A quantitative analysis of the changing relationship between ethnic diversity and social quality in England

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FIGURES AND CHARTS

ABSTRACT

Robert Putnam's 2007 empirical study, E Pluribus Unum, has become the seminal study in a growing body of work which uses statistical methods to measure the effects of ethnic diversity on social capital, or other measures of social quality. Putnam's study found that ethnic diversity negatively affects social capital in the United States, leading people to withdraw from social contact and 'hunker down' at home, alone, miserably watching TV. This study revisits Putnam's findings and seeks to plug two major gaps across this field: firstly, the absence of any frame of reference for social capital or other measures of social quality, which has led to both a narrowing of the commonly used indicators of social quality and a possible over-stating of the relative importance to overall social quality of those indicators which are employed; and, secondly, the lack of any investigation into how relationships between ethnic diversity and social quality change over time.

This study addresses two research questions: Do ethnic diversity and immigration have any effects on a range of indicators of social quality in local areas of England? Do any effects from ethnic diversity and immigration on social quality change over time? The study analyses data from the Citizenship Survey and other sources to investigate whether the rapid increase and spread of ethnic diversity throughout England in the twenty year period from 1991 to 2011 had any measurable effects on indicators of social quality in local authority areas over the period 2001 to 2011.

The study finds that ethnic diversity and immigration do have the negative effect on local trust identified by Putnam but that they also have positive effects on some social quality measures, and no effects on others. Broadly, these effects become more positive over time for measures of social cohesion and more negative for measures of social capital. The study demonstrates that the negative, positive and null effects of ethnic diversity are linked to differences in the measure of social quality; when individual-level, attitudinal, proximate measures of social quality are used, like local trust, negative findings are far more likely. The study concludes that ethnic diversity and immigration are not useful explanations for variance in social quality; levels of deprivation and higher-education more strongly account for this. It would be worthwhile to further develop a robust framework for quantitative studies of social quality and to improve methodologies for measuring social quality relationships over time.

CHAPTER ONE: INTRODUCTION

This thesis revisits Robert Putnam's seminal paper, *E Pluribus Unum* (2007*)* to test his finding that ethnic diversity has a negative effect on social capital. This thesis presents an original, empirical study which uses secondary analysis of quantitative data to compare any effects of ethnic diversity on the social quality of local areas in England over a ten-year period, from 2001 to 2011. The study addresses the question explored by Putnam and others by asking whether increasing ethnic diversity in local areas is affecting the social quality within those areas, and breaks new ground by further considering how any such effects change over time.

1.1 Originality in this thesis

This thesis makes an original contribution to the field of study which uses quantitative methods to investigate the effects of ethnic diversity and immigration on social capital, social cohesion, social trust or other aspects of the social quality of life in modern, Western societies. The best known work in this field is Robert Putnam's study of the relationship between ethnic diversity and social capital in the United States (US). Putnam found that neighbourhoods with greater ethnic diversity have lower levels of social capital and concluded that living in areas of increased ethnic diversity causes people to '*hunker down…like turtles'*, avoiding contact with their neighbours and retreating from associational life (Putnam, 2007, p149). In response to Putnam's study, a growing body of research has tested whether these findings hold true in the US (for example, Stolle et al, 2008; Uslaner, 2011), in the UK (in works by, for example, Twigg et al, 2010; Sturgis at al, 2010; Laurence, 2011; Schmid et al, 2014), and elsewhere in the world (including studies in Australia by Wickes et al, 2001, in the Netherlands by Gijsberts et al, 2011; and in Canada by Pendakur and Mata, 2012). In similar vein, this study takes Putnam's findings as the starting point and seeks to contribute new material to

this area of investigation. Specifically, this study addresses two areas not yet examined by research in this field.

Firstly, this study examines the possible effects from ethnic diversity and immigration on a broad range of social quality indicators. As I will discuss in detail in Chapter Four, it is my contention that studies in this field tend to focus on one or two aspects of social quality; social capital, social cohesion and social trust are the most common but others include national identity, civic engagement, life satisfaction, integration and inter-racial attitudes. None of these studies attempt to locate these aspects of social quality within a wider framework of what constitutes social quality in modern, Western societies. The studies proffer social capital (or some other aspect of social quality) as a measure of social 'well off-ness' which is untethered to any theoretical or conceptual explanation of where these measures fit with other elements of social well-being. Each study offers a slice of social quality (many offer the same slice) but do not give any sense of how big or important that slice is within the overall social quality cake. If ethnic diversity has a negative effect on social capital, for example, should we think of social capital as being a large or small part of the bigger social quality whole? Surely we need to know this to work out how much the negative effect matters in the overall scheme of things. In the absence of any wider social quality framework, Putnam's study, and others in this field, can be read, and have been interpreted, as studies of wider social well off-ness. This study seeks to lodge the exploration of ethnic diversity effects within a theoretical framework of social quality. In so doing, the study is able to examine the effects of ethnic diversity on a broader range of social quality outcomes than is common in this field.

Secondly, this study looks at whether any effects of ethnic diversity and immigration on social quality indicators change over time. This element of the research is entirely original; none of the published work in this field has looked at whether the effects of ethnic diversity

and immigration are fixed or whether, as seems more likely, they are dynamic and changing. Again, Chapter Four will present a detailed examination of this issue. The conclusions of Putnam's and other studies in this field are based on analysis of cross-sectional data which represents only one point in time. But social factors and the relationships between them change over time and some factors, like immigration and ethnic diversity, have changed particularly rapidly in recent times. Indeed, it is the increase in ethnic diversity which motivates these studies. Without factoring a temporal element into the analysis, the research is unable to address questions about where these relationships are heading. If Putnam's thesis is correct and ethnic diversity and immigration have damaging effects on social quality, do these effects worsen or dissipate over time as ethnic diversity and immigration increase? This study examines whether the growth and diffusion of ethnic diversity and immigration across England in the late 20th and early 21st century had any effects, or had any changing effects on indicators of social quality.

This thesis might also be considered original in its synthesis of epistemological approaches which conventionally underpin separate, or even divergent research strategies. This thesis presents a quantitative study which uses the deductive logic, methods and reporting conventions of positivist empirical enquiry. But this is framed by discussion of the meanings of critical concepts used within the research, drawing on an interpretivist perspective to consider how these concepts are constructed and how the study itself is made possible through the social processes that give rise to these shared meanings.

1.2 Research questions

The areas of originality described above are framed in the research questions which guide the empirical study presented in Part Two of this thesis. This thesis addresses two primary research questions:

1. Do ethnic diversity and immigration have any effects on a range of indicators of social quality in local areas of England?

2. Do any effects from ethnic diversity and immigration on social quality change over time?

1.3 Terminology

It seems helpful to explain at the outset some key points about the terminology employed in this thesis. These concepts and their contexts are more fully explored in later chapters. But for now, a quick explanation of 'social quality' and my use of 'race' and 'ethnicity' will clarify their usage, at least until the fuller explanations are arrived at.

Social quality

The term 'social quality' is not commonly used in the literature on this subject and so needs defining from the outset. The concept of 'social quality' was introduced in the late 1990s to debates about the European Union (EU) by people concerned that the European project had become focused on the pursuit of economic growth to the exclusion and possibly at the expense of sufficient regard for social issues. As developed in this context of incorporating a stronger social dimension within the European policy agenda, 'social quality' is defined as *'the extent to which citizens are able to participate in the social and economic life of their communities under conditions which enhance their well-being and individual potential'* (Beck et al, 1997, p3).

For this study, the value of the term 'social quality' is that it encompasses multiple dimensions of social life, offering a broader framework for social relations than either 'social cohesion' or 'social

capital', the terms which *are* widely used in the literature in this field. Moreover, social quality helps avoid the problems thrown up by the inconsistent use and contested meanings of social cohesion and social capital. Throughout this thesis, 'social quality' is used to cover the multiple dimensions of social life, or social relations, or social outcomes that research in this field seeks to measure in relation to ethnic diversity and immigration, including social cohesion, social capital, community cohesion, and social trust.

Race and ethnicity

The terms 'race' and 'ethnicity' are variously defined and widely contested. The terms are not used inter-changeably in this thesis, but the difference between them is in their historic usage rather than in the meanings they convey. The term 'race' is used when discussing the theoretical and research work which took place at a time when 'race' was the conventional term. 'Ethnicity' has largely replaced 'race' in both social research and everyday life and my study follows suit. The precise meanings of associated terminology, including ethnic diversity, ethnic minority and visible ethnic minority, are given in the methods section in Chapter Five.

1.4 The Putnam studies

Robert Putnam's 2007 paper, *E Pluribus Unum*, sits at the heart of a growing body of work which uses quantitative methods to investigate the effects of ethnic diversity on aspects of social quality in contemporary Western societies. This thesis responds to the group of published studies which share Putnam's research question and methodological approach. Throughout this thesis I call these 'the Putnam studies'. The Putnam studies are presented and discussed in detail in Chapter Four. But it is helpful to know before then which works I am labelling as 'Putnam studies' and on what basis I have grouped these together.

The Putnam studies referenced in this thesis comprise 30 published papers, summarised in Table i. These studies share the following characteristics:

- A focus on the effects of a minority population defined by race, ethnicity or immigrant-status;
- A focus on a social quality outcome, or a set of social quality outcomes, on which the effects of the minority population are measured;
- A focus on Western societies, predominantly the US and the UK, but studies have also been carried out in Canada, Australia and other parts of western Europe;
- The use of large scale national surveys and national censuses as the primary data sources;
- The use of regression analysis as the main analytic method, where the minority population is represented by an independent variable and a social quality outcome is the dependent variable;
- A comparison of the effects of the minority population within a boundaried geographic area, most commonly at the lowest measurable spatial level, such as 'neighbourhood', although some studies compare effects between countries;
- Almost always, a multi-level modelling approach to distinguish between the area-level effects of the minority population and any effects on the social quality outcome from individual variables such as age, education and ethnicity.

The list in Table i is neither definitive nor exhaustive. Post-Putnam studies are regularly being published and there are many more pre-Putnam studies (Putnam says there are *'hundreds'* (2007, p144)) which I have not unearthed. The aim here is not to provide a comprehensive guide to the work in this field, but to demonstrate what is included within the immediate context for my own research, as presented in Part One of this thesis.

Table i: The Putnam studies: summary

Author	Year of pub	Country	Author	Year of pub	Country
Taylor	1998	US	Letki	2008	UK
Alesina and Ferrara	2000	US	Stolle et al	2008	US and Canada
Glaeser et al	2000	US	Andrews	2009	UK
Oliver and Wong	2003	US	Twigg et al	2010	UK
Costa and Kahn	2003	US	Fieldhouse and Cutts	2010	UK & US
Duffy	2004	UK	Sturgis et al	2010	UK
Pennant	2005	UK	Wickes et al	2011	Australia
Flore	2005	UK	Laurence	2011	UK
Coffe and Geys	2006	Belgium	Gijsberts et al	2011	Netherlands
Dixon	2006	US	Uslaner	2011	UK and US
Leigh	2006	Australia	Pendakur and Mata	2012	Canada
Anderson and Paskeviciute	2006	Worldwide	Saggar et al	2012	UK
Putnam	2007	US	Laurence	2014	UK
Gesthuizen et al	2008	Europe	Sturgis et al	2014	UK
Laurence and Heath	2008	UK	Schmid et al	2014	UK

1.5 Why should Putnam be revisited?

The starting point for this study is my disquiet about Putnam's findings and their citation as evidence in support of anti-diversity and anti-immigration agendas. I find it difficult to accept that Putnam is correct. It makes no sense to me that increasing immigration and ethnic diversity can be a cause of declining social quality in Western societies.

I grew up in a small town in central England which was then almost entirely ethnically homogeneous. Ethnic minorities were a rarity. More than 30 years on, I can remember the names of every ethnic minority child in my secondary school; there were only three. In

contrast, I have spent my adult life living and working in some of London's most ethnically diverse districts, including Hackney, Brixton, Peckham, Tower Hamlets, Southall and Tooting. My own children have grown up amidst this ethnic diversity, attending multi-ethnic schools and colleges. Through my personal experience of living in a multi-ethnic family and my professional experience of working in ethnically diverse communities I have only ever seen the positive contributions that immigrants and ethnic diversity make to British society, not least of which is London's reputation as one of the most dynamic, creative and cosmopolitan cities in the world. I have seen ethnic homogeneity and ethnic heterogeneity close up, and I simply do not recognise Putnam's contention that people in ethnically diverse areas '*hunker down'* and avoid associating with each other.

To reconsider what Putnam found and the conclusions he drew from this, I developed a study based on the approach used by Putnam, and others, to look at whether there is a measurable relationship between ethnic diversity and various aspects of social quality. When I began this research, in early 2010, my reasons for revisiting Putnam's study were strong ones: there had been relatively few studies which tested Putnam's findings for the UK; the body of work in this field, from both the US and the UK, was inconclusive as to whether ethnic diversity and immigration have damaging effects on social quality; there were some clear gaps in the research designs which a study like mine could plug. Since then, a proliferation of new studies in this field, including many from the UK, have revisited, updated and moved on from Putnam's work. With every new publication it has been tempting to adopt the methodologies or measures of more recent studies in order to stay ahead, or even just abreast of, the rapid developments in this field.

However, six years on, the reasons for going back to Putnam's study as the starting point for this work are perhaps even more compelling than they were in 2010. Putnam's study was by no means the first to

test the effects of diversity on measures of social quality and many more have done this since. Yet it is Putnam's study which is best known and most frequently cited. As I will show in Chapter Four, some studies, including in the UK, have now found that ethnic diversity does not damage social quality. But Putnam's negative finding prevails. His study provides the empirical basis for evidence that ethnic diversity or immigration are having damaging effects on UK society, as used, for example, by Goodhart (2013), Collier (2013) and West (2013). Unless a strong consensus to the contrary can be established, it seems likely that Putnam's findings and conclusions will continue to inform polemic and, more worryingly, policy. It remains important to revisit Putnam on this basis.

Equally compellingly for this study, the post-Putnam work has tended to focus on just one of his findings; the negative effect of ethnic diversity on social trust. Putnam gives greater focus to this finding than to others in his paper because, he explains, *'the most impressive and substantial patterns we have so far discovered involve trust of various sorts'* (2007, p149). In responses to Putnam's findings the trend is towards a similar focus on trust (for example, Twigg et al, 2010; Laurence, 2011; Uslaner, 2011; Pendakur and Mata, 2012; Sturgis et al, 2014). As a consequence, while studies in this field have moved on from Putnam in the methods used to measure the effects of ethnic diversity on social trust, most of Putnam's other indicators of social quality have been left behind. Putnam measured 'social capital' through a rather loose set of indicators including confidence in local government and local leaders, voter registration, feeling able to influence one's local area, interest and knowledge of politics, working together on community projects, giving to charity, feeling happy and watching television. Few of these indicators have been included in the post-Putnam studies and the scope of the social quality outcomes has become increasingly narrow. This study seeks to move away from this focus on trust as the measure of social well-being by enlarging the conceptualisation

of social quality. This enlargement enables both a wider range of social quality indicators than has become usual in this field, and provides a frame of reference for understanding the relative value of each indicator within the overall world of social quality.

Finally, in terms of reasons to revisit Putnam, the growing body of work in this field has not yet addressed, far less closed the yawning gap in understanding how any relationship between ethnic diversity and social quality changes over time. Despite presenting his own conclusions as challenges for the future of modern societies, Putnam's findings about the negative effects of ethnic diversity tell us nothing about what the future of those effects will be. Do these negative effects increase or decrease over time? We just don't know.

1.6 Immigration or ethnic diversity

Putnam's study examines the effects of both ethnic diversity and immigration on social capital. But far more studies look only at ethnic diversity. Only one of the UK studies listed in Table i examines the effects of immigration (Saggar et al, 2012) and no UK study looks at both ethnic diversity and immigration effects. The relative lack of empirical investigation of immigration effects on social quality in the UK has been noted by Demivera (2015).

This study investigates the effects of both ethnic diversity and immigration. But the conceptual and theoretical frameworks which underpin the study are rooted in ethnicity as distinct from, and rather than, immigration. I want to briefly explain the reasons why.

Ethnic diversity and immigration are interwoven. Questions of who belongs have been fundamental to the creation of modern nations, and ethnic or racial identities have been a core part of this process. Arguably, nation states can be divided between those based on shared ethnicity, the ties of blood and ancestry, and those which are,

rather, bound together by common rights and commitments (Geertz, 1994; Smith, 1991). Immigration has been integral to nation building; the US is commonly characterised as a ‘nation of immigrants’. Immigration is also integral to the determination of citizenship, borders and entry; the processes of deciding who can enter the nation and how long they may stay (Castles et al, 2014).

For Britain, and other Western states, immigration is bound up with notions of racial or ethnic difference. Immigration produces ‘ethnic minorities’, but only for immigrant groups that are perceived as ethnically ‘other’ than the national majority; not all immigrants become minorities (Castles and Davidson, 2000). Ethnicity is an underlying principle in defining who can be part of, and who should be kept out of, the nation state. This ‘inclusion/exclusion dialectic’ is seen by many as an inherent feature of the modern nation state where one of the main targets of exclusion is the ‘ethnic other’ or ‘ethnic minorities’, who have arrived through migration (Giddens 1994; Castles 2000; Bauman 2004). Ethnicity is always central to issues of migration.

Across the Putnam studies there is greater focus on the social effects of ethnic diversity than of immigration, particularly in the UK studies. The UK studies in particular tend not to distinguish between what may be the differing effects of ethnic difference and new arrivals. The distinction is more usual elsewhere, with studies looking at differing effects of ethnic diversity and immigration on social quality in the US (Costa & Kahn, 2003) and Australia (Leigh, 2006). Putnam’s study tests the effects of both ethnic diversity and immigration but his reporting is focused on the ethnic diversity findings and little attention is paid to how these effects differ from those of immigration.

This focus on ethnic diversity over immigration may well be a consequence of measuring the pattern of relations at fixed points in time, rather than as a process which takes place over time. When

considered temporally, there is greater imperative to factor in immigration, as this is the process which creates ethnic diversity. This study introduces immigration into the analysis in this context; as one element in the process of change over time. The possibility of separate, or different effects from ethnic diversity and immigration is an interesting avenue, and one which is explored, but which does not constitute one of the primary research questions of this study. The focus here is on post-settlement effects rather than migratory processes. For this reason, although the inter-twining relationship between ethnic diversity and immigration is a constant theme, the contextual basis for this research study lies in the concepts and theories of ethnicity rather than of migration.

1.7 The social effects of ethnic diversity and immigration

Few subjects excite as much political, policy and academic attention as the effects of immigration and ethnic diversity on Western societies. The reasons for this have deep and complex historical roots. Chapter Three will examine how the social effects of ethnic diversity and immigration have been studied through history, and how evidence of these has been used in policy and public debates. The main themes of these debates are touched on here.

In Britain, as with other nations that characterise themselves as net receivers of people from other parts of the world, immigration is never far from the top of the political agenda and is almost always presented in negative terms. There is not enough room for more immigrants; we cannot afford to house/educate/provide health services for immigrants; immigrants don't share our language/culture/values. These familiar themes in the British discourse on immigration have appeared for centuries; for as long as immigrants have been arriving in Britain (Winder, 2004). While there is continuity in these themes, the language of the debate is ever changing. The words 'foreigners' and 'coloureds', very familiar to me

in the 1970s, are no longer widely used. The current lexicon includes migrants, new arrivals, refugees, asylum seekers, displaced people, as well as trafficked, unaccompanied and undocumented migrants. After some years in retreat, the term ‘immigrant’ has reappeared in mainstream discussion where, as in the 1970s, it tends to denote something or somebody problematic.

From the late 1940s, even as Britain was seeking to meet labour shortages by encouraging immigration from the colonies, the legislative direction has largely been towards restricting immigration (Goulbourne, 1998). In more or less overt ways, immigration restrictions have been tied to concerns about ethnicity and the need to limit entry to Britain from people who are ethnically ‘different’ from the majority, white British population (Mason, 2000). This has become more complex in recent years, with enlargement of the EU to include eastern European member states. It is now argued that the Labour government’s downfall in 2010 resulted from its under-estimation of the social impacts of the inflow of eastern European migrants to Britain, or of the popular perception of these social impacts (Watt and Wintour, 2015). The Brexit vote is seen by some as the backlash from people whose jobs, incomes and public services were undermined by this immigration influx (Travis, 2016).

In the last few decades, the debate about immigration has had to accommodate the consequences of immigrant settlement in the form of a growing population of people born in the countries that their parents migrated to, creating second generation migrants. As second generations have produced third, fourth and later generations, the resulting population has become ‘ethnic minority’, ‘minority ethnic’, or a plethora of associated acronyms; BME (black and minority ethnic), BAME (black, Asian and minority ethnic), BAMER (black, Asian, minority ethnic and refugee). And so the immigration debate about whether, or how to stop more people from some parts of the world from coming to live here, is now conducted in parallel with multiple

debates about how to manage the results of previous generations of immigration. In some places these debates are about understanding and addressing inequality (why do ethnic minorities have poorer education and employment outcomes?), in other quarters they are about managing community relations (are ethnic groups living segregated lives in British cities?). Then there are debates about loyalty (are some ethnic minority communities harbouring or even encouraging terrorist threats?), about national identity (is ethnic diversity eroding our core national values and threatening our sense of national self?), and about privileging (has multiculturalism put the needs of ethnic minorities above those of the majority?).

In Britain, the policy responses to the growth of an indigenous but ethnically ‘different’ population have changed over the decades and with the prevailing ideologies of successive governments. The focus on race relations of the 1960s and 1970s gave way to an emphasis on cultural plurality or multiculturalism in the 1980s, moving to race equality objectives and legislation in the late 1990s, which were enlarged into an ‘equality and diversity’ agenda in the 2000s, and into the 2010s with a growing focus on tackling perceived ethnic segregation by encouraging or requiring integration. Within this changing policy landscape, a liberal, progressive embrace of ethnic diversity has seen peaks and troughs. Between the so-called liberal hour of the late 1960s (Goulbourne, 1998) and the progressive legislation of the 2000 Race Relations Amendment Act, lie a great deal of resentment, hostility and organised campaigning against ethnic diversity.

The late 1990s perhaps mark a high point in policy acknowledgement of racism and discrimination, rather than ethnic identities or cultural traditions, as the key factor determining the different, often poorer, experiences and outcomes for Britain’s ethnic minority communities. The chain of events which began with the murder of Stephen Lawrence in 1993 and culminated in the 2000 Race Relations

Amendment Act, saw an evolving commitment from the government and state institutions, including the police and local authorities, to take responsibility for tackling racism. The 2000s saw a gradual rowing back from race equality as a policy goal, replaced by a broader and, arguably, shallower, diversity agenda which refused to 'privilege' ethnic minorities. Within the new equality and diversity agenda all groups with 'protected characteristics', from ethnicity to disability to sexual orientation, are included, with 'equality for all' rather for any particular group as the policy goal (HM Government, 2010).

The immigration and ethnic diversity debates overlap at many points, including in a particular discourse on 'silencing'. It has been claimed that Putnam found his findings so discomforting that he delayed publishing them for five years in the hope of discovering evidence to weigh against them (West, 2013). West believes that Putnam was silenced by the forces which have supressed reasoned debate on the merits or otherwise of immigration and diversity. West is just one of many contributors to a strident discourse on 'silencing' which has been a long-standing feature within immigration debates. The claim is that any discussion of immigration and diversity has been silenced by the forces of liberal, left, progressive, political correctness, squeezing out the voices of reasoned discussion. A stream of published commentators claim to have been silenced for questioning whether immigration and diversity are wholly positive features of British life (see, for example, Browne, 2002; Goodhart, 2013). Putnam himself warns that '*politically correct progressivism'* could *'deny the reality'* of the *'challenge…posed by diversity'* (2007, p165). The silencing of reasonable debate about immigration became a defining vignette of the 2010 general election campaign when Gordon Brown described a woman complaining about eastern European migration as 'bigoted'. His throwaway remark became emblematic of the heavy handed silencing of ordinary people by a

government which was vilified as ‘out of touch’ with the public’s concerns about immigration (Watt and Wintour, 2015).

