001 Censuses used slightly different population bases. The main difference is the treatment of full-time students who in 1991 were placed at their out-of-term address (typically their parent's address) while in 2001 they have been placed at their term-time address. The effect of this will vary across Northern Ireland adding to the population of areas such as South Belfast while reducing the population of areas distant from third-level education facilities.

3. Changes to questions In 1991, a single multi-tick question was asked to determine if someone aged 16 or over was economically active or inactive, and why. A separate tick box was included for full-time students. In Northern Ireland all full-time students were classified as economically inactive. For 2001, a series of questions were asked of those aged 16 - 74 (including full-time students) to facilitate the derivation of statistics that will be compatible with the International Labour Organisation (ILO) definition of economic status. In contrast to 1991, information on part-time/full-time status was not an integral part of these questions. A separate question on hours worked was asked.

4. Item imputation In 2001, responses to individual questions were imputed for respondents who did not fully complete the Census form.

5. Adjustment for underenumeration The absolute numbers reported in 1991 and 2001 are not strictly comparable because, unlike 1991, the 2001 figures have been adjusted for underenumeration. Given the above, the NISRA recommendation (contained in the published Census reports) is that 1991 vs 2001 comparisons should be restricted to comparing differences between percentages calculated

from the respective bases in each Census, and this is dependent upon the questions being similar over time."

(Source: NISRA, January 2006)

In 1991, the unemployment rate (as measured by the proportion of the total population aged 16-74 who were out of employment) which in Northern Ireland as a whole stood at 9.18 per cent, in North Down was 4.43 per cent, in Castlereagh 5 per cent, in Ards 5.57 per cent, and in Larne 7.98 per cent; whereas West-of-the-Bann unemployment in Magherafelt was 9.9 per cent, in Dungannon 11.09 per cent, in Cookstown 9.58 per cent, and in Armagh 9.37 per cent. However, calculating unemployment from a baseline of all persons aged 16-74, the method used by NISRA in respect of the 2001 census, significantly understates the actual level of unemployment in predominantly Catholic areas in 1991 insofar as there were larger numbers of people in those areas who were economically inactive (i.e. students, people looking after the home, people who were long-term sick and disabled). Thus, in Magherafelt, for example, the proportion of the economically active population who were "out of employment" was 17.25 per cent.