Immigration and ethnic diversity overlap and intersect with concerns about social quality which are focused on impacts within defined geographic spaces. The spatial levels have varied over time but the constant is a focus on the interplay of ethnic relations and social quality within distinct geographic areas. From Enoch Powell’s 1968 ‘rivers of blood’ speech, with its emotive portrait of the last white woman living in a once ‘*respectable street in Wolverhampton’* (Powell, 2007), much of the public debate of the last 50 years has been about how immigration and ethnic diversity impact on local services and in local areas. From the late 1960s, the spatial focus of this debate was the ‘inner-city’. ‘Inner-city’ became a byword for urban decline and the target for government intervention through large scale inner-city renewal programmes of the 1970s and 1980s. The ‘inner-city’ was where immigrant and ethnic minority populations lived and the site of ‘racial tensions’ which exploded in the 1980s riots in Brixton and Tottenham. From the late 1980s, the spatial focus narrowed from the ‘inner-city’ to ‘estates’, reflected in government initiatives such as the Estate Action programme, before broadening slightly in the 1990s to a focus on ‘neighbourhoods’. In the late 1990s and 2000s, under the Labour government, the ‘neighbourhood’ represented the geographic level at which social quality was assessed, ethnic diversity measured, and strategies developed for ‘neighbourhood renewal’ (James and Evans, 2008). Since 2010, under successive Conservative-led governments, the ‘neighbourhood’ as a unit of policy and of analysis has given way to the more blurred ‘locality’ and a vision of ‘localism’ as a new approach to local self-determination in public services (Department for Communities and Local Government, 2016).

Immigration and ethnic diversity overlap and once again share the same conceptual and discursive space as social quality within a

narrative of decline that runs through all these debates. Putnam's *E Pluribus Unum* paper is part of his larger, highly influential body of work on the decline of social capital in modern societies (Putnam et al 1993; Putnam 2000 & 2002). Immigration and ethnic diversity do not feature in Putnam's early work on social capital but begin to play an increasingly prominent and causal role from the early 2000s (see the conclusions in Putnam, 2002). Hallberg and Lund (2005) note that ethnic diversity as a cause of declining social capital became an increasingly central theme in Putnam's public lectures and 'private seminars', including for Tony Blair, at around this time.

Separate to its use as an explanation for social decline, ethnicity has its own discourse of decline; the decline of racial purity through inter-ethnic breeding. Concerns about racial decline were the motivation for early statisticians, like Francis Galton and Karl Pearson, to develop quantitative methods for the identification of racial difference (Painter, 2010). Painter (2010) demonstrates how, from its inception, the science of statistics has played a pivotal role in defining and defending hierarchies of racial difference. If this is correct, the statistical methods used by Putnam, and in this study, are built on the work of pioneering statisticians seeking to prove racial superiority and prevent racial decline.

Increasing immigration and ethnic diversity

Ethnic diversity and immigration in the UK have increased in recent decades. It is not straightforward to determine exactly how much they have increased as the numbers, particularly on immigration, are contested. While there is reasonably reliable information about how many people come to live in Britain the data about how many leave is much poorer, leaving plenty of ground for argument about levels of net migration (Dorling, 2011). Nor is the collection of ethnicity data without complications. Evolving ideas about what ethnic identity means and how it should be defined, in part reflected in the changing

ethnic group categories in the UK census, restrict the comparability of ethnicity data over time (Jivraj, 2012). However, we know that between 1991 and 2011 the proportion of people who categorised themselves as ethnic minorities in the census returns more than trebled, from about 6% to 20% of the national population. Over the same period, the proportion of the population of England which was born outside the UK nearly doubled, from around 8% to 14%. We also know that ethnic diversity and immigration spread geographically over this period, so that more local areas across the UK became more ethnically heterogeneous.

The increase and diffusion of ethnic diversity and immigration over this 20-year period offers a unique opportunity to examine their effects across both spatial and temporal dimensions. As in other Putnam studies, we can look at what happens when ethnic diversity and immigration differ from place to place, by comparing more and less diverse spatial areas. Unlike the Putnam studies, we can also look at what happens over time as all areas become more ethnically diverse and have higher immigrant populations, as has happened throughout England. Additionally, by examining data from 1991 to 2011, we can consider whether the rate at which ethnic diversity and immigration increased in this period has had any effects on social quality.

Ethnicity as difference

In his discussion of what Putnam's findings mean for immigration and multiculturalism in the UK, Collier posits that the social consequences might well be worse, as the '*cultural gap'* between the immigrant and indigenous populations looks smaller in the US than in the UK (2013, p76). He means, I think, that immigrants to Britain are more 'different' from the people who already live here and that this greater degree of difference is a bigger problem.

The notion of difference underpins the theoretical framework within which studies of ethnic diversity effects are conducted. These theories (which will be presented in detail in Chapter Two), contact or conflict, pluralism or assimilation, are grounded in notions of difference. More precisely, in the construction and categorisation of difference. The dimensions of these differences are multiple; they variously refer to nationality, culture, religion, race or ethnicity, between majority and minority groups, immigrant and indigenous groups, recent arrivals and settled communities, host and incoming groups. As will be discussed in Chapters Three and Four, there is much empirical work in this field that is concerned with quantifying these differences and with using quantified difference to explain or predict variations in social attitudes or behaviours.

The concept and language of difference saturates the media, policy and public debates on immigration and diversity. From prime ministerial speeches about the ‘swamping’ of British culture (Margaret Thatcher in 1978) or the ‘swarming’ of migrant hordes (David Cameron in 2015) through more nuanced debates on whether risk-pooling welfare states can be sustained as homogenous societies become heterogeneous (in, for example, Banting et al, 2006). Everything rests on the fundamental concept of difference.

Chapter Two will examine how ethnic difference has played a central role in the history of social categorisation; in the ways in which societies have organised populations into groups for social or economic reasons, or for management and administrative purposes. Slave classifications, census categories and ethnic monitoring forms are all part of this on-going history of defining and categorising groups by ethnic difference. In a parallel historical development, ethnic difference has played a prominent role in the history of statistics, with breakthroughs in modern statistics resulting from the work of pioneers seeking to quantify differences between racial groups. The histories of ethnic difference as a mechanism for

categorising populations and the statistical analysis of those populations meet in the early 20th century, in statistical studies of ethnic difference. This interest has endured and flourished through to the present day.

Ethnicity as ideological cover

Writing in 1948, in the aftermath of the Holocaust, the political theorist Hannah Arendt argued that the interpretation of history as a '*natural fight of races'* was one of the few ideologies to survive the *'hard competitive struggle for persuasion'* (2004, p211). Arendt's contention was that race conflict provides an ideological weapon in the pursuit of other, primary, objectives; totalitarianism in the case of the Nazis, imperialism for the 19th century Boers in South Africa.

Race conflict is a powerful and persuasive explanation for many events. Patrick Brogan's review of 92 armed conflicts which took place worldwide from 1945 to 1989 concludes that *'the engine that powers most of the wars in today's world is ethnic hostility'* (quoted in Banton, 2000b, p481). Williams (1994) outlines a sociology of ethnic conflict which identifies the ethnic group conditions that give rise to wars and genocides. The Baltic state wars and the Rwandan genocide of the 1990s are defined as ethnic conflicts (Petersen, 2002). On a less deadly scale, events in Britain which have been cast as ethnic conflicts include the Notting Hill riot in the 1950s, the Brixton and Tottenham riots of the 1980s (Panayi, 1996) , and the Bradford, Burnley and Oldham riots in 2001 (Cantle, 2001).

None of the Putnam studies suggest that ethnic violence is an outcome of increased ethnic diversity. Yet, the conceptual and theoretical frameworks that underpin these studies are the same as those that explain ethnically-driven wars and genocides. As I will explore in Chapter Two, they are rooted in the same ideas of ethnic

difference, of ethnic groups in conflict, and of ethnic group conflict as a competitive struggle for power or resources.

Arendt's argument is that race conflicts are not really about racial conflict. Rather, that the ideology of racial conflict provides cover for states seeking to assert or preserve power, or for power groups seeking to establish states. Arendt's view of race conflict as an ideological cover for expansions in state power suggests that, in seeking to understand the origins of conflicts, 'race' is not the answer. The same contention is applied to the study of ethnic relations by Robert Miles (1993), Kenan Malik (1996) and others who similarly argue that 'race' is not the right explanation. Further, that using 'race' as an analytic category not only fails to explain the problem but perpetuates difference and precludes the possibility of equality (Malik, 1996). In current debate on the EU referendum, journalists like Owen Jones argue that framing social grievances through the prism of immigration, and its concomitant ethnic diversity, obscures the real problems of economic insecurity and rising inequality (Jones, 2016).

So what does this mean for a study that is focused on ethnic difference as a possible explanation for differences in social quality? Arendt's view would be that a focus on ethnic diversity is misplaced. That other factors such as deprivation and inequality may better explain differences in social quality, but that ethnicity provides a persuasive explanation that fits readily into established ways of understanding the social world. It might mean that using constructs of ethnic difference as if they were fact is fundamentally misguided. This study itself may be contributing to the continuing reification of ethnicity; strengthening racial and ethnic differences by treating them as meaningful, measurable and real. Ultimately, it might mean that my research questions are wrong. That the question should not be 'What are the social effects of ethnic diversity?', but rather 'Why is

ethnic difference being rolled out to explain social quality?' or 'What struggles for power might a focus on ethnic difference be masking?'.

To study or not to study ethnic difference has been a philosophical dilemma for this study from the outset. At an early stage I decided that rather than rejecting any focus on ethnic difference, it was important to follow in Putnam's footsteps by engaging with his analytical approach, but to do this in full recognition of how we have arrived at our understanding of what ethnic difference means and how we categorise and measure this. This is the approach adopted and presented in this thesis. Whether this approach has worked, both in terms of revisiting Putnam's findings and in resolving this fundamental philosophical dilemma, will be considered in my concluding chapters.

1.8 The structure of this thesis

This thesis is presented in three parts. Part One looks at the context within which my empirical study takes place. I present this context in three chapters which flesh out the themes touched on in this introduction. Chapter Two maps out the foundations which underpin our understanding of differences in ethnicity as properties which can be categorised. It explores the historical development of the techniques we now use to measure the size and impact of these categorised differences. The chapter reviews the theoretical approaches which have been developed to explain the social effects of this form of categorised difference. The chapter closes with a consideration of whether it is possible to get 'beyond race'. Chapter Three explores the historic and contemporary debates on immigration and ethnic diversity to consider why the social effects of ethnic diversity are of interest to researchers. The chapter highlights empirical studies which have shaped these debates and helped pave the way for the Putnam studies with their specific focus on the causal

effects of ethnic diversity on social quality within distinct geographic areas. Chapter Four presents the Putnam studies. The chapter considers what is learned from the Putnam studies, whether there are differences in findings from the pre- and post-Putnam studies, and from the US and UK Putnam studies. Critiques of the Putnam study approach are reviewed. The chapter closes with my assessment of gaps in the Putnam studies and how these can be addressed in my own study.

Part Two of this thesis presents the methodology and findings from my empirical research. Chapter Five explains the study methodology, including how the data were selected and collected, what methods of data analysis are used, and how the outputs from data modelling are interpreted. Chapter Six looks at what the data used for this study tell us about how ethnic diversity, immigration and social quality changed in Britain from 1991 to 2011. Similar analyses of change over this period, particularly in ethnic diversity and immigration, have been undertaken by other researchers, and this chapter presents the findings of these where appropriate. The results of my own data analysis are presented in Chapter Seven with a discussion of these findings in Chapter Eight.

The third and final part of this thesis presents the conclusions. Chapter Nine considers what conclusions can be drawn from the study findings. It answers the central research questions: Do ethnic diversity and immigration have any effects on a range of indicators of social quality in local areas of England? Do any effects from ethnic diversity and immigration on social quality change over time? In the final chapter, I reflect on what this study may contribute to our shared understanding of the effects of ethnic diversity on social quality and whether my philosophical dilemma of whether to study ethnic difference at all has been resolved.

PART ONE: THE CONTEXT

CHAPTER TWO: CONCEPTS AND THEORIES OF ETHNIC RELATIONS

2.1 Underpinning concepts

The Putnam studies rest on the fundamental belief that 'ethnicity' is a quantifiable social property. That is, that distinct ethnic groups can be identified and that measuring populations by these groupings is both possible and meaningful. The reality and the measurability of ethnicity are the basic building blocks of the Putnam studies. But how did this happen? Where does this underpinning concept of 'ethnicity' come from? How is 'ethnicity' not only a measurable social feature, but perhaps uniquely, one which has inspired and driven advancements in the social science of measurement? Does everyone agree that 'ethnicity' can and should be measured?

The idea of race

The story of how 'race' became the basis of an enduring system for categorising humans into groups has often been told. When English voyagers first arrived in Africa in the 1550s they found skin colour to be one of the most salient differences between themselves and the African people. And when the English explorers described Africans as 'black' they were using a term already loaded with intense meanings pertaining to dirt, darkness, malignancy and evil. As English, and other European traders began to appropriate and exploit the resources of Africa in the 16th century, including, most profitably, its people, the difference between 'white' Englishmen and 'black' Africans was seen as a natural inequality. Black people were viewed as cursed by God; descendants of Canaan whose skin was black as a punishment for the sins of his father, Ham, who looked upon the nakedness of his own father, Noah. The God-given basis for racial difference was evoked by those profiting from the slave trade, and informed the racist discourse of the slave owners in the Caribbean

and American plantations. ‘Plantocracy racism’ justified slavery by the view that Africans were of a different, degenerate species, suited to work like beasts and to be treated as such (Banton, 1977, 2000a, 2004; Fryer, 1984; Jordan, 2000).

Over the course of the 18th century, as the Enlightenment saw the triumph of science over religion, the old beliefs in God-given differences gave rise to new, scientific explanations of racial difference. Michael Banton charts the emergence of the concept of race to denote types of people from the mid-18th century work of the Swedish naturalist Carl Linneaus on botanical classification. Linneaus’ work was developed in the late-18th century by Georges Cuvier to encompass humans, paving the way for the ‘racial typologists’ of the 19th century (Banton, 1977). Prominent amongst the founders of ‘racial typology’ were Robert Knox, a Scottish doctor who published *The Races of Men: A Fragment* in 1855; Joseph Arthur de Gobineau, the French aristocrat who published his *Essay on the Inequality of Races* in 1855; and Josiah Nott, an American doctor who translated and published Gobineau’s *Essay*, with considerable embellishment, as *The Moral and Intellectual Diversity of Races* in 1856.

Painter (2010) charts the same historical developments as Banton, but roots these in the Western European search for proof that whiteness was the ideal form of human beauty, and so dates the development of modern racial thinking from the work of the art historian, Johann Wincklemann, who was murdered in 1768. Wincklemann championed an ideology of ancient Greek beauty, promoting the aesthetic of whiteness as the beauty ideal which, Painter argues, laid the ground for the scientific search for physiognomic differences to prove the superiority of the white or Caucasian facial or skull type (Painter, 2010). Painter’s history of scientific racism catches up with Banton’s in the 19th century, in the work of Knox, Gobineau, Nott and other proponents of racial

hierarchies. Painter differs from Banton in emphasising how respected and influential these thinkers were. These were not fringe ideas, but works from the mainstream of Western European and American intellectual society.

Scientific racism reached the pinnacle of its influence in the eugenicist policies of Nazi Germany, when the logic of racial thinking was implemented to catastrophic effect. The aftermath of the Holocaust marks a shift in racial thinking, away from the now discredited science of racial hierarchy. Malik (1996) describes this pivotal movement when racial discourse was reformulated, arguing that the concept of race was transposed from the biological to the cultural as the main explanatory framework. Painter (2010) and Roediger (2008) follow the progress of racial thinking into 20th century America and its robust survival within the age of modern liberalism and mass democracy. While the meaning of race in 20th and 21st century societies is still a live debate, there is no question that the concept of race has endured.

While Banton, Painter and others have mapped the 'idea of race' through history, Robert Moore highlights that the main feature of this idea is '*its malleability, enabling it to be reworked over the centuries.*' (Moore, 2014, p1408). This malleability has seen the idea of race survive several historical shifts in language and culture. In 20th century Britain, the language of 'colour' was overtaken by the idiom of race, Banton pinpoints this very precisely as happening in 1954 (Banton, 2014), to be superseded by the emergence of 'ethnic' as a separate term. Following a lengthy period of academic reflection on the difference between the two, ethnicity has all but replaced race in 21st century British discourse, although race and ethnicity retain separate meanings in the US.

Throughout the changes in terminology, discourse and theories, we are, at root, talking about the same thing. That is, the persistent belief

that all people have characteristics which they share with others, and on the basis of these characteristics we consider ourselves or others as belonging to groups that are more or less recognisable as groups by everyone else. The nature of these characteristics has always been contested, and the dominant view has changed over the centuries through a series of Foucauldian epistemes; from the God-given, to the biologically determined, to the socially constructed or culturally ascribed.

In the current episteme, the social constructionist view of race is almost universally accepted. We believe that race is an idea which originated in modern Western thought, has been universally adopted, is deeply embedded and has proved remarkably adaptable to changing political and ideological viewpoints. There are dissenters. Mallon (2012) for example, argues that recognition of racial difference is a fundamental feature of all human societies, including those which are untouched by the emergence of racial thinking in European-American cultures. Such views, arguably, reach back to the biological determinism of the previous episteme. The greater challenge, discussed later in this chapter, is whether racial thinking can move forward, beyond the current episteme, to a place where race no longer carries any social meaning.

Categorising by race

Allport asserts that '*the human mind must think with the aid of categories….Once formed, categories are the basis for normal prejudgement. We cannot possibly avoid this process. Orderly living depends on it.*' (1958, p19). The concept of race has demonstrated its adaptability to survive through epistemic shifts in knowledge and beliefs. Through these same shifts, the deployment of race within systems of categorisation has proved similarly persistent.

Historians and sociologists have shown how Western philosophers and scientists created the concept of race as a way of classifying humans, and Western travellers, colonialists and imperialists exported this concept to the rest of the world (Banton, 1977; Outram, 2005). There has never been any neutrality about the concept of race. From the outset, racial classifications, developed by Western theorists, have been shaped by Western values which have seen other races as 'different' and usually as 'inferior' to the Western (white) race. Edward Said links the development of racial classification in 19th century Western thought with the Western view of Orientals as '*backward, degenerate, uncivilized and retarded'* (Said, 1985, p206). Race and racial difference are embedded in the West's construction of itself. The West is all the things which other places and other people are not. Without the concept of the 'other', made possible by race, there is no West (Said, 1985).

With the scientific 'proof' of a racial hierarchy, the concept of racial classification gained strength through the 19th, 20th and into the current century. The classifications themselves have been constantly reviewed, revised and added to, taking different forms and serving varying purposes in different societies. Racial classification was used by 18th century slave owners to control colonial populations by stratifying people by degrees of blackness, thereby creating a class of intermediate people who stood between the small number of white slave owners and the larger black slave population (James, 2001). The classifications and nomenclature varied between colonies. C.L.R. James records that before the 1791 slave revolt colonial San Domingo was racially stratified into 128 divisions, each division representing the number of parts of 'black' and 'white' blood; a sang-mêlé, with 127 parts white blood and one part black, was still a man of colour (James, 2001).

Racial classification by the amount of 'white' or 'black' blood that an individual was said to possess lasted well beyond the end of slavery.

In the US, the ‘one drop rule’, under which *‘any ascertainable quantum of Negro blood made one a Negro’* (cited in Nobles, 2000, p70), operated as a strict social divide in the southern states throughout the 19th century and became law in Georgia and Virginia in the 1920s (Nobles, 2000). European travellers in America noted the illogicality of a system that classified people by blood but labelled them by skin colour. Gustave de Beaumant wrote that when attending an American theatre in 1831 he found the audience segregated into seats for blacks, whites and coloureds, surprised to see a very fair skinned woman in the coloured seats he was told that local tradition had classified her as ‘mulatto’ (cited in Painter, 2010, p130).

Racial classification as a system for assigning and maintaining privilege operated in similarly overt fashion in South Africa during the apartheid era and in Germany under Nazi rule. As in racially segregated America, the privileges of racial hierarchies were enforced by legislation. The German government implemented racial classification through a detailed legislative programme, of which the 1935 Nuremburg laws were just part, and through a large bureaucracy set up to organise the population into racial categories. It is worth remembering that social researchers and other academics were actively involved in the development and application of racial classification to implement Nazi Germany’s racist and genocidal policies (Burleigh, 1991).

Zygmunt Bauman (1989) shows how race thinking provided the rationale for modern methods of ‘boundary building’ to segregate the unwanted from the included in modern societies which legislatively embrace equality for all. Bauman demonstrates how well the ‘instrumental rationality’ of modern society supports the bureaucracy of racial categorisation which can be deployed by the state in the rational pursuit of social engineering. The Holocaust, Bauman

argues, was not caused by modern bureaucracy, but this certainly provided an efficient delivery mechanism.

Despite its tainted role in Nazi, apartheid and segregationist state policies, racial classification remains embedded in the state structures of various nations, including the US and the UK. Both nations collect racial data through their national census. The census is now considered indispensable to efficient, modern government (Nobles, 2000) although recent British governments have been keen to scrap the national census on the grounds of cost cutting and reducing bureaucracy (London Evening Standard, 2010). Nevertheless, census taking has been the main mechanism for counting populations, in Britain since 1801 and in the US since 1790, and thus for providing quantitative data to enable social management. Importantly, censuses not only count populations, they organise those populations into categories. In her exploration of the use of racial categories in census taking, Nobles demonstrates how states use censuses to shape social and political realities. From the racial determination of citizenship in the US to the 'whitening' of Brazilian society, Nobles shows how censuses have helped to establish the categories that stratify societies, and have furnished the social statistics that are used in racial policies (Nobles, 2000).

That racial or ethnic categories are seldom constant in national censuses, and are particular to each nation, underlines that these categories are social and political constructions, and confirms Moore's assertion of the 'malleability' of race. There is no set of racial or ethnic categories that has been used across nations and over time. Rather, where national censuses have included race or ethnic categories, these are specific to the social organisation or political ideology of that nation state at that time. A question on ethnicity was first introduced into the British census in 1991, with nine response categories; by 2011 the census offered 18 possible ethnic groups. In

contrast, the US has included a race question in every census since 1790, using very different categories to those used in Britain.

The flexibility of racial classification is demonstrated by Painter (2010). To achieve the 'enlargement of American whiteness' 19th century racial science and government officials first classified Irish immigrants as racially inferior but subsequently moved them into the white American majority population. Roediger (2008) charts the same history of America's 'race management' of mass immigration through the 19th and 20th centuries which accommodated immigrants within America's racial system in a bid to keep America a country with a majority white population.

While race is an established category in the UK and the US, not all Western nations recognise race or ethnicity as valid concepts. France, for example, in its submission to the European Commission's inquiry on how to measure progress in the fight against discrimination, asserted that: *'In France, the problem lies…in the fact that ethnicity and race are unacceptable concepts'* (European Commission, 2008, p59). Spain, Portugal and other European countries are similarly opposed to the use of racial classifications, mindful of the misuse which this classification has historically enabled. Moves by the Italian government in the mid-2000s to classify Sinti and Roma people on the basis of race were widely regarded as an overtly racist act with direct echoes of Nazi Germany (Milne, 2008). In modern societies, racial classification is a political choice.

Measuring race

While quantification is thought to date back to the Neolithic era, its application as a way of organising and standardising social life took root in Western Europe over a 50-year period between 1275 and 1325. These years saw the development, in Europe, of the first

mechanical clock, perspective painting, double entry book keeping and other devices that '*obliged Europeans to think in terms of quantified time and space'* (Crosby, 1997, p19). Some of the tools used as the basis for Western quantification had their origins in other parts of the world; the Hindu-Arabic numeral system, for example, developed in India and Persia by the second century, did not reach Europe until the 13th century when its use was strongly promoted by the Italian mathematician Leonardo Fibonacci, amongst others (Boyer, 1991). But the application of quantitative approaches to the organisation of social life commenced in Europe, driven, Crosby argues, by the rise of the transaction economy and a Western fixation with money: '*There were no people on earth more concerned with coins than Westerners, no people who worried more about their weight and purity, who played more tricks with bills of exchange and other pieces of paper that represented money – no people on earth more obsessed with counting and counting and counting'* (Crosby, 1997, p74). This early lead in quantitative, transactional thinking put Western Europe in the forefront of science, cartography, astronomy, navigation, business and banking practices, creating the technology that would support the West's colonial expansion from the early 15th century, and the basis for the *'precise, punctual, calculable, standard, bureaucratic, rigid, invariant, finely coordinated, and routine'* rationalistic character of modern culture (Eviater Zerubavel, cited in Crosby, 1997, p230).

The conceptual elements can be traced back to ancient times, but the modes of thought that underpin modern statistical reasoning emerged in the 1660s (Hacking, 1975; Kendall, 1970). Statistics began as the systematic study of quantitative facts about the state (Hacking, 1975). The approach differs from the simple collection of quantitative data through social inventories, the use of which in Britain goes famously back to the 1086 Domesday survey. From the 1660s, marked by the publication of John Graunt's study of population data for the city of London, a new approach developed

that applied reasoning to quantitative data in order to draw inferences that could be applied to the general population (Hacking, 1975).

Stephen Stigler charts the formative period for the development of modern statistics from 1805, when Adrien Legrande published his work on the least squares method, to 1900, by which time the work of Galton, Edgeworth, Pearson and Yule formed the basis of the new discipline of statistics (Stigler, 1986). The birth of modern statistics took place in Western Europe with British intellectuals playing the leading roles. Much of this development was inspired by and supported the emerging grand theory of evolution. Francis Galton (1822 to 1911), who Stigler describes as *'perhaps the last of the gentleman scientists'* (p266), was a cousin of Charles Darwin. Francis Edgeworth (1845 to 1926) was born in Ireland, a distant cousin of Francis Galton, but studied in England and held professorships at Kings College London and Oxford University. Galton's protégé, Karl Pearson (1857 to 1936), founded the world's first university statistics department in 1911, at University College London. George Udny Yule (1871 to 1951) studied under Pearson at University College. The work of these men created the statistical laws of correlation and regression which are the basis for the statistical methods used today in fields as diverse as genetics, sociology, astronomy and finance.

The American historian Nell Painter has mapped the intellectual development of race thinking in Western societies, highlighting the role of mainstream academics in advancing ideas of racial hierarchy and the superiority of white people (Painter, 2010). Francis Galton and Karl Pearson feature prominently in Painter's account. Galton coined the term 'eugenics' and was its *'founding father'*. Pearson was an *'ardent eugenicist'* (Painter, 2010, p269). Galton's text on eugenics, *Hereditary Genius,* argues for race and class characteristics as the basis for natural selection. Galton described

the science of eugenics as giving *'the more suitable races or strains of blood a better chance of prevailing speedily over the less suitable'* (cited in Zuberi, 2001, p34).

Tukufu Zuberi (2001) offers a more strident critique of Galton and Pearson than Painter. Painter's central point is that the idea that white people are superior to other 'races' is not a marginal notion, but one developed and advanced by respected academics in mainstream universities. Zuberi argues that because their statistical breakthroughs are founded in their work to establish the proofs of human difference, the very methods developed by Galton and Pearson (and Zuberi adds Ronald Fisher to this group) are racialised. That is, statistical logic is rooted in the *'numerical analysis of human difference*' (Zuberi, 2001, p35), giving the modern use of social statistics an inherently racialised character. The legacy of this, Zuberi argues, is a continuing misuse of 'race' within statistical analysis, with 'race' considered a fixed attribute that reflects racial stratification rather than as '*a dynamic characteristic dependent on other social circumstances'* (Zuberi, 2001, p124). Race, therefore, should not be used as a causal variable, and studies that attribute causation to 'race' are, basically, wrong.

Painter and Zuberi assert that modern statistical methods were developed in the cause of measuring innate racial differences. And so has their use continued. Stephen Jay Gould has traced the history of the scientific quest to prove that intelligence varies between racial groups or, more exactly, to prove that white people are intellectually superior to other 'races' (Gould, 1996). Statistics and statisticians play leading roles in this history. Charles Spearman, for example, developed factor analysis, a key technique in modern statistics, in the course of his work to isolate the biological factors determining intelligence; work which he published in the *Eugenics Review* (Gould, 1996). Gould highlights Spearman's contribution to the reification of intelligence as a biological entity, although absolves him of any active

role in advancing theories for differences in intelligence among human groups (Gould, 1996). Spearman's methods, though, were used by his successor as professor of psychology at University College, Cyril Burt, to pursue exactly this aim; to find the evidence that intelligence is an innate characteristic that varies between human groups. It was claimed, after his death, that Burt falsified data in his later studies of twins to show stronger positive correlations in their measures of intelligence. Gould does not take issue with Burt's data, but rejects the statistical premise, developed by Spearman and utilised by Burt, and subsequently in the US by Herrenstein and Murray to prove innate racial differences in intelligence levels. Gould refutes the central assumption that intelligence can be reduced to a single number, capable of ranking people in linear order, which is genetically based and, therefore, immutable (Gould, 1996). If this premise is refuted, then the findings and conclusions of studies that prove genetic differences between races (for example, Herrnstein and Murray, 1994) are fallacious, as the central logic on which they are built is a false one.

Zuberi and Gould share a concern that abstract concepts – race, intelligence – have been reified into real entities and then fed into statistical analyses as variables that are proven to be significant, or even causal, in all manner of social phenomena. But, they both argue, these abstract concepts are, variously, too complex, ever-changing, socially determined, and their reification reduces them to fixed entities that cannot begin to reflect the reality they purport to represent. Separately, Gould and Zuberi highlight the drive in Western intellectualism to reduce the social world to quantifiable and therefore measurable entities. Zuberi takes this further than Gould, arguing that statistical methods are a form of 'white logic', rooted in the West's history of slavery, colonialism, imperialism and continuing belief in white racial superiority (Zuberi and Bonilla-Silva, 2008).

2.2 Theoretical frameworks

The Putnam studies investigate the effects of ethnic group relations on social quality in local areas. Not all of these studies set out a theoretical basis for their empirical investigation. Some researchers locate their studies in previous empirical findings and discussion of these, rather than in any wider theoretical context (including Letki, 2008; Andrews, 2009; Twigg et al, 2010; Uslaner, 2011). The Putnam studies which are explicitly oriented within a theoretical framework (including Taylor, 1998; Putnam, 2007; Fieldhouse and Cutts, 2010; Laurence, 2011) largely draw on intergroup theories from the US. Intergroup theories explain why majority ethnic groups display prejudice toward minority groups; they form one strand in the very wide field of race theories. This section takes a broad sweep across the race and ethnic studies field to show where the Putnam studies sit within the wider theoretical trends in UK and US scholarship on the social effects of ethnic diversity.

Theories of the social effects of race have evolved somewhat separately in different national contexts; a process coined 'methodological nationalism' (Beck and Beck-Gernsheim, 2009). For this study, the theoretical approaches from the US and the UK are of equal interest; theoretical models from the US provide the context, and sometimes the working hypotheses, for many of the Putnam studies, while the location of my own study within the UK means that the theoretical approaches on this side of the Atlantic should also be relevant. Interestingly, and perhaps conversely to methodological nationalism, the Putnam studies conducted outside the US or UK also use the US theoretical models; including Coffe and Geys' Belgian study (2006) and the transnational studies by Anderson and Paskeviciute (2006) and Gerthuizan et al (2008).

Classical roots

'There are few contemporary perspectives on race and ethnic relations that cannot be linked, in one way of another, to…Weber's seminal writings.' (Stone 2003, p31). It is hard to disagree with Stone's assertion, for time and again modern race relations theories draw on Weber's ideas. Stone identifies several areas where Weber's contributions have been critical to the development of modern race relations theories but it is perhaps in Weber's ideas about how social groups form boundaries and protect their interests that his influence is most marked. Weber saw social groups encompassing not only classes, defined as by Marx by their relation to the means of production, but a wider range of 'status groups' which can be based on claimed or ascribed characteristics. Status groups seek to maintain their social and economic advantages by keeping their social distance from 'inferior' status groups. This exclusionary tendency becomes particularly acute when there is increased competition for scarce resources (Weber, 1947). Weber identifies race as one of many characteristics on which status groups and the competition between groups can be based: '…*one group of competitors takes some externally identifiable characteristic of another group of (actual or potential) competitors – race, languages, religion, local or social origins, descent, residence, etc. – as a pretext for attempting their exclusion. It does not matter which characteristic is chosen in the individual case: whatever suggests itself most easily is seized upon….[The purpose of] this monopolization … is always the closure of social and economic opportunities to outsiders.'* (Weber, quoted in Stone, 2003, p34).

Stone draws a line of association from Weber's interest in marginal, 'pariah groups' to Robert Park's writings on 'the marginal man' (Stone, 2003, p35). Park was a leading figure of the Chicago school in the 1920s, whose theoretical work on race was critical to the development of assimilation theory, which remains among the most

influential theories of race relations. Park was keenly interested in *'the study of the Negro and the race problem*', an interest sparked by meeting the black American educator, Booker Washington (Park, 1950, pvii). Park's studies were focused on the differences between racial groups and on what happens when separate groups come to share the same geographic space.

Park's thinking is similar to Weber's ideas about competition between social groups. Park considered that cities were the site where 'race problems' emerge '*because it is here that racial groups meet as competitors for jobs and housing and become antagonists in a process of social conflict aimed at preserving or changing their group's status'* (Lal, 1986, p286). In Park's work, racial prejudice is seen as an outcome of the shifting relationship between racial groups, in the competition for resources between what Park called the 'we groups' and the 'other groups' (Park, 1950).

Weber's ideas about status groups can also be seen in Frederik Barth's work on ethnic groups and boundaries. Barth (1969) sets out a series of premises about the constitution of ethnic groups and the nature of the boundaries between them which share the Weberian idea of ethnic groups as a form of social organisation based on ascribed identity. For Barth, the critical feature of ascriptive groups is how they maintain boundaries through a *'continuing dichotomization between members and outsiders'* (p14). According to Barth, the cultural content inside the boundary may change, but the dichotomization of insiders and outsiders maintains the boundaried persistence of ethnic difference, even as the process of contact between ethnic groups might be expected to erode these differences.

Barth's insider/outsider dichotomy echoes Park's we group/other group conflict. Both share Weber's thinking on social closure as a mechanism for preserving privilege by closing opportunities for outsiders. These ideas about relations between ethnic groups as

essentially conflictual or competitive have been hugely influential in race theory. They provide the basic building block for groups of theories which were developed in the US to explain how immigrant groups integrate into the American population, and in British theories of race relations which sought to explain conflicts and inequalities between ethnic groups.

Assimilation theory

Assimilation is viewed by some as a theory of integration; Giddens and Sutton (2013) present assimilation, melting pot and cultural pluralism as three theoretical models under the umbrella of integration theory. For others, assimilation and integration are much the same theoretical concept, with assimilation dominant in US debate and integration favoured in European discussion (Schneider and Crul, 2010). Assimilation and melting pot theory are not always distinguished from each other, with the 'melting pot' of assimilation theory held in contrast to the 'salad bowl' of cultural pluralism (Paul, 2008).

Theories of assimilation were developed in US sociology in the early 20th century to explain how immigrant groups 'melt' into the American population. Now regarded as 'classic assimilation theory', the theory is that immigration is a natural, linear process through which new immigrants replace the behaviours and traditions of their own cultures and adopt the language and values of the receiving society. Over one or two generations the differences which mark immigrants from natives disappear and they become fully American (Paul, 2008).

The roots of assimilation theory are generally traced back to the 1920s work of Robert Park and his race relations cycle of 'contact, competition, accommodation, assimilation', although the centrality of this cycle to Park's work and to the development of assimilation theory has been questioned (Lal, 1986; Alba and Nee, 1997). Alba

and Nee (1997), pointing to confusion in early sociology about definitions and formulation of assimilation, argue that a breakthrough came in the early 1960s with Milton Gordon's assimilation framework which provided the basis for subsequent scholarship in this field. Gordon's framework is particularly helpful for understanding the difference between 'acculturation' and 'assimilation', terms which sometimes appear as interchangeable. Acculturation, in Gordon's framework, refers to the minority group's adoption of the culture of the host society. Acculturation is the first stage in the assimilation process and will always take place. Subsequent stages in the process culminate in structural assimilation, whereby the minority group join the clubs, groups and institutions of the core society, but which is by no means inevitable (Gordon, 1964).

Assimilation theory was further developed in the 1970s with the idea of 'straight line assimilation' as a process which unfolds through the generations, beginning with the first generation of immigrant arrivals. Each generation faces a distinct set of issues in its adjustment to the host society but gradually becomes absorbed into the general population, losing distinctiveness as an ethnic group. Proponents of straight line theory include Herbert Gans who suggests that the assimilation process may persist into the fifth and sixth generations for populations which choose to retain the 'symbolic ethnicity' of their predecessors (Gans, 1979). Critics of straight line assimilation theory accused it of failing to account for the different outcomes experienced by immigrant groups, some of which were clearly faring better than others within the American melting pot (Paul, 2008). Gans accepts these criticisms but argues that straight line theory remains valid, albeit with some '*bumps and waves in the line'* (1979, p17).

To address the critique of classic, straight line assimilation theory, variants of assimilation theory have been developed to account for the differences in socio-economic outcomes for migrant groups in the US. These include segmented assimilation theory, which asserts that

assimilation processes differ for immigrant groups depending on the interplay of factors which characterise and differentiate groups and the social and economic opportunities or barriers which are available to those groups. Segmented assimilation theory explains how some second or third generation immigration populations enjoy social and economic success in the US while others are in deep poverty (Alba and Nee, 1997; Paul, 2008).

Spatial assimilation theories offer another dimension of the assimilation model. These theories focus on residential mobility as an intermediate step towards Gordon's structural assimilation. The idea is that as minority groups acculturate and successfully enter the labour market, they move out of their original neighbourhoods and buy homes in 'better' areas. This process sees the dispersal of ethnic groups away from ethnically concentrated neighbourhoods and into white areas '*opening the way for increased contact with members of the ethnic majority and thus desegregation'* (Alba and Nee, 1997, p837).

Assimilation theories fell from favour in the 1980s and 1990s, charged with imposing ethnocentric demands that ethnic minorities should shed their own cultural traditions and ethnic identities (Paul, 2008). Assimilation theory is also subject to criticism for its dichotomous model of an ethnically homogeneous majority group and an ethnic minority group (Paul, 2008), although some assimilation theorists assert that assimilation of minority groups is not necessarily into a single majority culture but can be into a pluralistic set of sub-cultures and sub-groups (Gans,1979). Assimilation theory remains, Alba and Nee argue, critically important for understanding *'the course of interaction between majority and minority groups'* (1997, p827).

Intergroup conflict theories

Contemporary to the development of assimilation theories, and also stemming from the work of the Chicago school, a parallel set of intergroup relation theories developed in the US. In the 1920s and 30s, Chicago school researchers, Robert Park in particular, examined the effects of increasing ethnic diversity in cities like Chicago, resulting from the large scale migrations of black people from the Southern states and of foreign-born people from throughout Europe. Park considered that race prejudice was not about individual attitudes but about conflict between ethnic groups competing for jobs and housing within the same city. Lal (1986) argues that the major theoretical interest of the Chicago sociologists was in the processes of social interaction, and demonstrates how this focus was extended by Herbert Blumer.

Blumer rejected the '*rather vast literature'* (1958, p3) that race prejudice is fundamentally about individual attitudes, asserting instead that race prejudice is about a sense of group position; race prejudice is the outcome of relations between groups, where the sense of superior position of the dominant group is threatened by a subordinate group (Blumer, 1958). Lal stresses the importance of Blumer's symbolic interactionism to this formulation, which considers social life to be constructed through the symbolic meanings which people give to and interpret from events and actions (Lal, 1986). For Blumer, while race prejudice derives from group and not individual position, groups are defined through complex interactions and communications between their members; *'through talk, tales, stories, gossip, anecdotes, messages, pronouncements, news accounts, orations, sermons, preachments and the like…*' (Blumer, 1958, p5). The group position model developed by Blumer asserts that intergroup competition and hostility arise from historically shaped and collectively formed judgements about the social position that in-groups perceive they should occupy in relation to outgroups. Blumer

emphasises the critical role of '*intellectual and social elites, public figures of prominence, and the leaders of powerful organizations'* (1958, p6) as the key figures in forming the sense that the in-group position should be dominant and in the characterisation of the subordinate, outgroup.

While Lal positions Blumer as carrying forward Park's work, Lyman points to Blumer's rejection of assimilation theory in general and in particular of assimilation as the inevitable and final outcome of Park's race relations cycle. Lyman argues that Blumer's group position theory leads sociology out of the 'utopia' of assimilation theory, providing a more useful framework for understanding race relations as a process of social construction of groups into a perceived racial hierarchy (Lyman, 1984).

From the 1960s, various race relations theorists built on Blumer's theory of group position to develop a cluster of theories about ethnic intergroup conflict. These intergroup theories share several core elements:

- The formation and consolidation of an in-group identity based on a shared racial or ethnic identity;
- The creation of an out-group, as an abstract, stereotyped, generalised group;
- The relationship between the in-group and out-group is essentially a competitive or conflictual one, with groups in competition for, or in conflict over resources, status or power.

Key models within the intergroup conflict theoretical framework include:

- Blalock's racial threat theory. Blalock views race relations as a competition for resources. His theory proposes that the dominant racial group, the white population, protects its own interests from economic, political and symbolic threats from minority

populations. The white population, with its greater power, uses the state apparatus to control the threat from minorities to its dominant position (Blalock, 1967);

- The simple self-interest model. In this model, there is an objective basis for conflict stemming from a clash of (usually) economic interests (Bobo and Hutchings, 1996);
- The stratification beliefs model in which individuals perceive other groups as a competitive threat depending on their own beliefs about social inequality (Bobo and Hutchings, 1996);
- Realistic group conflict theory, originated by LeVine and Campbell (1972) and advanced by Bobo (1983); This model asserts that prejudice and hostility result from conflicting group interests, specifically when one group blocks the desired attainment of another group;
- Moscovici's theory of nomic and anomic groups, in which nomic groups are those which are sure of their position and opinions and have experience of success, while anomic groups are unsure of their position and have experience of failure. The theory is that nomic majorities can afford to tolerate minorities and act equitably towards then, while anomic majorities cannot (Moscovici, 1976).

Intergroup contact theory

At about the same time as Blumer's paper on race prejudice as a sense of group position was published came Gordon Allport's study of the nature of racial prejudice (Allport, 1958). Allport considers race prejudice to be about individual attitudes and his work may well be one in the 'vast literature' which Blumer dismissed. However, Allport's theory connects individuals with groups (as does Blumer's) and is widely used as a theory of group relations.

Allport supports the conceptualisation of racial or ethnic categorisation as an ascribed status for group formation but

disagrees with the idea that prejudice arises from group position. Allport rejects this 'collectivism', maintaining that '*prejudice is ultimately a problem of personality formation and development'* although recognising that perhaps the greatest source of influence on individual prejudice is the collective view of the 'in group' (1958, p13).

After examining a range of evidence on contact between ethnic groups, Allport concludes that some forms of contact reduce racial prejudice. Contact per se does not reduce prejudice; Allport describes a variety of contact situations which have no effect on prejudice. But within a given set of conditions, contact between majority and minority groups reduces the majority group's prejudice towards the minority. The main conditions are that contact must be at equal status (for example in a workplace) and in the pursuit of common goals. The effect of contact in reducing prejudice is greatly enhanced if given institutional support by law or through local custom (Allport, 1958).

Although now best known for his contact theory, Allport's work on racial prejudice looks at other causes, effects and dimensions of prejudice. He offers theoretical explanations for why some individuals are tolerant while others are prejudiced, about visibility and degrees of difference. However, Allport struggles, as do other theorists, to find a satisfactory explanation for why some minority groups face no prejudice, others experience mild prejudice, and a few are subject to extreme hostility. Allport called this last group 'scapegoat groups'. This is Weber's marginal man and Barth's pariah group; Appudauri calls them the 'small numbers' (Appaduri, 2006). All describe the process, but struggle to explain why some minority groups are merely out-groups while others are reviled and persecuted.

Conflict versus contact hypothesis

Conflict (or threat) theory and contact theory are commonly viewed as oppositional. Putnam, for example, considers contact theory to be '*diametrically opposed'* to conflict theory (2007, p141). Because they are seen as opposing, conflict and contact theory are often linked within a single, testable hypothesis offering an 'either/or' explanation for inter-ethnic group relations. When applied to the effects of ethnic diversity on social quality outcomes, the hypothesis runs along these lines: *If conflict or threat theory is correct, ethnic diversity will have negative effects on social quality. If contact theory is correct, ethnic diversity will have positive effects on social quality.* Variants of this hypothesis are tested by some of the Putnam studies (for example, Dixon, 2006; Laurence, 2014). Putnam's own study tests and rejects both conflict and contact theory as explanations for the effects of ethnic diversity on social capital. Instead, he proposes a new theoretical model.

Putnam's constrict theory

Putnam's empirical findings show that diversity reduces trust both within and across groups. He finds that people living in more ethnically diverse neighbourhoods are less likely to trust people from other ethnic groups, so he rejects the contact hypothesis. However, he also finds that people in more ethnically diverse neighbourhoods are less likely to trust people within their own ethnic group, so the conflict or threat hypothesis is rejected.

Putnam proposes an alternative explanation for the social effects of ethnic diversity; constrict theory. In Putnam's constrict theory, ethnic diversity triggers anomie or social isolation. People retreat from associational life, and '*hunker down'*, pulling in '*like turtles'* (2007, p149).

Cultural pluralism

Cultural pluralism comprises a more diffuse set of ideas than the more clearly delineated assimilation and intergroup theories. Cultural pluralism refers to ethnic cultures existing separately, with equal validity, within the same society and is viewed as an alternative theoretical position to assimilation (Paul, 2008). While cultural pluralism is considered a theoretical model and multiculturalism a policy approach (Giddens and Sutton, 2013), in practice, multiculturalism has eclipsed cultural pluralism to become a broad term encompassing both theory and practice.

The theoretical basis for multiculturalism or cultural pluralism is less relevant to the Putnam studies than the intergroup theories. However, because the swirl of controversy that surrounds multiculturalism has kept the question of ethnic diversity's social impacts at the top of the political agenda, and motivated several of the later Putnam studies, this theoretical approach is included here.

Key contributors to multicultural theory include Charles Taylor who asserts that the politics of multiculturalism are about the demand for recognition and that our '*modern preoccupation with recognition and identity'* is an inevitable response to the collapse of the old social hierarchies (Taylor, 1994, p26). Taylor argues that multiculturalism poses a dilemma for liberal societies in trying to reconcile the universalism of the '*politics of equal dignity'* with the individualism of the '*politics of difference'*, and he raises a central conundrum for multiculturalism when he suggests that the demand for recognition made by minority cultures is premised on the notion that all cultures are of equal worth (Taylor, 1994, p72). Kymlicka tackles these dilemmas by arguing that liberal societies can and should endorse certain '*group differentiated rights'* for ethnic minorities, but only in so far as these minority rights are consistent with liberal values (Kymlicka, 1995, p75). In explicit rebuttal of both Taylor and

Kymlicka, Kukathas (1998) argues that liberalism can be described as the '*politics of indifference'*, meaning that the liberal state should take no interest in the cultural, ethnic, religious or other attachments of groups, and that these should have no relevance to the state. Kukathas asserts that when multicultural policies are articulated as the politics of recognition then they *'quickly descend into the politics of interest group conflict*' (Kukathas, 2003, p251). In this debate, the effects of multiculturalism are bound up with questions of liberalism and of how liberal states should accommodate illiberal cultures. However, these views have been developed by academics in countries which have endorsed multicultural policies; Canada (Taylor and Kymlicka) and Australia (Kukathas). It is not clear how far these theoretical positions are applicable to Britain, where the degree to which multiculturalism can be said to be a state policy is debatable.

Amongst those seeking to articulate a framework for understanding multiculturalism in Britain are Parekh (2000) and Modood (2007). Parekh's report on the future of multi-ethnic Britain argues for a '*community of communities'*, where cultural differences are recognised and valued, but where inequalities between groups must be reduced (Parekh, 2000, pxiv). The Parekh report firmly points to racism as a key factor in perpetuating inequalities, and argues that '*colour blind and culture blind'* approaches do not work, but that targeted approaches are required that tackle racism and discrimination in housing, employment, education and other policy areas (2000, p107). Modood reminds that where multiculturalism has been most successful (he cites Canada and Australia as examples) it has been integral to the nation building project of those states. He challenges the UK's emerging backlash against multiculturalism with a call to embrace the plurality of cultures and citizenships within a shared national identity (Modood, 2007).

British race relations theories

Contemporaneous to the development of assimilation and ethnic intergroup theories in the US, a distinctly British school of race relations theoretical work was being developed. This work started in the late 1950s and early 1960s in response to the new era of large scale migration of visible ethnic minorities from African, Asian and Caribbean countries. Perhaps from the outset, British theory conceived relations between racial groups as problematic. Knowles characterises the early focus of British race relations theory as concerned with weakening social and political cohesion, resulting from *'poor social 'integration' in the face of growing, visible, bodily and cultural difference.*' (Knowles, 2010, p25).

The early British era in race studies, from the 1950s through to the late 1970s, was characterised by a structuralist approach which drew on the models of the classical social theorists to explain the social impacts for and of the new immigrant populations (Mason, 1999). John Rex and Michael Banton were the key contributors to British race relations theory in this structural period. Their work introduced race and racism into British sociology and established 'race relations' as a legitimate field of social enquiry. Both Rex and Banton framed their early race relations theories within a framework of classical sociology, particularly in the Weberian tradition. Jenkins argues for Rex's *Social Conflict* as a 'masterpiece' which developed a theory of race relations as essentially conflict relations which are subordinate to class as the pre-eminent social conflict. Jenkins stresses that Rex's approach is not based on a Marxist model, but on a Weberian understanding of class as a form of group identity (Jenkins, 2005).

Rex's work, in particular, was subject to considerable criticism, including from Banton (2014) but more stridently from race theorists committed to a Marxist position. The main charge against Rex was that his race relations problematic underplayed the importance of

class (‘*we were alleged not to be Marxist enough*’ writes Rex’s research partner, Robert Moore, 2014, p1407). In response, Banton argues, Rex tried to do the impossible by spanning a theoretical gulf to ‘*Marxize Weber’* (Banton, 2014, p1377). But this did not rebuff the Marxist critique. Miles argued that the very conceptualisation of ‘race relations’ perpetuated discredited notions of ‘race’ as an ontological reality (Miles,1993). Within this antagonistic environment, Banton has claimed that the increasingly influential race theorists at the Centre for Contemporary Cultural Studies were seeking to destroy Rex’s work on race relations (Banton, 2014).

Between them, Rex, Banton and other sociologists in the early race relations field produced various theoretical frameworks to explain the effects of ethnic diversity in Britain, often by adapting US theories to suit British conditions. Examples include Rex and Moore’s use of the Chicago school work on residential zoning to develop a theoretical model for understanding the centrality of discriminatory housing policies in creating ‘*twilight zones’* of immigrant segregation and disadvantage (Rex and Moore, 1967). A later stab at producing an overarching theoretical framework for race relations was taken by Michael Banton. Banton borrowed ‘rational choice theory’, an economic theory that social behaviour is made up of the decisions of individuals, each of which is choosing the option that will optimise their objectives. In its application to race relations, Banton asserts that rational choice explains racial discrimination as the outcome of a zero-sum competition between ethnic groups for resources such as jobs or housing (Banton, 1995). This looks very like the ‘simple self-interest’ theory of intergroup conflict described earlier. Banton optimistically wrote that the application of rational choice theory to race and ethnic relations *‘raises many doubts but scarcely any fundamental objections’* (Banton, 1995, p18). However, this theoretical approach generated many fundamental objections for its attempt to rationalise the *‘non-rational’* as well as bafflement at this misguided application of neo-liberal economic theory to *‘situations*

that do not remotely resemble self-regulating markets' (Stone, 2004, p841).

Neither Rex and Moore's housing discrimination theory, nor Banton's rational choice theory were more widely adopted. Nor are there other theoretical models which represent a prevailing or dominant trend in British race theory in this structural period. However, a continuing legacy of the structural theorists is a framework for empirical research on ethnic inequalities which remains a strong field of social research in the UK.

The post-structural shift in race theory

The unresolved tension between the Weberian perspective on race as a meaningful form of social stratification and the Marxist assertion that race is a meaningless distraction from the dialectic of class, was overtaken by a more fundamental shift in thinking. A new wave of post-ism (post-structural, post-modernist thinking) left structural theories in the shade. After the dominance of classical sociology in the structuralist era came an increasingly inter-disciplinary interest in race and ethnicity, with a plethora of new paradigms and perspectives from feminism, cultural studies, geography and history. The multiple new branches in race studies reflected the wider social movement from universalism to individualism and a theoretical shift from political and social structures to culture and identity.

The Centre for Contemporary Cultural Studies (CCCS) was on the pivot of this cultural turn. Stuart Hall, Director of the CCCS from 1968, moved away from Marxist structural theory to look at how racist ideologies are constructed and articulated through popular culture and media representation, and to deconstruct these cultural representations of 'difference' and 'otherness' (Hall, 1997a). The construction of ethnic difference as 'other' was the major concern of colonial and post-colonial discourse theorists exploring the Western

construction of knowledge. Examples here include Frantz Fanon's influential work on the colonial creation of the black subject, showing how black exists in subjugated opposition to white; '*not only must the black man be black: he must be black in relation to the white man'* (Fanon, 1986, p110), and Gayatri Chakravorty Spivak's deconstruction of Western discourse to show how non-Western women are silenced by the delimitation of their place within the narrative (Spivak,1994).

The cultural representation of race and post-colonial discourse are just two strands among many in the post-structural era. Others include the formation of cultural identities (e.g. Hall and Du Gay, 1996; Hall, 1997b); the intersectionality between ethnicity, gender and other constructed identities (Phoenix, 2006); the geographies of race and racism (Dwyer and Bressey, 2008). The empirical interests of the structural race theorists have moved into this new era with continuing investigation into the causes and effects of ethnic inequalities in housing, education and other policy fields (Modood et al, 1997; Equality and Human Rights Commission, 2016).

There may never have been a prevailing theoretical framework within the British race and ethnic studies field, and any attempts to forge one have certainly now been abandoned. The work by Rex, Moore and other early race theorists to develop an over-arching theoretical framework for race relations has been overwhelmed by the multiplicity of dimensions through which ethnicity is now viewed. In the absence of any distinct British theory of ethnic relations, when empirical studies of ethnicity in Britain use theoretical frameworks, as some of the UK Putnam studies do, these are borrowed from the US.

2.3 Beyond race

Recognising that race is a social construction, that racial categorisation is susceptible to racist hierarchisation, and that racial thinking may itself be at the root of racist behaviour, there have been many drives to move beyond race. These challenges to the use of race have come from many directions; empirically, theoretically and epistemologically.

At the empirical level, various researchers have examined the effects of both race and class on a range of outcomes and found class to be a more significant predictor. First published in 1978, William Wilson's '*The Declining Significance of Race*' argues that for black people in America class has become a greater determinant of life trajectories than race (Wilson, 1980). In a later paper, Wilson (2015) argues that his original research is supported by more recent evidence of widening gaps between the 'haves and have nots' in black communities (Hochschild and Weaver, 2015). In their review of Wilson's work, Sakamoto and Wang suggest that serious analysis of class inequality has been neglected by American sociology; implicitly, at the expense of developing the study of race and ethnicity into a '*growth industry'* (Sakamoto and Wang, 2015, p1267).

At a theoretical level, Robert Miles (1993) and Kenan Malik (1996) have argued for a move beyond race relations, where the use of race as a sociological category should be rejected entirely. Miles considers that a focus on race relations is a distraction from the fundamental struggle for *'a universal citizenship'* (Miles, 1993, p23). In Miles' view, 'race' is a red herring which distracts our understanding of the organisation and struggles of society, which we can do through the framework of Marxist theory. Miles retains the use of 'racism' and 'racialisation' as useful for understanding the specific means through which the capitalist mode of production is reproduced but rejects the use of 'race' as an analytic category.

The 2008 election of Barack Obama as the first black president of the US prompted considerable reflection on whether America has become a 'post-racial' society, moving beyond the race-based system that has characterised American society since its founding on the back of the slave trade. As part of this discussion, Hughey (2011) argues that racial attitudes are as entrenched in American society as ever, citing evidence that 25% of white Americans agree that black people are less intelligent than white people, and 40% agree that black people have a weaker commitment to their families than white people. Hughey believe that far from being post-racial, overt racial prejudice has moved underground, to places where white people feel safe to express such views. Goldberg (2015) agrees, asserting that 'race' as America once knew it is over, but that racism lives on in new, 'neo-racial' forms.

Nayak tackles the 'end of race' at the epistemological level, asking '*if race is an arbitrary sign used to divide up the human population, why do social constructionists continue to deploy the term at the same time as they refute its existence?*' (Nayak, 2006, p411). Nayak searches for, and claims to find, an emergent post-race paradigm in the work of scholars including Jacques Derrida, Frantz Fanon and Paul Gilroy. But while the refutation of race, or race relations paradigms, is easily expressed, Nayak struggles to articulate what 'post-race' thinking entails. Nayak's own post-race position appears to be '*against an oversimplification of binaries and towards a broader recognition of the multi-textured bricolage or genealogy of race writing'* and she concludes that '*only by engaging in the complicated clutter of daily life'* can race '*perhaps eventually be crossed out'* (p427). It is not clear from this that Nayak has travelled any further on this post-racial line of enquiry than Paul Gilroy had done a decade earlier when he declared that '*race ends here'* (Gilroy, 1998). Gilroy similarly questions the tenability of an academic position that refutes but then employs the '*mythic morphology of racial difference'*, asking

whether we are all complicit in the reification of racial difference. But, like Nayak, Gilroy's post-racial offering provides nothing substantive. Gilroy explicitly distances himself from Miles' renunciation of race for analytical purposes, and looks instead to Frantz Fanon's concept of '*epidermilisation*' and the idea that power can be '*written deeply into the body*' (Gilroy, 1998, p847). But what this means in practice is far from clear.

Brubaker (2004) joins Nayak, Gilroy and others who point out that the continued use of 'race' or 'ethnicity' in social research contributes to the reification of ethnic groups as real and important divisions within the social world. Brubaker describes this as 'groupism' which he defines as '*the tendency to take discrete, bounded groups as basic constituents of social life, chief protagonists of social conflicts and fundamental units of social analysis*' (p8). His solution is that researchers and theorists should step back from '*over-ethnicized'* interpretations. This entails, as Zuberi (2001) also argues, not trying to identify race or ethnicity as causal variables of social outcomes. The danger of this, Brubaker asserts, is that ethnic-groupist interpretations may obscure other interests and dynamics. This is much as Arendt argued many years earlier when she asserted that race had won the competition for persuasive ideology. It chimes also with the view that a focus on race conflict or race relations obscures the fundamental social conflict based on class position, as advanced by Miles (1993) and Malik (1996), but who of course might be considered to be replacing one groupist determinism with another.

Brubaker's 'anti-groupism' is, arguably, a reflection of the post-modern shift from theorising society in terms of structures and groups, to interpreting social phenomena as fluid and dynamic processes. But through this shift from universalism to individualism, from structural inequalities to cultural identities, the core concept of race remains. The anti-use-of-race-ists argue that the core concept will not disappear until we stop using it. They advocate an end to the

use of race but acknowledge the reality of racism (Miles, 1993). Others counter that we cannot understand racism without any conception of race (Banton, 2014), or that the denial of race is an attempt to erode the cultural identity and the historical experience of some ethnic groups (Lipstadt, 2006). There seems to be little disagreement that we '*live in an unfolding racial history'* (Winant, 2000, p686), but there are profoundly differing views on the contribution that academic research makes to perpetuating the racialisation of the social world.

CHAPTER THREE: THE SOCIAL EFFECTS OF ETHNIC DIVERSITY

'One of the most important challenges facing modern societies….is the increase in ethnic and social heterogeneity in virtually all advanced countries.' (Putnam, 2007, p137). His opening sentence goes straight to the heart of the issue that motivates the Putnam studies; the effects in the neighbourhoods and cities of advanced societies which result from immigration of people who are categorised as ethnically other than the established, majority, white population. The issue has long been a central focus not only within social research, but in political debate and policy making. This chapter traces the evolution of empirical research on the social effects of ethnic diversity and immigration. It highlights key studies which embody the research questions of their day and which have had a marked influence on political discourse and policy direction.

3.1 Empirical roots

Studying the urban poor

In the mid-19th century researchers began to investigate the conditions of the poor in Britain's towns and cities. This early research includes Friedrich Engels' study of the Manchester slums, published as *The Condition of the Working Class in England* in 1844, and Henry Mayhew's account of the London poor published from 1849 to 1850. The early studies of the urban poor established the roots of British empirical sociology which was to grow along two distinct branches, from the quantitative studies of the *'social accountants'* and the qualitative investigations of the '*social explorers'* (Kent, 1981). The social accounting approach applied the newly emerging science of statistics to gain a quantitative understanding of social conditions, while the social explorers took what we now call an ethnographic approach to look at social

conditions. Common to both approaches was a twin focus on, firstly, selecting a distinct spatial area as the location for study, and secondly, a keen interest in the lives of the poor and disadvantaged. These studies were carried out by '*mostly middle class men who were…members of the establishment'* (Kent, 1981, p31).

The social accounting approach was developed through surveys, as used by Charles Booth's *Life and Labour of the People of London*, published in 1902, and Seebohm Rowntree's *Poverty: A Study of Town Life*, published in 1901 (Kent, 1981). These studies laid the ground for the social surveys that have been the major method of collecting information about social conditions throughout the 20th and into the 21st century. Booth and Rowntree's work is now critiqued for the moral values which influenced their classifications of people into different social classes (Tonkiss, 2004), but it is remarkable how little these classificatory systems have changed in the last 100 years or more. Booth's system of colour coding streets by social classes strongly resembles modern classification systems, such as Acorn (CACI, 2011) which is widely used in contemporary social and market research, including as a variable in the Citizenship Survey, the main data source for my study.

The study of the urban poor, through which empirical sociology was developed, has remained a key focus in social research. With the arrival and settlement of ethnic minority migrants in both Britain and the US, social researchers began to apply the methods developed to study the urban poor to the study of immigrants in urban areas.

Studying urban ethnic minorities

The pioneering empirical study in this field is by the black sociologist, W.E.B DuBois. DuBois' study of Philadelphia's black population in the 1890s was carried out through a comprehensive analysis of administrative data to produce empirical evidence about 'the Negro

problem' (DuBois, 1996). DuBois applied a geographic classification system which is astonishingly similar to that applied by Booth to London's streets, to show residential areas by the social class of their occupants; unlike Booth, but similar to the modern Acorn system, DuBois' classifications are by racial group as well as by class.

DuBois' work anticipates many of the themes that characterise subsequent work on migration impacts and ethnic diversity, both in the US and Britain: his focus on an urban environment and the influence of physical space on the population; his empirical approach, drawing conclusions from his analysis of data, largely quantitative; his focus on an immigrant population, in this case Negroes, and search for explanations for the social problems that are associated with their presence, in this case crime, alcoholism and pauperism. All of these themes, common in 20th century and contemporary sociology, are present in DuBois' work.

In Britain, one of the earliest studies of ethnic minority impacts was by Sheila Patterson, based on research carried out from 1955 to 1958 and first published in 1963 as *Dark Strangers: A Study of West Indians in London* (Patterson, 1963). Patterson studied the effects in Brixton from the settlement of a large migrant population from the Caribbean. Like DuBois, Patterson adopted a 'social accounting' approach, surveying around 400 Brixton residents through questionnaires and face to face interviews.

Patterson's study is not generally considered ground breaking, but three aspects of this work helped to define the parameters and the problematics for subsequent empirical research in this field.[1]

[1] There is a fourth feature of Patterson's study which I would like to highlight, for its personal rather than sociological relevance. Patterson's fieldwork included interviews with 150 West Indian migrants living in areas of Brixton which include the street where my grandmother and mother lived when they arrived from

- The framing of the race relations problematic. Originally conceived as a study of 'white-coloured relations', Patterson' work developed into a study of 'immigrant-host relations', as she came to view the issue as about how immigrants are absorbed into established communities, and not, fundamentally about race. She considered skin colour to be a complicating factor, making West Indian immigrants more visible and more strange than the thousands of other immigrant groups which had settled in Britain in the post-war period. *'In Britain – that insular, conservative, homogeneous society – mild xenophobia or antipathy to outsiders would appear to be a cultural norm. It is extended in varying degrees to all outsiders, to Poles and coloured people, and to people from the next village or street.'* (Patterson, 1963, p17).
- The use of empirical research to test a theoretical proposition. Patterson uses the assimilation theoretical model, positing that the first generation migrants in her study will be in the 'accommodation phase', not yet reaching 'ultimate assimilation'. She concludes that accommodation was taking place slowly but surely and would lead, ultimately, to full assimilation and probably to a partial biological absorption of West Indians into the local population through inter-marriage.
- The identification of housing as the flash point for immigrant-host tension. Patterson reports widespread concern within the established population that migrant incomers were pushing them out in the competition for scarce housing.

Jamaica in 1955. I wonder now, but never asked when she was alive, if my grandmother was among Patterson's interviewees. In a further aside, but providing anecdotal support for Patterson's conclusions about the assimilation and upward mobility of Brixton's West Indian population, the house in which my grandmother lived in the 1950s was shared by six families, all with young children. In the early 1990s I lived in the house directly opposite to this, equal in size, but now home to only four adults and one baby.

Despite Patterson's earlier study, '*truly seminal status'* (Ratcliffe, 2015, p405) is accorded to John Rex and Robert Moore's study of race relations in the Sparkbrook area of Birmingham, first published in 1967 as '*Race, Community and Conflict'* (Rex and Moore, 1967). Ratcliffe considers Rex and Moore's study ground breaking on two fronts; for placing housing as the central issue within debates about migrant impacts and in its adoption of a hypothetico-deductive model in which empirical investigation tests hypotheses drawn from a theoretical position. Patterson's study not only tested a theory of race relations and highlighted housing as the primary source of community concerns about immigration, but is also, in my view, the more engagingly written of the two studies. It does appear that seminal status is accorded to men more readily than to women, even in a case such as this, where the earlier study, by a woman, accomplishes all the features for which the later study is celebrated. However, the Rex and Moore study is interesting, although perhaps not ground breaking, for its departure from the conventional use of Park's race relations cycle theory and adaptation of Chicago school ideas to posit a British theoretical model. Rex and Moore use a Weberian class model to analyse the social impacts of race relations in terms of conflict between ethnic groups for resources, particularly for housing (Rex and Moore, 1967).

3.2 The problems of ethnic diversity

<u>The social consequences of immigration</u>

Not long after Rex and Moore's study of race relations in Birmingham was published, populist anti-immigration discourse took centre stage with Enoch Powell's 'rivers of blood' speech (Powell, 2007). Delivered to the Birmingham Conservative Association in April 1968, Powell's speech includes all the themes which have subsequently come to characterise mainstream debate on immigration: ordinary, hardworking people no longer recognise their own country; white

people will soon be a minority in their own country; immigrants are claiming the state benefits which hard working white people paid for; the state puts the interests of immigrants ahead of the white population; ordinary people are not allowed to voice their reasonable concerns about the effects of immigration. The central anecdote in Powell's speech is of an elderly white woman who lost her husband and sons in the war, now living in fear and persecution as the last white person left in a once respectable street in Wolverhampton. This vignette captures all the elements which drive the enquiry into the social effects of ethnic diversity; the focus on place, conflict between ethnic groups, the deterioration of social quality.

Powell's dramatic warnings about rising immigration were an unsuccessful attempt to prevent enactment of the 1968 Race Relations Act, which would make it illegal to racially discriminate in housing, employment and other public services. But legislative counter-measures were already in train to restrict the numbers of black and other ethnic minority immigrants coming into Britain. Home Secretary at the time, Roy Jenkins, argued that '*good race relations'* depended on '*strict immigration controls'* (Jenkins, 1967). Restrictions on immigration have been described as the price of progressive race relations legislation (Goulbourne, 1998). The Commonwealth Immigrants Act, passed in 1968, required immigrants from Commonwealth countries to demonstrate proof that they, their parents or grandparents had been born in Britain, and the Immigration Act, passed in 1971, ended the automatic right of Commonwealth citizens to remain in the UK. New legislation to control immigration has been introduced in each subsequent decade.

The public debate about whether further immigration should be permitted or halted has been more or less continuous since Powell's speech. And although the language of the debate, at least among mainstream politicians, is less overtly racist today than it was in the 1960s, the arguments on both sides remain the same. On the pro-

immigration side of the political debate, the main argument is that immigrants bring skills that are badly needed in the British economy. For example, immigrants make up a large proportion of NHS medical staff; Dorling has calculated that more nurses from Malawi are working in Manchester than in the whole of Malawi (Dorling, 2011). As Prime Minister, Tony Blair used the skills argument to introduce the skilled worker scheme, aimed at restricting immigration in general while encouraging those with specific skills in areas of shortage (Blair, 2005). In the 2010-15 coalition government, Business Secretary Vince Cable also used the skills argument to argue that a government cap on immigration numbers could damage British companies if they were unable to recruit people with the right skills (BBC, 2010).

The anti-immigration side of the debate tends to deploy a wider set of arguments. Anti-immigrationists point to economic, demographic, environmental, social and developmental reasons for preventing large scale immigration. Despite their shared concern that they have been 'silenced' by the forces of progressive liberalism, these arguments are fully articulated in published texts by Browne (2002), Goodhart (2013), Collier (2013) and West (2013). It is here worth remembering Painter's point about the advancement of ideas from respected thinkers at the heart of the establishment (Painter, 2010): Anthony Browne and Ed West were both journalists, including for The Observer; Browne was economic development adviser to the Mayor of London and now leads the British Bankers Association; Browne and David Goodhart have both headed well known think tanks; Paul Collier is a professor of economics at Oxford University. These are influential figures in the academic and policy mainstream. But they position themselves as outside 'the elite', as risk takers who are '*breaking the taboo*' that *'blocks serious discussion'* of the negative consequences of large scale immigration (Collier, 2013, p26).

On the economic case for immigration, West (2013) argues that a relatively small increase in GDP is attributable to immigration which does not offset the costs of providing the additional population with education, health and other services. He asserts that any labour or skill shortages requiring immigrant labour are short term, while the immigrants who arrive to fill these stay long term, creating a surplus in the working age population which exceeds the number of available jobs. West additionally points to research which demonstrates that immigration reduces wage rates for workers at the lowest end of the income spectrum, to support his view that the economic arguments in favour of immigration are 'thin' (West and Collier both cite a study by Dustmann et al, 2013, in support of this point). West concludes, as do Browne and others, that economic arguments are a 'red herring' put out to mask the real agenda of liberal universalism.

Collier argues that immigration increases pressure on public housing; drives up private sector rents and house prices; and displaces *'smart indigenous children'* from the best schools and universities (Collier, 2013, p120). Collier's evidence base is flimsy; the housing assertions come from an unreferenced estimate from the Office for Budgetary Responsibility (Collier, 2013, p116), no references are cited for the education claims. Additional assertions include Collier's and Browne's claims that immigration is not necessary to counter our ageing population and workforce; there is no demographic time bomb, no downward trajectory in fertility rates, and so no ageing population for immigration to help solve. Browne argues that immigration increases inequality; immigration from poorer countries increases taxes; immigration to rich countries harms poor countries; pro-immigration measures are responsible for promoting fascism in Europe; and immigration fuels racial tensions and creates 'unease' in multi-cultural areas (Browne, 2002).

Goodhart and Collier use Putnam's 2007 study findings as evidence that immigration brings harmful effects to trust and social solidarity in

Britain's neighbourhoods. Collier suggests, again without evidence, that Putnam's findings may have greater threat for European countries than for America, as the '*cultural gap'* between the immigrant and indigenous populations is smaller in America (p76). Interestingly, Collier recognises that Putnam's work could be '*open to a myriad of statistical objections'* but claims that they do provide '*a robust result'* (p74). Collier clearly does not find Putnam's work statistically flawed, despite some fairly basic errors pointed out by Dawkins (2008) as we shall later see.

The arguments of the anti-immigrationists have been refuted on evidential grounds by various academics, including Dorling (2011), Finney and Simpson (2009). Finney and Simpson provide detailed evidence to challenge the mass-immigration myth that Britain takes more than its fair share of immigrants, showing that less than 3% of the world's migrants live in the UK, compared with 20% in the US, and that increases in the number of immigrants in Britain since 1961 are the same as worldwide increases. Dorling uses population data to challenge the myth that mass immigration to Britain is from Africa, Asia and the Caribbean, showing that by far the greatest numbers of immigrants to Britain since 1841 have been from America. The views that immigrants increase unemployment by taking jobs and depress salary levels by accepting poor wages are rejected in research by, amongst others, Lemos and Portes who found no statistically significant impacts resulting from eastern European migration on wages or unemployment in the UK, for any group of people (Lemos and Portes, 2008). Finney and Simpson also challenge Browne's claim that 'third world' immigrants are a drain on the state, with evidence that immigrants pay more in taxes than they claim in benefits and are therefore net fiscal contributors (Finney and Simpson, 2009).

Academics like Finney and Simpson and Dorling have used empirical research and data analysis to separate fact from fiction in the

immigration debate, exposing many of the claims made for negative impacts of immigration as myths. At the same time, other academics have used empirical research to draw the opposite conclusions; that immigration does have negative impacts. Examples include Samuel Huntington's work in the US, which draws on an extensive array of data sources to demonstrate the detrimental effects on American life of immigration by Hispanic people (Huntington, 2004). However, Huntington's empiricism seems on shaky ground in his central assertion that America's culture is essentially Anglo-Saxon Protestant because the American melting pot of mass immigration came after the period of English settlement which gave America its culture, language, religion and values. The logic of Huntington's 'we were here first' argument cannot stretch to accommodate either Native Americans or African Americans, so both are largely excluded from his discussion.

The progressive dilemma

David Goodhart (2013) credits the Conservative politician David Willets for drawing his attention to the 'progressive dilemma'. The progressive dilemma could describe Goodhart's self-characterised position on the liberal left, where he maintains it is impossible to raise concerns about the effects of ethnic diversity without being branded 'racist'. But Goodhart himself describes the dilemma as the conflict between ethnic diversity and social solidarity. In this dilemma, ethnic heterogeneity undermines the bonds of trust and cooperation which create social solidarity. Without social solidarity, it is difficult to maintain social structures which depend on cooperation and shared values. Ethnic diversity, therefore, erodes the legitimacy of the welfare state (Goodhart, 2013).

In the UK, Dench, Gavron and Young's (2006) empirical study of new communities in Bethnal Green contributed to the immigration debate in general and the progressive dilemma in particular. Dench, Gavron

and Young's study, originally intended to revisit Wilmott and Young's seminal study of family and kinship in East London, became a study of '*race and conflict'* in Bethnal Green. The authors concluded that the implementation of welfare state policies has favoured Bangladeshi immigrants over the 'indigenous' white working class population, leading to anger and resentment from the latter. The study adopted a 'social explorer' approach based on unstructured interviews with a variety of Bethnal Green residents. The researchers gave most space to the views of the white 'indigenous' population whose grievances, particularly about access to public housing, were presented uncritically, without supporting evidence, and without the balance of views from other communities who may feel that they equally 'belong' to Bethnal Green. The study was strongly criticised by academics; Robert Moore called it '*tendentious'*, '*theoretically incoherent'* and '*simply bad sociology'* (Moore, 2008, p349). But flaws in its sociological rigour were overlooked in wider press coverage which seized on the work's themes of racial tension and white working glass grievance (for example, Bunting, 2006).

The Dench, Gavron and Young contention that the welfare state compact with the British people had broken down in the face of Bethnal Green's ethnic diversity helped evidence Goodhart's progressive dilemma. Additionally, their study fed into and helped provide an empirical basis for the narrative of white working class grievance, evident in, for example, Trevor Phillips as Chair of the Equality and Human Rights Commission calling for more government action to help the white working class (Ford, 2008).

The claim that immigration has eroded the trust and solidarity needed to sustain the welfare state has been subject to empirical scrutiny. Banting et al (2006) call this the 'heterogeneity/redistribution trade off hypothesis'; the larger the ethnic minority or immigrant population the more difficult to sustain a robust welfare state. Testing the heterogeneity/redistribution trade off hypothesis through cross

national analysis, Banting et al found no evidence that immigrant population size is an important factor in social spending. They point to other, far more powerful factors which shape the welfare state, including the strength of left wing political parties and the age structure of the population. Interestingly, as this is a factor which my own study will consider, Banting et al found that the rate of growth rather than the size of the immigrant population is a significant factor; higher rates of immigrant population growth have a downward effect on social spending, although this can be mitigated by adoption of multicultural policies (Banting et al, 2006).

Privileging ethnic minorities

The idea that previous government policies gave special treatment to ethnic minorities is a popular one. The idea can be seen in Dench, Gavron and Young's conclusion that Labour welfare policies favoured Bangladeshi immigrants, and in assertions that multiculturalism privileges ethnic minority interests in legal cases (Favell, 2001). Favell (2001) claims that multiculturalism protects the rights of ethnic minority groups, even where these rights are contrary to the human rights accorded by the liberal state. Favell argues that multiculturalism in Britain has shied away from tackling the illiberal practices of some ethnic minority groups in favour of '*a more general pragmatic development of loose policies of tolerance'*, asserting that where such cases come to court, there '*is a presumption in favour of the ethnic minority practice, on the grounds of the 'reasonableness' of cultural pluralism and tolerance'* (Favell, 2001, p132). The idea that multiculturalism allows ethnic minorities to get away with practices that do not conform with English law was addressed by Sebastian Poulter, legal adviser to the Commission for Racial Equality in the 1990s, who found no evidence for this (Poulter,1990).

The view that ethnic minorities have been given special, privileged treatment has been characterised by several governments as an

explicit policy of the previous government. The 2010 to 2015 coalition government rejected '*special treatment'* for specific groups asserting that its own approach *'moves away from treating people as groups or 'equality strands' and instead recognises that we are a nation of 62 million individuals'* (HM Government, 2010, p8). A similar view was presented by the previous government. The Commission on Integration and Cohesion, established by the Labour government in 2006, urged a move away from thinking about 'single identities' through which individuals are defined by race or ethnicity, and away from seeing the UK as made up of distinctive and separate ethnic communities. The Commission recommended an end to funding for 'single groups', meaning groups based on a particular ethnic identity, arguing that single identity groups entrench division and segregation (Commission on Integration and Cohesion, 2007). This was also the view of the Cantle review, set up some five years previously, in 2001, to advise on community cohesion. The Cantle report recommended that *'funding bodies should presume against separate funding of distinct communities'* and that '*funding and support should not follow an assumption that all black and ethnic minority needs are greater than other sections of the community'* (Cantle, 2001, p50).

So, from at least the early 2000s, government commissioned reports were calling for an end to special treatment for ethnic minorities. However, none of these reports includes any evidence of how, or even if, any special or privileging treatment had taken place. Where research into funding allocations to ethnic minority groups has taken place, and very little has, the conclusions have been that black and ethnic minority groups receive less, not more than other communities (Parekh, 2000; Chouhan and Lusane, 2004).

The geography of ethnic diversity

There are several, interweaving strands of debate and research concerning the geographies of race, racism and ethnic diversity effects.

One strand is focused on whether Britain's cities are becoming racially segregated. Much concern was sparked by the 2001 Cantle report findings that ethnic groups were living 'parallel lives' in some UK cities (Cantle, 2001), resulting in a raft of community cohesion policies and programmes from the then Labour government (Home Office, 2004 & 2005). Professor Cantle continues to argue that ethnic segregation is increasing across Britain, with even greater segregation in residential areas, schools and workplaces apparent in 2016 than in 2001, driving '*more prejudice, intolerance, mistrust among communities*' (Asthana, 2016). The Cantle report was based on an investigation into the causes of rioting in Bradford, Burnley and Oldham in the summer of 2001, widely seen as 'race riots'. The report considered that the social problem which caused the riots was summed up by a witness of Pakistani origin who told the review team '*When I leave this meeting with you I will go home and will not see another white face until I come back here next week'* (Cantle, 2001, p10). This anecdote helped the Cantle review team to characterise the causes of the disturbances as the polarisation of ethnic communities, resulting from the physical segregation of housing estates and inner-city areas.

The Cantle report revived longstanding concerns about racial segregation in British cities. Fears that concentrations of ethnic minority populations drive out white residents have long been part of the immigration discourse, illustrated in Enoch Powell's story of the last English woman left on her street in Wolverhampton. Kaufmann and Harris (2013) analysed data over a 20 year period, from 1991 to 2011 to consider whether increased ethnic diversity in Britain

prompts white, UK born residents to move to areas with less ethnic diversity – the so-called 'white flight' phenomenon. They conclude that white people prefer to leave and actually leave areas of greater ethnic diversity, while ethnic minority people are equally as likely to want to leave but are less likely to actually make the move. Kaufmann and Harris acknowledge that the motivations for this movement are unknown. Is escaping ethnic diversity the driving factor? And is this process leading to greater ethnic segregation? These questions are not addressed.

Other researchers have looked at whether British cities are becoming more racially segregated. Johnston et al (2002), for example, analysed data from the 1991 census to investigate whether ethnic enclaves, or ghettos, were being established in English cities, concluding that there was some evidence of this for Asian groups, especially outside London. Drawing on evidence from Johnston and other urban geographers Trevor Phillips, then head of the Commission for Racial Equality, claimed that '*some districts are on the way to becoming fully fledged ghettoes'*, in a widely reported speech where he warned that '*we are sleepwalking our way to segregation*' (cited in Finney and Simpson, 2009, p116). The Commission for Racial Equality issued further warnings about segregation in 2006 when head of policy Nick Johnson warned that the Blair government proposals to increase parental choice in school selection would lead to people in the UK leading increasingly separate lives (BBC, 2006). Despite the previous government's explicit policy commitment to cohesion as a means of ending this perceived ethnic segregation, David Cameron was still able to claim in 2011 that Britain had hitherto been tolerating *'segregated communities behaving in ways that run counter to our values'* in a speech that brought the segregation issue together with the failure of multiculturalism and the decline in social cohesion debates, while implicating Muslim communities as a threat to British values and to Britain's security (Cameron, 2011).

Finney and Simpson have unpicked the myths of ethnic segregation in Britain. Their analysis demonstrates that there are no very high concentrations of particular ethnic groups, other than white populations, and no ‘ethnic ghettos’ in Bradford or any other part of Britain (Finney and Simspon, 2009). These findings are confirmed by analysis of the 2011 census data which shows that neighbourhood residential integration is increasing and segregation is decreasing in most local authority areas (Catney, 2013).

Despite this evidence, ethnic segregation remains an issue of concern for the UK government and for researchers in this field. A new Social Integration Commission, chaired by Matthew Taylor, was established in 2013. The Commission drew on Putnam’s finding that diversity erodes trust (Putnam, 2007), and on post-Putnam work by Uslaner (2011) which argues that ethnic segregation is the more exact cause of this erosion. Ethnic segregation is considered an important dimension in the lack of social integration which the Commission identified costs the British economy £6 billion each year (Social Integration Commission, 2014a, 2014b).

Segregation concerns are underpinned by a conceptualisation of Britain as a society comprised of one racial group, white people, into which ethnic minorities assimilate or remain segregated from. As Johnston et al (2002) argue, this outlook draws on the American assimilation model, where successful assimilation into the melting pot is the desired goal and concentrations of distinct ethnic groups, which have failed to assimilate, are perceived as problematic. When applied to a British context, this perception of a ‘host majority’ and ‘ethnic minorities’ views white majorities as unproblematic but is troubled by increases in the size of ethnic minority populations, and is alarmed at the possibility that black or Asian populations may become the ethnic majority in some areas. This view has been challenged. The Greater London Authority, for example, has robustly

argued that black or Asian majorities should not be considered any more problematic than white majority populations (GLA, 2005).

Another strand in the geographic exploration of ethnic diversity effects is concerned with the spatial level of these effects. Research commissioned by the Joseph Rowntree Foundation to inform a wide-ranging study of the relationship between ethnicity and poverty, has sought to introduce a 'place-based', geographic dimension to this work. The research finds that the geographic pattern is much as expected; ethnic minority populations are more likely than white populations to be living in areas of high deprivation with poorer job opportunities (Garner and Bhattacharya, 2011).

The geography of ethnic diversity has also been explored by Michael Keith, an influential contributor in this field who was a member of the Labour government's Commission on Integration and Cohesion. The Commission's report placed a strong emphasis on local places, particularly local authority areas, as the geographic level at which cohesion and integration should be measured and improved (Commission on Integration and Cohesion, 2007). In subsequent discussions of this report, Keith has emphasised that the benefits of immigration to the UK accrue at national level but that at local-level, immigration and ethnic diversity have negative effects as they put increased pressure on local services (Keith, 2009).

Keith also promotes the idea that ethnic diversity effects vary by spatial levels in a case study of Barking and Dagenham (Keith, 2008). This case study brings together Keith's view that migration brings national benefits but local problems with the language and concepts of the US ethnic intergroup competition theorists, and comes close to Banton's rational choice theory in Keith's assertion that we need to recognise the '*rational self-interest'* of the established white community's support for anti-immigration politics (Keith, 2008, p204). It is particularly interesting that Keith selects Barking and

Dagenham for this case study. As Keith highlights, the borough was in a state of rapid economic and social transformation throughout the nineties and noughties and became politically unique in 2006 when the anti-immigration British National Party became the second largest elected group on Barking and Dagenham Council. As we will see in later chapters, Barking and Dagenham experienced the highest rate of increase in immigration in England in the 10 years to 2001, and the fifth highest in the 10 years to 2011. While of course there is no requirement that case studies should represent average or majority circumstances, Keith's selection of this atypical borough to explore ethnic diversity impacts contributes to a sense of the extreme as the norm. A case study of ethnic diversity effects in a local area with more typical ethnic diversity and immigration might find less to say about '*the realities of inter-ethnic competition in access to goods and services'* (Keith, 2008, p195) but equally might more fairly represent the local experience across much of England.

3.3 The effects of ethnic diversity on social quality

Since the late 1990s, concerns about the effects of immigration and ethnic diversity have become increasingly linked to the concept of social capital, in work that originated in the US, notably by Putnam, and which found political favour in Britain in the 2000s, and the concept of social cohesion, which also enjoyed a high profile in British policy making during the 2000s.

The relationship between social capital and social cohesion is seldom clearly defined. There is a tendency in much of the literature, including in empirical studies that investigate the presence or absence of these social qualities, to use the terms interchangeably. To add further complexity, the terms 'social cohesion' and 'community cohesion' are also often used without clear distinction between them. In this section, I will try to unpick the different

meanings that are given to these terms while looking at how the debate on ethnic diversity impacts has developed.

Social capital

The concept of social capital has been given different meanings by different theorists. In Bourdieu's work, social capital comes through social networks to which individuals have different levels of access and which are themselves of different value within the social stratification of society, and so social capital, like economic capital, can be of greater or lesser value in individual social mobility (Bourdieu, 1986). The American sociologist, James Coleman defined social capital as '*the ability of people to work together for common purposes in groups and organisations'* (cited in Fukuyama, 1995, p10). Putnam characterises social capital as the *'connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them'* (Putnam, 2000, p19). Putnam's work on social capital has been highly influential, and the term is currently most commonly used in Putnam's terms, to describe the sum total for a given society of the amount of associational activity that its members are engaged in. Also in wide common usage are Putnam's characterisation of 'trustworthiness' as an integral (and measurable) component of social capital, and his distinction between bonding social capital (which takes place within groups) and bridging social capital (which takes place between groups).

Putnam and others have used the concept of social capital to explain why some societies have been more successful than others, with the conclusion that social capital is a good thing that creates better and more prosperous societies (Putnam, 1993). Fukuyama, for example, argues that social capital has major consequences for industrial economies in that societies with higher levels of trust (Japan, Germany, the US, for example) have higher productivity than those with lower levels of trust (Fukuyama, 1995). Putnam's own analysis

of data on community associations, volunteering, political participation and other forms of civic engagement, has led him to conclude that social capital has declined in America since the 1950s (Putnam, 2000).

Peter Hall has tested whether Putnam's findings on the decline of social capital (Putnam, 1993) hold true for Britain, concluding that there has not been any appreciable decline in aggregate levels of social capital (Hall, 1999). Hall suggests that government policies have affected the level of social capital in British society, identifying policies on education, changes in the British class system, and active encouragement of voluntary associations as particularly important. This, Hall contends, is a reversal of the causal relation between governments and social capital as posited by Putnam, who emphasises how levels of social capital affect governments (Hall, 1999). Grenier and Wright (2004) revisited Hall's research and, after introducing new variables into his methodological framework, differ from Hall by concluding that social capital has declined in Britain in the post-war period. Grenier and Wright argue that Hall does not fully consider issues such as the rise in income inequality in Britain, leading him to underplay the importance of the uneven distribution of social capital along the lines of social class.

Because social capital is conceived as a property that belongs to social groups, it was perhaps inevitable that it would be applied to ethnic groups. Fukuyama does this in his comparison between the low levels of entrepreneurial and enterprise success in African American populations and the greater business success in America's Chinese and Japanese communities, linking these outcomes to low levels of trust between African Americans and high levels of trust within the Chinese and Japanese communities (Fukuyama, 1995). Putnam, of course, has concluded that ethnic diversity has a negative effect on social capital which, in the context of his views about the positive virtues of social capital, indicates that ethnic

diversity is socially damaging (Putnam, 2007). Grenier and Wright do not analyse social capital in relation to ethnic groups but describe this as 'strikingly absent' from both their own and Hall's analysis. Despite this absence, they suggest that it *'would not be surprising to conclude'* that levels of social trust would be reduced within an ethnically diverse country such as Britain (Grenier and Wright, 2004, p29).

Putnam's distinction between bridging and bonding social capital has also lent itself to the analysis of relations within and between ethnic groups. For example, the Commission for Integration and Cohesion, in its argument against funding for single ethnic groups, used Putnam's terms to assert that while single group funding may promote 'bonding capital' by supporting activities within ethnic minority communities, it acts against 'bridging capital' and that bridging capital is what is needed to achieve an integrated and cohesive society (Commission for Integration and Cohesion, 2007, pp160-163).

Social cohesion

The study of social cohesion has a long tradition in sociology, stretching back to Durkheim (Pahl, 1991). Pahl observes that the common belief that social cohesion is in decline has been long held; *'In the search for social cohesion there is a consistent tendency for some sociologists, both classical and contemporary, to become prophètes manqués. They regularly affirm that there has been some fall from grace and that the morality of their times is confused and impoverished. The golden age of traditional morality is, typically, not very precisely described and nor, for that matter are the future consequences for society*' (Pahl, 1991, p345).

The concept of social cohesion is also a familiar one in psychology, where it is classically defined as the '*field of forces'* that affect an

individual's attitudes and behaviours in relation to group membership (Friedkin, 2004, p409). Socio-psychological conceptualisations of social cohesion have a long standing history of operationalisation into measurable indicators and of treatment as both causal and outcome variables (Friedkin, 2004). This may be an important reason why social cohesion features so often in empirical studies of ethnic diversity effects, including in many of the Putnam studies.

Community cohesion emerged as a key concept in British policy in the early 2000s, where it was inextricably linked with questions of ethnic diversity from the outset. The term was used in the 2001 Cantle review which concluded that the solution to the ethnic conflicts resulting from ethnic segregation lay in an urgent need to promote community cohesion. The review offered a definition of community cohesion as '*about helping micro-communities to gel or mesh into an integrated whole. These divided communities… need to develop common goals and a shared vision.*' (Cantle, 2001, p70). This definition, with its dual meanings of community cohesion as a goal and as an intervention to achieve that goal, shaped the government's policies on ethnic relations in local areas for the remainder of the decade. Amongst the raft of measures launched by the government were a community cohesion pathfinder programme (Home Office, 2004), a community cohesion practitioners toolkit (Home Office, 2005), guidance on building a local sense of belonging (Communities and Local Government, 2009), and refocusing the questions in what was to become the Citizenship Survey, to provide national data on community cohesion in local areas.

Over and above the visible community cohesion policy measures, the community cohesion agenda crystallised a conceptualisation about the relationship between ethnicity and cohesion that remains predominant today. That is, that cohesion is about 'shared values' and that communities lacking in cohesion have failed to adopt a common set of values. This focus on values also characterises the

language of the multiculturalism debates, where the characterisation of multiculturalism as the rejection of a common culture has also led to calls for a stronger articulation of common values and for ethnic minorities and immigrants to demonstrate their allegiance to these, as asserted by then Prime Minister David Cameron (Cameron, 2011). The Labour government introduced a citizenship test in 2005 as a response to the demand that immigrants should demonstrate a knowledge of British traditions and an allegiance to British values. The subsequent, Conservative-led governments continued this move towards requiring immigrants to learn and demonstrate their commitment to British values. In 2014, the government issued guidance to all maintained schools in Britain about how to promote '*fundamental British values'* to their pupils (Department for Education, 2014).

Forrest and Kearns highlight that social cohesion has different meanings at different levels of analysis, and that conclusions based on macro observations of '*disorder, dislocation and social and economic transformation may underestimate the importance of the lived experience of the dull routine of everyday life'* (Forrest and Kearns, 2001, p2127). Writing in 2001, the same year that the Labour government's national strategy for neighbourhood renewal was launched (Social Exclusion Unit, 2001), Forrest and Kearns examine the way in which the local area, or neighbourhood, was introduced into debate about social cohesion and social capital as the spatial unit of key interest. They suggest that there is an implicit view that 'successful' neighbourhoods are distinct from 'unsuccessful' neighbourhoods in the degree to which there is social cohesion, the underlying assumption being that disadvantaged neighbourhoods lack the '*ingredients that foster social cohesion'* (p2133). They implicate researchers in perpetuating this assumption, arguing that the research focus on what disadvantaged areas may lack has skewed empirical research, at least in the UK, towards studies of neighbourhoods that are seen as problematic. As we have already

seen, empirical social research has always focused on urban areas characterised by poverty and social upheaval.

Worley argues that while the Labour government's community cohesion agenda was widely regarded as the new framework governing race relations policy in the UK, the concept of 'community' essentially 'deracialized' the language and discussion of cohesion (Worley, 2005). Similarly, and more stridently, Ben-Tovim asserts that the core concept of 'community cohesion' used by the Cantle inquiry moved the focus onto cultural difference and away from the real problem of *'overt and institutional racism'* (Ben-Tovim, 2002, p46). Both Worley and Ben-Tovim argue that the community cohesion discourse took racism off the political agenda, replacing anti-discrimination with programmes to promote inter-cultural understanding. This reading is in line with other themes explored in these chapters, including the loss of 'race equality' as a policy ambition and the turn from structural theories of race to explorations of cultural representation and identity.

In a broader critique of the social capital, social cohesion and immigration debate, Cheong et al (2007) argue that the meanings of social capital and social cohesion are not fixed but are socially constructed and value-based, reflecting the prevailing ideological climate in which they are used. They contest the notion that social capital offers 'a cure' for poor social cohesion, pointing to work by Bourdieu and Portes who regard social capital as the outcome of social and ethnic inequalities, not as a solution to them. They argue that the community cohesion agenda imposed a majority agenda on minority communities and that issues of power, class and racism have not been sufficiently considered.

Ethnic inequalities

Within the broad field of empirical research on ethnic diversity, perhaps the least contested strand is the study of ethnic inequalities. This work continues that of Rex, Moore and other early race researchers who identified that ethnic minority populations were faring badly in the British education, employment and housing systems (for example, Modood et al, 1997). Today, this work covers almost all policy areas, including health, mental health, poverty, children in care, offending and criminal justice (for example, Equality and Human Right Commission, 2016).

In education, for example, empirical studies of racial inequality go back to the early 1970s when Bernard Coard found widespread, systematic mistreatment of West Indian children in British schools (Coard, 1971). These studies continue through the decades to the current time, with the Equality and Human Rights Commission reporting in 2016 that Black Caribbean children are three times more likely to be excluded from school than white children, and only half as likely to attend a Russell Group university (Equality and Human Rights Commission, 2016).

While not explicitly located in any theoretical framework, this field of enquiry draws on the key components of race relations theory established by the early British sociologists. Rex's key components of ascribed racial difference, hierarchisation, power and conflict provide the basis for this continuing examination of racial inequalities. Research into ethnic inequalities deploys what Zuberi (2001) advocates as a legitimate use of racialized statistics; generating and using statistical data in the pursuit of social justice.

3.4 Chapter summary

The debates around the social impacts of immigration and ethnic diversity are deeply politicised. Immigration, in particular, is a topic that few politicians can ignore and that many champion. This politicisation brings a polarising tendency to the discussions; there are left and right wing positions, liberal and extremist positions, pro and anti-positions. The logic of this polarised debate infects discussion and thinking on this issue to such a degree that it is now difficult to express it in any other terms. The politically entrenched positions within these debates have long been apparent in the immigration debate and are becoming clear in the multiculturalism debate. This politicisation brings a level of argument that is conducted in terms, not just of what the other side has said, but of what one side portrays the other side as having said, all the better to contrast this with their own position. Although, clearly, most social researchers will strive for neutrality in their own studies, the politicisation of these debates make it difficult to frame any discussion outside of this polarised 'for or against' framework. Putnam illustrates this in the conclusions to his study when he rails against the '*politically correct progressivism'* that might challenge the '*reality*' of his findings, and the '*ethnocentric conservatism'* that might deny the desirability of acting on them (Putnam, 2007, p165).

This chapter has drawn on work from many contributors to the ethnic diversity debates, some of whose ideas are based on empirical research and others whose work is more theoretical or philosophical. There is no apparent opposition between the empirical and the theoretical traditions, although neither is there a great deal of connection between them. They appear to exist happily in parallel, covering the same subjects from their different academic perspectives. This difference in academic positions mirrors the divide between the evidence-based and the intuitively-driven, both of which are evident in ethnic diversity political debate and policy making.

Compare, for example, the evidence-filled reports of the Social Integration Commission (2014a, 2014b) with the government's evidence-light guidance to schools on promoting British values (Department for Education, 2014). Worryingly, it is the latter of these which represents actual policy.

Ethnicity is almost invariably perceived as problematic. Whether for or against, left or right, immigration and ethnic diversity are regarded as problems that need to be tackled by policy makers or investigated by researchers. This problematisation is Arendt's 'ideological cover' in action; a mobilisation of race or ethnic difference to provide a readily understood and widely accepted explanatory framework for social events. If ethnic diversity as an investigable problem is an ideology rather than a reality, then we have to question whether there is any validity in researching this subject at all. Does researching ethnic diversity add to the ideological cover, helping to mask our understanding of the realities of the social world? There is no right or wrong approach here; you are damned if you do (by essentialising or reifying the concept of race) and damned if you don't (by deracialising the analysis).

Finally, it is interesting to note how frequently the theme of demise or decline occurs in the literature and debates in this field. The discourse of demise, as Pahl noted, has been prominent throughout the sociological study of social cohesion (Pahl, 1991). It is also frequent in urban sociology and policy, where declining inner cities or neighbourhoods in need of renewal have been the focus of much research and numerous policy interventions. The theme of demise is there in the history of the construction of race; Arendt notes of Gobineau's race theory '*the most surprising aspect of the theory, set forth in the midst of the optimistic nineteenth century, is the fact that the author is fascinated by the fall and hardly interested in the rise of civilizations'* (Arendt, 2004, p226). There is also, although not covered in this thesis, a history and literature of racial decline,

necessitating the preservation of racial purity enacted, in some societies, through prohibitions against inter-racial marriage, and driving the 19th century eugenicists to evolve better, statistical methods for measuring racial difference. The demise of shared values and decline of national identity are core themes of the modern political debates of immigration and ethnic diversity in Britain. The decline of social capital is a core theme in Putnam's work; Hallberg and Lund characterise Putnam's work as '*the literature of doom*' (2005, p65). The demise of a shared American identity is the central theme of Huntington's *Who Are We? (*2004). Decline is a strong theme in Dench, Gavron and Young's study of race and conflict in Bethnal Green, their view being that welfare policies are responsible for the decline of self-help family and community networks (2006).

CHAPTER FOUR: THE PUTNAM STUDIES

4.1 Findings from the Putnam studies

Table ii: The Putnam studies

Author	Date	Country	Geographic level of analysis	Key explanatory variables	Key outcome variables
Taylor	1998	US	Neighbourhood	Ethnic diversity	Racial attitudes
Alesina and Ferrara	2000	US	Metropolitan area	Ethnic diversity & linguistic diversity	Trust
Glaeser et al	2000	US	Not applicable	Ethnicity	Trust
Oliver and Wong	2003	US	Neighbourhood	Ethnic diversity	Inter-racial attitudes
Costa and Kahn	2003	US	Metropolitan area	Ethnic diversity	Social capital
Duffy	2004	UK	Not stated	Ethnic diversity	Life satisfaction Trust
Pennant	2005	UK	Ward	Ethnic diversity	Trust
Flore	2005	UK	MSOA*	Ethnic diversity	Social capital
Coffe and Geys	2006	Belgium	Municipality	Nationality	Social capital
Dixon	2006	US	Metropolitan area	Ethnic diversity	Inter-racial attitudes
Leigh	2006	Australia	Postal district	Ethnic diversity & linguistic diversity	Trust
Anderson and Paskeviciute	2006	World-wide	Country	Ethnic diversity & linguistic diversity	Trust, Political & Civic engagement
Putnam	2007	US	Neighbourhood & metropolitan area	Ethnic diversity & immigration	Social capital
Gesthuizen et al	2008	Europe	Country	Ethnic diversity	Social capital
Laurence and Heath	2008	UK	MSOA	Ethnic diversity	Community cohesion
Letki	2008	UK	Neighbourhood	Ethnic diversity	Social capital
Stolle et al	2008	US & Canada	Neighbourhood	Ethnic diversity	Trust
Andrews	2009	UK	Local authority district (LAD)	Ethnic diversity	Social cohesion
Twigg et al	2010	UK	MSOA	Ethnic diversity	Social cohesion
Fieldhouse and Cutts	2010	UK & US	Census tract US MSOA UK	Ethnic diversity	Social capital
Sturgis et al	2010	UK	MSOA	Ethnic diversity	Trust
Wickes et al	2011	Australia	Suburb	Linguistic diversity	Social cohesion & Trust
Laurence	2011	UK	MSOA	Ethnic diversity	Social cohesion & Social capital

Author	Date	Country	Geographic level of analysis	Key explanatory variables	Key outcome variables
Gijsberts et al	2011	Nether-lands	City	Ethnic diversity	Social cohesion
Uslaner	2011	UK and US	Not stated	Ethnic segregation	Trust
Pendakur and Mata	2012	Canada	City	Ethnic diversity	Social capital
Saggar et al	2012	UK	LAD	Immigration	Social cohesion; National identity, Integration
Laurence	2014	UK	MSOA	Ethnic diversity	Inter-ethnic attitudes
Sturgis et al	2014	UK (London)	MSOA & LSOA**	Ethnic diversity & ethnic segregation	Social cohesion
Schmid et al	2014	UK	MSOA	Ethnic diversity	Trust

*Middle Super Output Area; ** Lower Super Output Area

The group of 30 empirical works shown in Table ii make up the body of work which I call the Putnam studies. These can be divided into the studies which were published before and those published after Putnam's 2007 *E Pluribus Unum*; referred to here as the pre-Putnam and post-Putnam studies. Robert Putnam's 2007 publication is very much the seminal work in this field, although by no means the first.

The pre-Putnam studies include work by Taylor (1998) in the US to measure whether the racial composition of neighbourhoods had any association with white attitudes towards other ethnic or racial groups, and towards 'race targeted' policies. Also from the US is research by Alesina and Ferrara (2000) measuring whether levels of trust vary with the ethnic composition of metropolitan areas; work by Oliver and Wong (2003) measuring whether perceptions of other racial groups vary with the ethnic composition of neighbourhoods; a study by Costa and Kahn (2003) measuring the relationship between civic engagement and ethnic heterogeneity; and research by Glaeser and others (2000) measuring whether ethnic heterogeneity decreases trust between social groups. These studies share broadly common findings that racial diversity has a negative effect on trust, civic engagement and other social qualities.

Pre-Putnam studies have also taken place in the UK, Australia and Belgium. Analysing data from the UK Citizenship Survey, Pennant (2005) found a significant negative relationship between ethnic diversity and generalised trust, although no other relationships between ethnic diversity and trust in institutions were statistically significant. Flore (2005), also analysing Citizenship Survey data, found that ethnic diversity has a strong negative effect on the odds of expressing trust in neighbours although, like Pennant, found no significant relationships between ethnic diversity and other social capital indicators. Duffy (2004) analysed data from the British Household Panel Survey and found that life satisfaction is lower for people in ethnically diverse areas, although acknowledged that other likely explanatory variables were not tested. Coffe and Geys (2006), unable to find any suitable survey data for Belgium, used administrative data to construct a single measure for social capital from three indicators (number of community associations per capita, electoral turn out in municipality elections, and crime rate per capita) and found a significant, negative relationship between social capital and the number of nationalities within Belgian municipalities. Although Coffee and Geys conclude that differences in levels of social capital cannot be directly attributed to ethnic-cultural differences, they are not able to substantiate this in their analysis as ethnicity is not included as a variable in their statistical models, presumably due to a lack of ethnicity data in Belgium. A study in Australia found that levels of trust were lower in ethnically and linguistically heterogeneous areas, with linguistic heterogeneity having a stronger effect (Leigh, 2006). Also in this pre-Putnam era, a comparative study at national level across 44 countries found that ethnic and linguistic diversity decrease levels of interpersonal trust but increase interest in politics and the likelihood of belonging to a voluntary association (Anderson and Paskeviciute, 2006).

Putnam's study, published in 2007, has become the key reference for subsequent studies of this subject; of the 17 post-Putnam studies in Table ii, only two do not cite Putnam's 2007 study (Letki, 2008; Laurence and Heath, 2008), while seven introduce their studies with direct reference to the Putnam study (Gesthuizen et al, 2008; Stolle et al, 2008; Fieldhouse and Cutts, 2010; Gijsberts et al, 2011; Sturgis et al, 2010; Uslaner, 2011; Wickes et al, 2011).

Using national data from the Social Capital Community Benchmark survey and the national census, Putnam modelled the effects of immigration and ethnic diversity on a variety of social capital indicators including levels of trust, confidence in government and other institution, political efficacy (defined as individuals' confidence in their own influence), voter registration and turn out, volunteering, perceptions of happiness and quality of life, number of close friends and confidants, amount of time spent watching television. Across these indicators, Putnam found a pattern of negative association with ethnic diversity, leading him to posit that *'inhabitants of diverse communities tend to withdraw from collective life, to distrust their neighbours, regardless of the colour of their skin, to withdraw even from close friends, to expect the worst from their community and its leaders, to volunteer less, give less to charity and work on community projects less often, to register to vote less, to agitate for social reform more, but have less faith that they can actually make a difference, and to huddle unhappily in front of the television.*' (Putnam, 2007, p151). Putnam concludes that the effect of increased ethnic diversity is to reduce social solidarity and social capital as residents of all races tend to 'hunker down'. He suggests that this conclusion supports neither conflict theory nor contact theory and labels his 'hunkering down' effect as 'constrict theory'.

Many studies on this subject followed Putnam's. Responding directly to Putnam's findings in the US, a study by Stolle et al (2008) drew on alternative data sources to those used by Putnam and found that

while ethnic diversity does have a negative effect on social trust in both the US and Canada, the effect is moderated by individual social contacts; that is, people with more contacts have higher levels of trust. Notably, Stolle's study is one of the few to differentiate between social quality outcomes for ethnic majority and ethnic minority populations, and the findings of negative effects on social trust are for white majorities (Stolle et al, 2008). In Canada, Pendakur and Mata (2012) tested the effects of ethnic diversity on social capital which they measure through three indicators; trust in others, interactions with others and participation. They report that diversity has a negative effect on interactions with others but a positive effect on trusting others and participating in organisations.

Various studies have tested whether Putnam's findings hold true for the UK (Letki, 2008; Twigg et al 2010; Sturgis et al, 2010; Laurence, 2011 and 2014). The general finding is that there is a negative relationship between social cohesion or social capital outcomes and ethnic diversity in British neighbourhoods, but that this relationship is weak and substantially less significant than the effects of deprivation. Other post-Putnam studies in the UK include work by Laurence and Heath (2008) and by Rhys (2009), and outside the UK, work by Wickes et al (2011) in Australia. Again, the general findings are that weak negative relationships between ethnic diversity and various aspects of social cohesion or social capital are present, but that other indicators have stronger effects than ethnic diversity, notably levels of socio-economic deprivation.

Saggar et al (2012) use data from the 2008/09 Citizenship Survey to explore the effect of immigration, as distinct from ethnic diversity, on social cohesion and integration. Social cohesion is measured by combining responses to four questions about neighbourhood relations (do local people 'pull together' to improve the neighbourhood; can people in the neighbourhood be trusted; satisfaction with the neighbourhood as a place to live; whether

people in the local area get on well together). Integration is measured by responses to survey questions on trust in police, local council and parliament, sense of belonging to Britain and support for social values including equal opportunities and free speech. The analysis is conducted at local authority level. Saggar et al conclude that immigration has no significant impact on local neighbourhood cohesion.

Several studies have sought to examine whether Putnam's findings for the US hold true for the UK by constructing comparative data models. Fieldhouse and Cutts (2010) looked at the effects of ethnic diversity on attitudinal (e.g. a sense of belonging to a neighbourhood) and structural (e.g. involvement in neighbourhood activities) indicators of social capital. They found a negative association from ethnic diversity on social capital in both the US and the UK, but that the negative effects of diversity were smaller for ethnic minorities in the UK. Uslaner (2011) undertook a similar US and UK comparative study of the effects on social cohesion, but argues that ethnic diversity is not a useful explanatory measure and uses instead the degree of ethnic segregation within local areas. Uslaner found that residential segregation (not ethnic diversity) is responsible for lower trust, but that this association is stronger in the US than in the UK. Uslaner's finding that ethnic segregation rather than ethnic diversity is the stronger explanatory factor is partly echoed in a study by Sturgis et al (2014) which looked at the effects of both on social cohesion in London boroughs. The study found that ethnic diversity is positively related, and ethnic segregation negatively related, to perceived levels of social cohesion at the neighbourhood level.

Some post-Putnam studies have found that ethnic diversity and immigration have no relationship with social quality. A cross national study of 28 European countries by Gerthuizen et al (2008) found no relationship between social capital and ethnic diversity, and firmly rejected Putnam's thesis.

Theoretical frameworks

The Putnam studies largely draw on three theoretical frameworks: theories of social capital, trust or social cohesion; theories about intergroup ethnic relations; and the constrict theory which Putnam developed from his own empirical findings.

The theoretical context for Putnam's study includes his own thesis on the decline of social capital in American society (Putnam, 1993, 2000, 2002). Putnam also uses the contact hypothesis, drawing on Allport's work, to posit that increased ethnic diversity will foster trust and solidarity between in-groups and out-groups, and conflict theory from the work of Blumer, Blalock and others, to hypothesise that with increased ethnic diversity, the more we stick to '*our own and the less we trust "the other"'* (Putnam, 2007, p142). As we have already seen, Putnam concluded that neither conflict theory nor contact theory explained the findings from his own empirical research, and offered instead 'constrict theory' to describe a retreat from social contact resulting from increased ethnic diversity.

Several of the Putnam studies are located within the 'contact theory vs conflict theory' framework, including US studies (Taylor, 1998; Dixon, 2006) and UK studies (Laurence, 2011 & 2014; Sturgis et al, 2014; Schmid et al, 2014). Some, Taylor for example, conclude that increased ethnic diversity supports conflict theory. Others, Dixon for example, reconcile these apparently oppositional theories by asserting that conflict exists until reduced through meaningful contact, but that the dynamics of this process are complex and vary across different sets of inter-ethnic group relations.

Putnam asserts that most empirical studies conducted within the theoretical framework of group relations support conflict theory rather than the more optimistic contact theory. Putnam's view that existing

empirical evidence more strongly supports the theory that ethnic diversity fosters distrust and conflict between groups, is contested by some of the post-Putnam studies (for example, Gesthuizen et al, 2008).

Several of the UK studies which test the contact versus conflict hypothesis, conclude that testing ethnic diversity effects within this theoretical framework is misleading. They assert that ethnic diversity does not lead to negative effects from conflict or positive effects from contact, because the measure of ethnic diversity is itself misconstrued. Uslaner (2011) for example, argues that ethnic diversity in itself does not mean there is any meaningful contact between people from different ethnic groups. Other studies build on this view, replacing ethnic diversity with a measure of ethnic segregation in subsequent studies (Laurence, 2014 for example).

A number of the post-Putnam studies position themselves in relation to Putnam's constrict theory, seeking to test this in other contexts including Australia (Wickes et al, 2011) and the UK (Schmidt et al, 2014). Wickes et al find tentative support for Putnam's theory while Schmidt et al firmly reject it, concluding that ethnic diversity does not inevitably lead people to hunker down, but provides opportunities for contact which override any potentially negative effects. A few Putnam studies locate themselves in relation to the social capital theories developed by Putnam (1993, 2000, 2002) and Fukuyama (1995), including Alesina and Ferrara, 2000; Costa and Khan, 2003; Pendakur and Mata, 2012.

Trust is a common theme through most of the Putnam studies. Only a few of the studies are testing theories about trust (Alesina and Ferrera, 2003, for example). However, almost all include trust as an outcome variable, either on its own or as a component in an aggregated measure of social capital or social cohesion. The trust measures vary from study to study. Some use 'trust in institutions'

such as parliament or the police, others use a measure of interpersonal trust derived from 'the lost wallet question' (if you found a wallet how likely is it that you would return it). The most frequently used measure of trust is 'neighbourhood trust' (to what extent do you trust people in your neighbourhood).

Many of the Putnam studies do not draw on any theoretical model. Instead, they describe the scope and conclusions of the empirical work (based more or less on the Putnam studies included here) and position themselves as testing, challenging or extending this body of knowledge. Such studies include pre-Putnam work (e.g. Flore, 2005) but tend more often to be from post-Putnam researchers (e.g. Twigg et al, 2010; Saggar et al, 2012).

Conclusions of the Putnam studies

There is no consensus on what the findings from the Putnam studies point to. Some studies find that ethnic diversity has a negative effect on social quality and other studies find that it does not. Broadly, the US studies have found stronger negative effects than the studies in the UK. However, more of the pre-Putnam studies are in the US and more of the post-Putnam studies are in the UK. As the post-Putnam studies have tended to introduce additional data and methodological refinements in order to challenge Putnam's findings, it may well be that these differences in approach account for difference in findings, rather than intrinsic differences in the American and British situations.

Most of the UK post-Putnam studies have found some negative effects on social capital, cohesion or trust from ethnic diversity (Letki, 2008; Twigg et al, 2010; Sturgis et al, 2010; Laurence, 2011). This same group of studies has found that other social factors, particularly deprivation, are more important than ethnic diversity for explaining reduced social capital or trust (Letki, 2008; Saggar et al, 2012). In contrast, Putnam finds that although poverty and other social factors

have significant effects on local trust, even when these are controlled for, 'ethnic diversity *per se* has a major effect' (Putnam, 2007, p153, original italics, my underlining).

Several of the Putnam studies, including Putnam's, report positive effects from ethnic diversity. Putnam (2007) indicates that ethnic diversity has a positive effect on several measures of political engagement. Pendakaur and Mata (2012) find that ethnic diversity increases bridging social capital. Sturgis et al (2014) report that ethnic diversity is positively related to perceived social cohesion within neighbourhoods. Schmid et al (2014) report an indirect positive effect on trust via increased contact resulting from ethnic diversity.

4.2 Critiques of the Putnam studies

External critics

There is a surprisingly limited critique of the Putnam studies. There is some critique from within the field itself, primarily methodological. The main criticism is Putnam's use of ethnic diversity rather than ethnic segregation as a measure of inter-ethnic contact. Critics argue that the fact of ethnic diversity does not in itself mean that there is interaction between ethnic groups, and that ethnic segregation is a more meaningful indicator in seeking to measure ethnic impacts on social outcomes (Uslaner, 2011; Laurence, 2011; Sturgis et al 2014).

The very limited critique from outside this field is directed only at Putnam and not at the Putnam studies as a body of work. Dawkins (2010) is strongly critical of Putnam's methodology, including Putnam's use of ethnic diversity rather than ethnic segregation as the main explanatory variable of interest. Dawkins also takes issue with Putnam's measurement of local area ethnic diversity using a fractionalisation method. Fractionalisation quantifies the amount of ethnic variance within a given area but does not distinguish between

the ethnic compositions of those areas. A neighbourhood with100% white residents will have the same fractionalisation index score as an area with 100% black residents. This masks important differences in conditions between these areas (Dawkins, 2010). Most of the Putnam studies use a fractionalisation index to measure ethnic diversity. A notable exception is the study by Laurence and Heath (2008) which categorises local areas by their ethnic mix and does find some significant differences in levels of community cohesion dependent on ethnic group composition.

In a further and most serious criticism of Putnam's study, Dawkins accuses Putnam of a glaring error in his analytical approach. Putnam uses linear regression modelling which, Dawkins points out, is inappropriate for the ordinal scale of the dependent variables in Putnam's models. The results of Putnam's study are therefore misleading (Dawkins, 2008).

Aside from these methodological concerns, some critics focus on the conceptual basis for Putnam's work. In critiques which pre-figure Putnam's *E Plurubis Unum* paper, Hero (2003) is concerned that Putnam's analysis of social capital by ethnic group does not take ethnic inequalities into account. Putnam advances social capital as the measure of a better-off society, where others would consider racial equality a more imperative indicator (Hero, 2003). Hallberg and Lund (2005) are similarly sceptical about Putnam's measures of social quality and question whether individual attitudes, as drawn from survey data, constitute 'proof'. They point out that these individual attitudes are taken out of any historical and cultural context. Like Hero, Hallberg and Lund question Putnam's focus on the negative effects of diversity on social capital, arguing that this is at the expense of more interesting, more useful questions about the relationship between social capital and institutional racism. Rather than asking, '*Why does diversity pose a threat to community?*' they

consider the more pertinent question to be *'Why does community pose a threat to diversity?'*(Hallberg and Lund, 2005, p65).

Change over time

My primary criticism of the Putnam studies is that they all, without exception, analyse the effects of ethnic diversity (or something similar) on social quality at one point in time. None of these studies attempt to examine ethnic diversity effects as a dynamic process which may change over time. Putnam recognises this (2007, pp158-159). He considers that while the consequences for social capital of ethnic diversity and immigration are negative in the immediate and short term, there are likely to be longer term benefits (2007, p164). However, Putnam is a lone voice in acknowledging that the lack of any measure of change over time is an important, missing component of this study. The rest of the Putnam study field is quiet on this point.

When the relationship between ethnic diversity and social quality is measured only at a fixed point in time, there is no way of knowing in which direction the relationship might be moving. Are the negative effects of ethnic diversity which Putnam identified increasing or reducing over time? Further, not only is the relationship measured at a fixed time point, but the ethnic diversity component in this relationship is measured as a fixed entity and not as a process of change. If the level, or stock of ethnic diversity has a negative effect on social quality, does the rate of increase, or flow of ethnic diversity have the same effect?

The failure of the Putnam studies to measure ethnic diversity flows and impacts over time is a major omission. The oversight is astonishing given the importance to changing ethnic diversity accorded by the studies themselves which, without exception, refer to increased ethnic diversity as a starting point for their enquiry. The

empirical research is prompted by a process which is acknowledged as taking place over time. Putnam's own study refers to *'the increase in ethnic and social heterogeneity in virtually all advanced countries'.* He says that '*the most certain prediction that we can make about almost any modern society is that it will be more diverse a generation from now than it is today.*' And that he wants to look at *'the implications of that transition'*. These references to increase, generation and transition powerfully evoke the sense of dynamic movement across time, and all appear in his opening paragraph (2007, p137). Without measures of flow and change over time, the Putnam studies can neither predict where the relationship between ethnic diversity and social quality is headed, nor describe its historical path.

The fixed point measure of ethnic diversity is at odds with the dynamic conceptualisation of race relations which underpins the intergroup theories which are employed by the Putnam studies. Intergroup theories conceive race relations as shifting relationships between groups. We have already seen that intergroup theories see the patterns of these relationships change over time; straight line assimilation takes place over generations. In Blumer's symbolic interactionist approach (1958), ethnic group relations are always in a state of potential flux, changing through the continual process of interaction. There is a profound epistemological conflict inherent in reducing Blumer's dynamic group position model to a static measure of group relation effects.

Similarly, fixed point measures of social quality are conceptually at odds with the view of social quality in decline. As ethnic diversity increase is a process which happens over time, so social quality decline is a process which can only take place over time. The temporal dimension is essential to both.

Even Putnam's fans seem not to notice that his analysis lacks any historical dimension. One of Goodhart's main arguments is that modern liberalism has a '*thin and unhistorical understanding of people and societies'* (2013, p13). But Putnam's unhistorical analysis is a prime source of Goodhart's evidence for the negative consequences that modern liberal multiculturalism has allowed through increased ethnic diversity.

If measures of the relationship between ethnic diversity and social quality are to be of any value, it is critical that they consider the dynamic of this relationship over time.

Measuring social quality

The Putnam studies use a narrow set of measures to demonstrate what ethnic diversity is having an impact on. As previously highlighted, understanding and analysis of the relationships between these various dimensions of social quality are fluid and still evolving. The main dimensions included in the Putnam studies, social capital, cohesion and trust, are used flexibly, without consistency, and with no reference to any wider understanding of what comprises social quality and where social capital, for example, fits within this. This fluid, untethered approach to social quality creates several difficulties.

Firstly, there is no consistency in the measures of social quality employed in the Putnam studies. The most commonly used measures are of social capital, social cohesion or trust. Some studies examine impacts on more than one social quality indicator: Anderson and Paskeviciute (2006) look at trust, political and civic engagement; Laurence (2011) looks at social cohesion and social capital; Wickes et al (2011) look at social cohesion and trust; Saggar et al (2012) select social cohesion, national identity and integration. Broadly, the US studies tend to focus on social capital, while the UK studies look

at social cohesion, but there are exceptions; Letki, for example, looks at social capital in the UK (2008).

What these aspects of social quality represent and how they are measured differs from study to study. Confusingly, the terms social cohesion and social capital are used flexibly and sometimes interchangeably within the same studies; examples of this tendency include Letki (2008) who measures diversity effects on social capital but discusses these effects in terms of social cohesion, and Sturgis et al (2014) who summarise Putnam's 2007 findings on social capital as ethnic diversity effects on social cohesion. Even where studies are ostensibly using the same measure of social quality, they construct this in different ways. Letki's (2008) measure of social capital is not the same as Putnam's (2007), for example; some indicators within their social quality measures are similar (e.g. do you trust people living in this neighbourhood), while others are used by Putnam but not Letki (e.g. are you currently registered to vote) and others are used by Letki and not Putnam (e.g.receiving unpaid help from organisations or individuals).

The use of different measures complicates the comparability of findings from the Putnam studies. Does ethnic diversity have a positive effect on social capital in Canada (Pendakur and Mata, 2012) and a negative effect on social capital in the US (Putnam, 2007) and the UK (Letki, 2008) because of differing national circumstances, or because of differences in how social capital is measured?

Secondly, the Putnam studies lack any wider framework for understanding social quality. The social quality outcomes (social capital, trust etc) stand alone in these studies, without reference to any complementary or competing ways in which social quality might also be defined or perceived. To take just one frequently used measure, social capital is explicitly or implicitly presented as an

attribute that makes us 'better off'. But there is little consideration of how this better off-ness works in relation to other aspects of social quality. Who is better off for having more social capital? Is social capital a more important indicator of better off-ness than, say, economic equality? These are similar to the concerns that Hero (2003) and Hallberg and Lund (2005) level at Putnam, but they apply to all the Putnam studies.

Finally, and as a consequence of the lack of any social quality framework, there is a tendency within some Putnam studies to apply the findings for one measure of social quality to much larger conclusions about American or British society. Putnam's study is probably the most egregious example of this. Putnam defines social capital as *'social networks and the associated norms of reciprocity and trustworthiness'* (2007, p137). Although he does not locate social capital within a wider framework of social quality, we can see from this definition that social capital does not represent everything which might constitute social quality, but some specific aspects of it. Perhaps 'networks', 'reciprocity' and 'trust' make up the greater part of social quality; it seems doubtful and Putnam makes no case for this. Yet Putnam's conclusions about ethnic diversity effects on social capital are written in very grand terms, including *'America's historical identity as a nation of immigrants'* and the *'great achievement of human civilization'* (2007, pp164-165). There may be no intention of 'bigging up' the research findings, but this discursive extrapolation from the modest parameters of the study to the limitless scope of human civilization is clearly suggestive of a much wider relevance.

Whose social quality?

There is little or no analysis within these studies of whether social quality is differently perceived by different ethnic groups. Exceptions are Stolle (2008) in the US and Fieldhouse and Cutts' comparative study of the US and Britain (2010). Both find that the negative effects

of ethnic diversity on social capital are true for white majority populations but not for ethnic minorities. This finding is stronger in Britain than in the US, leading Fieldhouse and Cutts to suggest that Britain's ethnic minorities are considerably more comfortable than white people when living in diverse areas, regardless of the ethnic composition of the area.

Measuring immigration impacts

Putnam's study makes an important distinction between immigration and ethnic diversity. The study finds that the negative effects on social capital are stronger in areas with a high percentage of immigrants than they are in areas with high levels of ethnic diversity. Other studies which distinguish between immigrants and ethnic diversity report the same finding (e.g. Laurence and Heath 2008). Surprisingly, not all studies make this distinction in their predictor variables, including UK studies which explicitly address Putnam's conclusions (including Rhys 2009, Twigg et al 2010, Sturgis et al 2010). Demivera (2015) has highlighted the relative lack of work on the social effects of immigration in the UK.

Using subjective and objective measures

The Putnam studies tend to rely on attitudinal data to measure social quality. The outcome variables in almost all the studies are taken from survey questions which ask people to give their views on various aspects of social quality. The findings and conclusions from these studies are therefore findings and conclusions about how people perceive the social cohesion of the areas they live in. This important point, that the conclusions are about attitudes to or perceptions of social cohesion, is noted by Fieldhouse and Cutts (2010), who distinguish between indicators of structural dimensions of social capital and those of attitudinal dimensions. Only one study uses what could be described as objective outcome indicators by

using variables derived from administrative rather than survey data; Coffe and Geys' (2006) study of the relationship between social capital and the number of nationalities in Flemish municipalities. No studies use objective data to corroborate, or review, the attitudinal data used to construct their outcome variables.

None of the published work uses both types of indicator in one study. This apparent omission has precluded any direct comparison of whether structural and self-reported indicators of social quality are affected in similar ways, or in any way at all, by ethnic diversity and immigration. We do not know whether subjective and objective measures tell the same story about the social effects of ethnic diversity and immigration.

The applicability of the theoretical models

Where the Putnam studies draw on any theoretical framework, it tends to be the conflict versus contact hypothesis, or something similar, from the US ethnic intergroup theories. I have a number of concerns about the applicability of this theoretical framework to this field of enquiry in general and to the UK studies in particular.

Firstly, it is not clear that the common presentation of conflict and contact theories as oppositional is appropriate. Putnam calls these *'two diametrically opposed perspectives on the effects of diversity on social connections'* (2007, p141). On one side, the theory of ethnic conflict (sometimes also presented as 'the power threat' or 'real conflict' hypothesis) is presented as a competition between ethnic groups in which a dominant or majority group becomes hostile to a subordinate or minority group as the subordinate group threatens its economic and social position. Contact theory is presented on the opposing side, as predicting that inter-group relations can be improved through first-hand social contact which corrects negative racial stereotypes.

But in my reading of Blumer (on conflict theory) and Allport (on contact theory) the critical opposition is not conflict and contact, but collective and individual. Blumer (1958) and Allport (1958) offer similar explanations for the ascription of racial groups and of dominant and subordinate group positions, of how group identities are maintained through abstraction (Blumer) or scapegoating (Allport) of subordinate groups. The difference is in Allport's psychological approach, which locates the values of racial prejudice and actions to overcome this within the individual, and Blumer's sociological approach which situates these within the social position of the group. Ultimately, Allport's outlook is more optimistic, as individual attitudes can be changed, with contact as one method for this. Blumer suggests that race prejudice only declines when the sense of group position is eroded by '*big events'* (Blumer, 1958, p6).

The contact/conflict hypothesis is resolved in some Putnam studies; Dixon (2006), for example, finds that both are supported. However, I am not convinced that conflict and contact represent the right dichotomy. The individual/collective contrast appears more strongly theoretically grounded and perhaps should therefore be the focus of these empirical investigations. The Putnam studies which use multi-level modelling to simultaneously analyse individual-level and area-level effects are already separately positioning individual attitudes and collective features methodologically, although not theoretically. In these studies, Putnam's included, conclusions about conflict or contact are drawn from effects measured at area-level which, in my view, enables only an acceptance or rejection of Blumer's group-level conflict theory and not Allport's individual-level contact theory. An empirical investigation of Blumer versus Allport would require testing whether racial prejudice is overcome by individual contacts or collective events; this is not something which any Putnam study has yet investigated.

Secondly, it seems doubtful whether the US ethnic intergroup model is applicable to the UK. Oliver and Wong (2003) highlight that the threat or conflict hypothesis was formulated about two specific racial groups (whites and blacks) in a sharply defined historical relationship, and question whether this is a suitable model for explaining white attitudes towards other ethnic groups in the US. We should ask the same of the UK, where several of the Putnam studies have adopted this theoretical framework (Laurence, 2011; Sturgis et al, 2014, for example). Can a model which supposes an ethnically heterogeneous majority and an in-coming ethnic minority really be a helpful way to conceptualise ethnic relations in 21st century Britain? Even in the 1960s, Rex and Moore (1967) argued that the immigrant-host conceptualisation of the Chicago school assimilation model was inappropriate for Britain, as it casts ethnic minorities as outsiders and disregards the dynamics of inequality. Fifty years on, in a vastly more diverse Britain where half the ethnic minority population was actually born, the majority/minority group model is surely less relevant than ever.

As a slight aside, if the US intergroup theories are considered appropriate for understanding ethnic relations in the UK, it is puzzling that the UK Putnam studies draw mainly on the conflict/contact hypothesis and not on others within this framework. Moscovici's theory that successful majorities can afford to accommodate minority groups, while unsuccessful majorities cannot, certainly would seem to warrant closer examination (Moscovici, 1976). This model would work well for studies which look at deprivation to explain ethnic diversity effects, Letki's (2008) for example.

A final challenge to the theoretical positioning of the Putnam studies is whether the intergroup theories actually lend themselves to positivist empiricism. When these studies draw on Blumer's group conflict model, they draw on the theoretical framework of the symbolic interactionists. But they do so without adopting the

epistemological framework and methodological approaches which are intrinsic to this theoretical tradition. The Putnam studies use static measures when symbolic interactionism considers that social relations are always in a state of change. The Putnam studies use scientific quantitative data analysis rather than the participant observation and ethnographic methods which are needed to '*develop a familiarity with what is actually going on in the sphere of life under study'* (Blumer, cited in Lal, 1986, 284).

4.3 Conclusions from Part One

Part one of this thesis has drawn a contextual map of the ideas, theories and studies within which my empirical study is situated. On the outer edges of the contextual map lie the concepts that enable any quantitative study of ethnicity: the idea of racial difference and the establishment of quantification and measurement. Quantitative study of ethnic diversity has its roots in the separate but intertwining histories of these two themes. Both are creations of early Western European ways of seeing the world and of organising the world into manageable and profitable components. Both have shared the appearance that they are natural or innate ways of doing things, although the general belief that this is true of 'race' has declined. In contrast, our faith in the value of quantification is undiminished. The organisation of the social world into entities that can be counted and measured is the fundamental basis of key Western intellectual traditions, including positivist sociology. Our strong '*trust in numbers*' (Porter, 1995) imbues these approaches with a sense of detachment and objectivity. Putnam's conclusions typify this approach when he talks about '*scientific examination*' to establish '*the facts'* and '*the reality'* of the negative effects of ethnic diversity (Putnam, 2007, p165).

The history of ethnicity meets the history of quantification and measurement at frequent points, often in the form of racial

classification. This is also the point where administrative processes for understanding and managing populations meet the social research processes that enable researchers to build theories about those populations. The idea and practice of racial classification recur regularly as the logical expression of the ways of thinking that enable a quantitative study of ethnic diversity and social quality to take place. If no other evidence were needed, the development of so many different forms of racial categorisation with so few common categories demonstrates that racial classification has no innate, natural or scientific rationale but, rather, reflects the social and political outlooks of the societies they appear in.

Ethnicity and quantification meet again in the emergence of statistics as a scientific process for measuring differences between people. Statisticians have helped to set the boundaries of group difference, by ethnicity, by intelligence, or in other forms. The development of statistical methods in pursuit of eugenicist ideals and their continued application to measures of ethnic difference and to ethnicity as a causal variable mean that the methodology itself may be racialized. That is, the use of statistical analysis contributes to the production of racial difference and to the maintenance of racial hierarchisation and inequality which are integral to this.

Working inwards on the contextual map, concerns about immigration and ethnic diversity are frequently articulated in terms of social impacts, with a particular focus on localities as the spatial level of concern regarding these impacts. The key debates in recent years, including those focused on immigration, privileging, social cohesion and segregation, have engaged academic researchers and theorists, politicians and policy makers, journalists and media commentators. These debates are fluid, evolving, intersecting and overlapping. They are also highly politicised and are particularly subject to changes in political ideology. Statistical data, sometimes the exact same data,

are presented as evidence in support of arguments from opposing sides of these debates.

The theoretical framework for understanding the social impacts of immigration and ethnic diversity is shaped by the work of American sociologists and social-psychologists. The framework includes conflict and contact theories, the assimilation cycle and, more recently, Putnam's constrict theory. The theories within this framework are based on a conceptualisation of society as comprising a 'host majority', invariably this is the white population, and 'ethnic minorities'. The theoretical propositions concern the ways in which the majority population accommodate the minority, or not. While some race experts have rejected this framework as inappropriate to the British context, it is still applied to UK empirical studies. The lack of any agreed theoretical framework for understanding ethnic relations in Britain in part explains why the US theories are borrowed, although perhaps a greater part of the explanation lies in how well the intergroup theories lend themselves to operationalisation as variables within statistical analysis. The search for a distinctly British, testable theory of ethnic diversity effects has long since been eclipsed by the post-structural diffusion of ethnic studies along multiple epistemological, theoretical and empirical branches.

At the centre of the contextual map lie the Putnam studies; a growing body of quantitative empirical studies of the relationship between ethnic diversity and social quality. The benchmark study in this field is Putnam's 2007 investigation into the relationship between ethnic diversity and social capital. Putnam's finding that ethnic diversity reduces social capital has prompted other researchers to explore whether this holds true for other societies or for other aspects of social quality. The conclusions from this body of work are mixed and there are some aspects of the topic that clearly merit further investigation.

Across this contextual map, race and ethnicity are always perceived as problematic. Whether ethnic diversity causes social problems, even wars, or whether social structures cause ethnic inequalities, whether individual identities are shaped by racialized cultural representations or whether race is an ideological diversion from economic exploitation. There is no apparent way of looking at ethnicity without associating it with trouble, conflict, problems. Perhaps the only way to stop conceiving of ethnicity as problematic is to stop investigating it. Or perhaps we need to investigate the problem in order to solve it. My own study takes place within this problematised arena.

My study

My empirical study contributes to this field by developing a methodological approach which shares the characteristics of the Putnam studies while seeking to address the gaps which are evident in this body of work. My study addresses the same question as the Putnam studies: does increasing ethnic diversity have any measurable effect on social quality in local neighbourhoods? It works within the methodological approach adopted by the Putnam studies, using multi-level modelling of large datasets.

Because my study rests on the conceptual assumption that ethnic relations can be conceived as a measurable relationship between groups (Brubaker's groupism), my research is implicitly operating in the same theoretical space as the intergroup theories utilised by the Putnam studies. However, in a departure from the positivist convention, my study does not draw on this theoretical framework to posit a testable hypothesis. This is because, having questioned the validity of applying these theories to the UK, it makes no sense to then adopt them for my own study. In the absence of a testable theorisation of race relations in a British context, I find that my study lacks any theoretical model from which to derive testable

hypotheses. As a theoretical basis, my study follows the convention established by the post-Putnam field, which loosely asks ‘Is Putnam right?’

My study seeks to address those gaps in the Putnam studies which I consider most significant and which can be tackled within a single study. There are three, two of which are articulated in the primary research questions for this study and a third which offers an interesting, additional area of supporting enquiry.

Firstly, my study addresses the lack of a wider framework to underpin the elements of social quality being examined. The Putnam studies are concerned with measuring the relationship between ethnic diversity and a variety of indicators, most of which are intended to signify social cohesion or social capital. Although both social cohesion and social capital can be viewed as broad concepts, covering a range of social dimensions, they are reduced to fairly narrow measures within these studies, in some cases to a single survey question (e.g. Stolle et al 2008, Rhys 2009). Little of the existing work defines social quality more widely to include, for example, measures of efficacy, empowerment or equality. Putnam uses a wider range of social quality indicators than most, although reports more extensively on findings for the social capital measures. My study employs a social quality framework which locates social capital, social cohesion and trust as components within a broader set of elements which could comprise social quality. The use of a wider social quality framework allows for a wider set of social quality outcomes to be investigated. In this way, my study seeks to broaden the narrow scope of the Putnam studies.

Secondly, my study will rectify the lack of any time dimension within the existing studies. All use cross-sectional survey data to look at the relationship between ethnic diversity and aspects of social quality at a fixed point in time. None consider whether these relationships

change over time, although Putnam acknowledges that this may be critical. My study develops measures to account for both the change over time in local areas (a dynamic measure of ethnic diversity) and the rate of change in ethnic diversity within local areas (the flow of ethnic diversity). Using these measures, the study explores the trajectory of the relationship between ethnic diversity and measures of social quality, to consider what this can tell us about ethnic diversity as a process. To support this investigation, my study examines the effects of both ethnic diversity and immigration. If we consider that immigration is a process which leads to ethnic diversity, then it makes sense to look at whether these processes have the same or different effects on social quality, and whether those effects change in the same direction over time.

Finally, my study addresses the over-reliance of the Putnam studies on individual level, self-reported survey data to provide measures of social quality. With only one exception (Coffe and Geys, 2006), the empirical studies in this field rely on survey data to construct their social outcome variables. Most of the variables derived from this survey data are attitudinal (e.g. Do you think your neighbourhood is a safe place to live?), although some measure behaviours such as frequency of contact with neighbours, membership of community associations, or amount of time spent volunteering.

The key issues here are, firstly, that the use of attitudinal indicators means that studies are measuring the impact of ethnic diversity on individual perceptions of social quality. A negative effect on social quality says something about how ethnic diversity or immigration may influence individual perceptions of aspects of social quality, but leaves much unsaid about how social quality behaves outside of those perceptions. It is entirely possible that a perception of social quality in decline is not supported by objective, or structural measures of social quality; the subjective perceptions and the objective data may tell different stories. Secondly, measuring social

quality at the individual level, through survey data, and the factors which may influence this at area level, allows for an exploration of area effects on individual outlook. This multi-level analysis is made possible by multi-level statistical modelling software, as used in this study. But the multi-level conceptualisation overlooks what area level effects there may be on area level social quality outcomes; do area level ethnic diversity and immigration effect area level social quality in the same way as individual perceptions of social quality?

Of these three areas for examination, the first two are original areas of research which have not previously been investigated. They are framed in the primary research questions of this thesis:

- Do ethnic diversity and immigration have any effects on a range of indicators of social quality in local areas of England?

- Do any effects from ethnic diversity and immigration on social quality change over time?

PART TWO: THE STUDY

CHAPTER FIVE: RESEARCH DESIGN AND METHODOLOGY

This chapter presents the research design and methodology used to address the primary research questions:

- Do ethnic diversity and immigration have any effects on a range of indicators of social quality in England?
- Do any effects from ethnic diversity and immigration on social quality change over time?

The chapter begins with a brief recap of the gaps in this field of work and how they are addressed in this study. The chapter moves on to explain the variables selected for the study, which data sources they are derived from and how the study datasets were constructed. The final sections in this chapter explain the methods used to analyse the data, how the outputs from the data analysis are interpreted, and the results from preliminary data testing and analysis.

5.1 Research design

This study addresses three shortcomings which are apparent in the existing body of empirical research in this field. These are:

1. The absence of any framework for social quality within which to locate distinct aspects of social quality and, linked to this, the narrow range of social outcomes which are commonly investigated;
2. The lack of any temporal dimension within existing studies;
3. The over-reliance on individual-level, self-reported survey data to measure social quality.

The study aims to develop the methodology for measuring the relationship between social quality and ethnic diversity/immigration by addressing these issues, specifically by:

- Using a social quality framework as the basis for selecting a comprehensive set of social quality outcome indicators. The study

uses a social quality framework developed by Berman and Phillips (2000) to operationalise Beck's (1997) concept of social quality;

- Measuring the effects of ethnic diversity and immigration on a wide range of social quality indicators, as derived from the Berman and Phillips social quality framework. The study measures ethnic diversity and immigration effects on eleven separate indicators of social quality;
- Examining changes in the relationship between ethnic diversity and immigration and social quality over time, by (a) comparing data from two time points, 2001 and 2011, and (b) measuring the effects of rates of increase in ethnic diversity and immigration on social quality;
- Recognising immigration and ethnic diversity as separate indicators and including both within the study;
- Using both individual-level, self-reported data and area-level, structural data to measure social quality.

Main data source

The main source of data used in this study is the Citizenship Survey (Home Office Communities Group BMRB Social Research, 2003; Department for Communities and Local Government, Ipsos MORI, 2012).[2]

[2] The dataset for the final Citizenship Survey was approved for use in this research study by the Department for Communities and Local Government (DCLG) in June 2012, prior to public release. Geographic variables below regional level are not included in the Citizenship Survey data on public release, so permission from DCLG to obtain and use LAD and MSOA variables for the 2001 and 2011 datasets was required. This process, from requesting permission to receiving the LAD variables (the MSOA variable was also provided for the 2001 dataset but was not available for the 2010/11 data), took eleven months.

The Citizenship Survey was a national survey commissioned by the UK government to provide an evidence base on the state of community cohesion across local areas in England. The Citizenship Survey first took place in 2001 and was repeated in 2003 and 2005. From 2005, the survey moved to a continuous design. In January 2011, the government announced the cancellation of the Citizenship Survey and field work was concluded on 31 March 2011. Around 10,000 individuals were surveyed in each round, with an additional booster of about 5,000 ethnic minority respondents. The Citizenship Survey provides an ideal data source for studies of ethnic diversity and social quality and has been used for many of the UK Putnam studies (Pennant, 2005; Flore, 2005; Laurence and Heath,2008; Letki, 2008; Fieldhouse and Cutts, 2010; Uslaner, 2011; Laurence, 2011& 2014).

The spatial level for measurement

This study looks at the relationship between immigration, ethnic diversity and social quality at a local-level. The selection of an appropriate spatial level for local-level analysis is problematic.

There is no shared understanding of how 'local' should be defined. The Putnam studies use different spatial levels of analysis. Many of the US studies, including Putnam's, use census tracts while others use Metropolitan Statistical Areas (MSAs) (e.g. Alesina and Ferrara, 2000; Costa and Khan, 2003). There are 65,443 census tracts in the US, each with a population of around 4,000 and 367 MSAs each made up of adjoining counties and including an urban core area of at least 50,000 population. By population size, US census tracts correspond roughly to the UK's Middle Super Output Areas (MSOA) which have an average population of 7,200. MSOA is the spatial level of analysis used in most of the UK studies (as shown in Table ii, page 99). The US MSAs roughly correspond to the UK's local authority districts (LAD) for which population sizes range from 2,200

(Isles of Scilly) to over 1 million (Birmingham) with a mean population of around 160,000 using 2011 population figures. In the UK studies, LAD-level analysis is used by Andrews (2009) and by Saggar et al (2012). The cross-national studies use the country as the spatial level of analysis (Anderson and Paskeviciute, 2006; Gerthuizen et al, 2008). There do not appear to be any systematic differences in study findings linked to the spatial level of analysis.

Given the concerns that are expressed about concentrations of ethnic minority populations in urban or inner-city areas, it does seem likely that the spatial level selection will be an important factor in the research design, as the level of ethnic diversity will differ by geographic level. If ethnic minority populations are concentrated in very specific geographic areas then smaller spatial areas will show greater extremes of ethnic diversity, with some areas having very high ethnic minority populations and others having almost none. In larger spatial areas these extremes will be averaged out, so the larger area may show moderate levels of ethnic diversity, while the smaller areas within them will indicate very high or very low levels. The studies in this field tend to skate over this issue and generalise from the findings generated from one level of spatial analysis to conclude that this represents a pattern for all areas but which may actually only hold true for the spatial level of the analysis; for example, Stolle et al, 2008, analyse data at neighbourhood level but discuss conclusions about the US and Canada; Gijsberts et al, 2011, analyse data at city level but discuss conclusions about the Netherlands. This conflation of area-level analysis with country-level conclusions is another part of the critique that Dawkins (2008) makes of Putnam's (2007) methodology.

The main options for spatial level within the UK data are LAD and MSOA. Both offer advantages and disadvantages. The main drawback of using LADs as the spatial level of analysis is that they are larger than neighbourhoods or localities, both geographically and

demographically. Much of the data used in this and similar studies is collected from surveys which ask people to say how they feel about their local area or their neighbourhood. For example, the Citizenship Survey asks questions about ‘your immediate neighbourhood’ and ‘your local area’ and while ‘immediate neighbourhood’ is not defined, ‘local area’ is described as being ‘the area within a 15 to 20 minute walk from your home’ (Ipsos MORI and TNS-BRMB, 2010, Annex E, p15). While LADs vary in size, all are substantially larger than a 15 to 20 minute walk. LADs also have considerably larger populations than would be expected of a neighbourhood. There is no agreed definition of neighbourhood, but populations of 5,000 to 10,000 inhabitants are considered to be at the upper end of the scale (The Young Foundation, 2010). LAD, therefore, is a larger geographic area than some attitudinal indicators of social quality are designed to measure. What people think about their local areas, meaning the area within a 15 to 20 minute walk of where they live, may be very different to what they think about the much wider area of the LAD. Applying LAD-level measures of social features such as ethnic diversity and immigration, to local-level measures of attitude and behaviour, may be problematic.

Because they are smaller, MSOAs are a better fit with the design of the survey questions which refer to neighbourhood and locality. However, not all data is available at MSOA level including, at the time that this study was conducted, the 2010/11 Citizenship Survey data. The LAD is the lowest geographic level for which data are available across all the variables identified for inclusion in this study. The LAD-level also ensures a minimum number of lower level units (i.e. individuals) within the higher-level units (i.e. LADs), which is a factor for consideration in mutli-level modelling, as discussed later in this chapter. For these reasons, and despite recognising that in other ways this level of spatial analysis is not ideal, this study uses LAD as the level of analysis.

A final spatial point to highlight is that the various data sources used in this study differ in terms of their geographic coverage. It would be ideal for this study to cover all of the UK. After all, the relationships between ethnic diversity and immigration and social quality are relevant across the entire country. But the constraints of the data mean that only LADs in England are included. The study findings are applicable only to England and any references to 'national' in the discussion refer to England only.

Measuring change over time

Finding suitable data to measure change over time has been a major challenge for this study. The chief difficulty is the lack of social quality data which are consistent and therefore comparable across different time points.

Ethnic diversity and immigration data are available from the UK census and are relatively straightforward to obtain and use. A question about ethnicity was first included in the 1991 census, enabling a consistent measure of ethnic diversity for the 20-year period from 1991 to 2011. Questions about country of origin have been asked in each census since 1841. So if immigration is measured by the number of people who were born outside the UK, reliable data is available for a very long time span.

It is more difficult to find data which measure social quality indicators consistently and with large enough samples to enable LAD level analysis over any significant timespan. The longest period for which relevant and comparable data are available is from 2001 to 2011, using data from the Citizenship Survey (for convenience, the 2010/11 Citizenship Survey data year is referred to as 2011 throughout this thesis). Fortuitously, these time points correspond with the national census, enabling the study to measure the relationships between the ethnic diversity and immigration variables derived from the 2001 and

2011 censuses with social quality variables obtained from the 2001 and 2011 Citizenship Surveys.

The Citizenship Survey offers a wealth of data on social quality, covered by a wide range of questions about social capital, social cohesion, trust in other people and trust in public institutions. Unfortunately for this study, very few of the same questions were asked in every survey round. Although the survey offers a data source which is comparable over a ten-year time span it provides only a limited number of questions for which data can be used to track changes on social quality measures over this period.

Measuring ethnic diversity

Most of the Putnam studies test the effects on social quality of ethnicity as measured by ethnic diversity, although some researchers argue that ethnic segregation is a more appropriate measure (for example, Uslaner, 2011; Sturgis et al 2014). The distinction is particularly relevant for studies which address the conflict versus contact hypothesis (for example, those by Fieldhouse and Cutts, 2010; Laurence, 2011). Clearly, when seeking to measure whether inter-ethnic contact has significant effects on social quality outcomes, it is important that the variables which represent 'contact' should measure this as accurately as possible. Arguably, contact (or lack of it) is better measured by ethnic segregation than by ethnic diversity. However, contact is not of interest for this study, so ethnic diversity is the more suitable measure.

Almost all of the Putnam studies use a fractionalisation method to construct an ethnic diversity variable (Laurence and Heath, 2008 and Saggar et al, 2012, are exceptions to this). Fractionalisation produces a single figure derived from the percentage shares of each ethnic group within the population. The advantage of adopting this approach is that it is consistent with much of the work in this field.

However, there are disadvantages. A fractionalisation measure does not reflect the nature of ethnic diversity. Using the fractionalisation approach means that studies are unable to consider whether the relationship between ethnic diversity and social quality is affected by the nature of that diversity. In Britain, the fractionalisation approach cannot answer whether areas with White British, Black Caribbean and Black African populations, for example, are more or less socially cohesive than areas with White British, Indian and Pakistani populations. Of the UK Putnam studies, Laurence and Heath (2008) and Saggar et al (2012) look at the nature of the ethnic diversity of local areas. Both studies identify significant differences in community cohesion outcomes depending on the composition of the ethnic mix, providing a richer understanding of how the make-up of ethnically diverse populations influences social quality outcomes.

Despite its advantage over the fractionalisation measure, analysing effects for different ethnic groups (the approach adopted by Laurence and Heath and Saggar et al) is not adopted for this study. Grouping local areas by the nature of the ethnic make-up of the population introduces an additional layer into the data analysis which greatly complicates the interpretation of the data output. It would require results to be interpreted by social quality outcome indicators, by change over time, and by ethnic make-up categorisations. This is too complex for the study to accommodate. In order to keep the data output interpretation manageable, and to be consistent with other empirical work in this field, a fractionalisation approach is used to calculate the ethnic diversity of each LAD.

Measuring social quality

This study uses Beck et al's (1997) concept of 'social quality' as an overarching term to encompass social cohesion and social capital (the key terms of interest for other studies in this field) and other social dimensions such as social inclusion. This provides a

theoretical basis for operationalising social quality into measurable components, and a frame of reference lacking in the Putnam studies.

It is implicit within the Beck et al definition that social quality operates at both collective and individual levels. The first part of the definition '*the extent to which citizens are able to participate in the social and economic life of their communities…'* indicates social quality at the collective-level, while the second part *'…under conditions which enhance their well-being and individual potentia*l' looks to the individual-level. The multiple levels at which social quality is conceptualised raises important considerations for how it is measured and how any effects on this are analysed and interpreted. The collective and individual-levels in the Beck et al definition tend to be mirrored in social quality variables which are regarded as objective and subjective, with collective-level, objective measures associated with social indicators, and individual-level, subjective measures connected with well-being (Diener and Suh, 1997). The focus in this study, in common with the Putnam studies, is on collective, area-level effects; that is, on how area-levels of ethnic diversity and immigration affect area-level social quality. The variables used in this and similar studies combine social features measured at area-level, like ethnic diversity, with features measured at individual-level, like local trust. The multi-level modelling techniques used in these studies allows both individual and collective-level measurement of effects on social quality outcomes. This complex interplay of subjective and objective, individual and collective, actual area-level and aggregated area-level measures has the potential to both enrich and confuse the exploration of ethnic diversity effects on social quality. This multi-layered analysis provides the opportunity to investigate whether objective, area-level measures of social quality are affected by ethnic diversity in the same way as subjective measures derived from individual attitudes.

Berman and Phillips have translated Beck et al's social quality framework into a set of measurable indicators organised within four dimensions of social quality; socio-economic security, social inclusion, social cohesion and empowerment. Berman and Phillips translate social quality into 20 domains, with suggested indicators for each of these. Almost entirely these are area-level measures. Table iii shows the dimensions, domains and indicators developed by Berman and Phillips as a framework for social quality (Berman and Phillips, 2000; Phillips and Berman, 2003).

For this study, the ideal would be to use Berman and Philips' social quality framework to guide selection of at least one indicator for each domain. Unfortunately, this is not possible. Not all of Berman and Philips' suggested social indicators work at LAD-level, the social and cultural empowerment domain for example. For others, LAD-level data exists but not for both time points in this study; the social status cohesion domain for example. Some changes are also needed to incorporate the social capital and civic engagement indicators from Putnam's study.

Taking Berman and Philips' framework as the starting point, I have developed an adjusted social quality framework, shown in Table iv. To accommodate the social capital indicators examined by Putnam, the adjusted framework adds a 'social capital' dimension to Berman and Philips' framework. Within social capital, I have incorporated 'civic participation', which could also fit within the altruism domain on the Berman and Philips framework, but which offers a measure of the civic engagement activities that Putnam and others associate with social capital (Putnam, 2000), and a 'local trust' indicator, also commonly used as a measure of social capital, but which could also fit within the 'social psychological empowerment' domain of the Berman and Philips framework. Finally, in the social capital dimension, I have added the 'watching TV' indicator. Time spent watching television does not fit anywhere on the Berman and Philips

framework, and LAD level data for this is only available for 2001, two factors which should exclude it from the study. But this outcome is included because Putnam's finding that people in more ethnically diverse areas watch more television contributes to his vivid characterisation of how ethnic diversity leads inhabitants '*to withdraw from collective life…and to huddle unhappily in front of the television*' (Putnam, 2007, p151). Although no time comparison is possible for this outcome, this is outweighed by the opportunity to test this particular aspect of Putnam's study.

Table iii: Berman and Phillips social quality dimensions, domains and indicators

Domain	Social indicator
Dimension 1: Socio-economic security	
Material security	Distribution of net income – by quartiles, deciles etc.
Employment security	Unemployment, temporary, part time employment rates: industrial injuries etc. – all by employment sectors
Housing security	Homelessness, housing insecurity: lack of amenities
Maintenance of health	Morbidity and mortality rates
Dimension 2: Social inclusion	
Inclusion in social security system	Distribution of access to social security services; low income by demographic variables (age, sex, region, ethnicity, employment status etc.)
Labour market inclusion	Distribution of discrimination in access to jobs, full time and part time employment etc. by demographic variables
Housing market inclusion	Distribution of access to neighbourhoods, subsidised and protected housing: homelessness etc. by demographic variables
Inclusion in education system and services	Distribution of access to and discrimination in educational and cultural services by demographic variables
Political inclusion	Franchise. Restrictions on eligibility to stand as an elected representative or member of a government
Inclusion in community services	Distribution of access to leisure facilities and neighbourhood services
Social status inclusion	Equal opportunities and anti-discrimination legislation. Distribution of access to social and leisure facilities
Economic cohesion	Gini coefficient. Distribution of income and wealth. Labour market participation rates
Social status cohesion	Levels of discrimination by sex, ethnicity, disability etc. Subjective perceptions and experiences of discrimination
Dimension 3: Social cohesion	
Political cohesion	Participation rates in elections
Public safety	Crimes against property and individuals in public places. Subjective perceptions of safety and risk of crime
Altruism	Participation in and contributions to solidaristic voluntary organisations and charities
Dimension 4: Empowerment	
Social and cultural empowerment	Membership of socially visible and respected groups – e.g. police, armed services, judiciary, TV presenters etc. and acknowledged contributions to cultural life by demographic groups
Political empowerment	Gender, ethnicity etc. distribution of elected politicians, cabinet ministers and prime ministers
Economic empowerment	Distribution of wealth, business directorships etc. by demographic variables
Social psychological empowerment	Self-reported subjective and holistic evaluations of personal empowerment and quality of life.

Table iv: Adjusted social quality framework

Domains	**Indicators for this study**
Dimension 1: Socio-economic security	
Material security	Income
Employment security	Economic status
Housing security	Deprivation (barriers to housing) Residential stability
Maintenance of health	Limiting illness or disability
Dimension 2: Social inclusion	
Inclusion in social security system	Income Economic status
Labour market inclusion	Deprivation (employment)
Housing market inclusion	Deprivation (barriers to housing)
Inclusion in education system and services	Qualification level
Political inclusion	Trusting parliament
Inclusion in community services	Trusting the local council
	Trusting the police
Social status inclusion	*None identified*
Economic cohesion	Economic status Deprivation (employment)
Social status cohesion	*None identified*
Dimension 3: Social cohesion	
Political cohesion	Voter turnout in local elections
Public safety	Feeling safe in local area
	Crime rate
Altruism	Number of registered charities in local area
Dimension 4: Empowerment	
Social and cultural empowerment	*None identified*
Political efficacy	Feeling able to influence decisions about local area
Political empowerment	*None identified*
Economic empowerment	New business formation rate in local area
Social psychological empowerment	*None identified*
New dimension: Social capital	
Local trust	Trusting other people who live in the local area
Civic engagement	Civic participation
Watching TV	Watching a lot of TV

Identifying outcome and control variables

This study looks at the effects of ethnic diversity and immigration on indicators of social quality. The aspects of social quality for which these effects can be tested are the outcome variables for this study. While all the indicators which I have mapped on to Berman and Philips' social quality framework can be considered to reflect aspects of social quality, not all are suitable as outcome variables within this study. For some indicators, it has already been firmly established that there is a significant relationship with ethnicity and/or immigration. It makes no sense to re-examine these indicators as social quality outcomes, as we already know that there will be effects related to ethnic diversity and immigration. For this reason, the indicators need to be included in the study as control variables, in order that any effects on the social quality outcome variables from ethnic diversity or immigration have already taken into account the known effects of these variables.

The social quality indicators which need to be considered as control rather than outcome variables for this study are those for deprivation, ill health, qualifications and crime. The known relationships between these social quality indicators and ethnic diversity and immigration include the following: ethnic minority groups are more likely than the white British population to live in deprived neighbourhoods (Jivraj and Khan, 2013); some ethnic minority groups have lower than average qualification levels, while a greater proportion of immigrants have higher-level qualifications than the UK-born population (Lymperopoulou and Parameshwaran, 2014); some ethnic groups have poorer health outcomes, particularly among older age groups (Becares, 2013). There is also a clearly established relationship between crime and deprivation, with higher crime rates recorded in areas of greater deprivation (Higgins et al, 2010).

When the identified social quality indicators are separated into outcome and control variables, this results in eleven outcome variables across four social quality dimensions and seven control variables across three social quality dimensions, as shown in Table v.

Table v: Social quality indicators as outcome or control variables

OUTCOME VARIABLES	CONTROL VARIABLES
Dimension 1: Socio-economic security	
	Income
	Economic status
	Deprivation
	Residential stability
	Limiting illness or disability (LLI)
Dimension 2: Social inclusion	
Trusting parliament	Qualification level
Trusting the local council	
Trusting the police	
Dimension 3: Social cohesion	
Voter turnout in local elections	Crime rate
Feeling safe in local area	
Number of registered charities in local area	
Dimension 4: Empowerment	
Feeling able to influence decision about local area	
New business formation rate in local area	
New dimension: Social capital	
Trusting other people who live in the local area	
Civic participation	
Watching a lot of TV	

It makes sense to treat the social quality indicators for which ethnic diversity and immigration have known effects as control rather than outcome variables. This approach is consistent with Putnam's and other studies in this field; for example, Letki (2008) controls for deprivation, as do Twigg et all, 2010, Fieldhouse and Cutts, 2010, Saggar et al, 2012). However, this leaves the socio-economic security dimension with no outcome variables, so the study is only able to explore the effects of ethnic diversity and immigration in non-

economic spheres of social quality. Indeed, the entire socio-economic security dimension, because it lacks any outcome indicators, will not feature in the main findings from this study. Although new business formation is included as an outcome indicator of economic empowerment, and so allows for some exploration of economic issues, the absence of any socio-economic dimension both distorts the original intention of Berman and Phillips' social quality framework, it is now a partial rather than overarching framework, and moves the discussion into the realms of personal and social behaviours, away from consideration of economic factors and, critically, of economic inequalities. These points will be considered again in Part Three of this thesis.

Measuring social quality at individual and area-level

The Putnam studies tend to rely on a small number of attitudinal indicators to represent aspects of social quality, most commonly measures of trust, as self-reported in survey data; for example, Alesina and Ferrara, 2000, use generalised trust; Leigh, 2006, uses generalised trust and localised trust; Stolle et al, 2008, use interpersonal trust. To test whether social quality is affected by ethnic diversity and immigration when measured on indicators other than those which are self-reported by individuals, this study incorporates some area-level indicators of social quality. The self-reported indicators are derived from the responses which individuals have given in surveys and the area-level indicators are derived from administrative or census data which is collected about local areas.

The ideal would be to triangulate the effects of ethnic diversity and immigration using both individual and area-level measures for the same social quality domain, to consider whether individual, subjective perceptions of local areas are consistent with objective, area-level measures. Data limitations, as ever, mean that not all of the social quality dimensions can be tested with both individual and

area-level indicators. There are area-level indicators in the social cohesion dimension (voter turnout and registered charities) and in the empowerment dimension (new business formation), but none available for social inclusion or social capital. Although limited, this does provide at least some opportunity to test whether individual and area-level indicators of social quality tell the same story in terms of any effects and changing effects over time of ethnic diversity and immigration.

Table vi: Individual and area-level indicators for the social quality dimensions

Social quality dimensions	**Outcome indicators**	
	Individual-level	**Area-level**
Social inclusion	Trusting parliament Trusting local council Trusting the police	NONE
Social cohesion	Feeling safe	Voter turnout Registered charities
Empowerment	Feeling able to influence	New business formation
Social capital	Local trust Civic participation Watching a lot of TV	NONE

5.2 Data selection

To meet the methodological challenges described above, the data which can be included within this study need to meet two basic but fundamental criteria:

- Measurable at LAD level;
- Comparable for 2001 and 2011.

The availability and selection of data meeting these criteria are discussed in this section. The data required for this study are grouped into three types of variable;

- Explanatory variables. These are the ethnic diversity and immigration variables. They are also sometimes referred to as the

independent or predictor variables. The study is testing whether these variables have any explanatory effect on social quality; that is, do ethnic diversity and immigration explain variances between LADs in social quality outcomes?

- Outcome variables. These are the indicators of social quality. They are occasionally referred to as the dependent variables. The study is testing whether the explanatory variables play any significant part in differences in social quality between LADs.
- Control variables. These are the characteristics which are known to have an effect or thought likely to have some effect on social quality. The study needs to consider whether any effects on the outcome variables from the explanatory variables are independent from the effects on the outcome from the control variables.

Explanatory variables

Ethnic diversity

Data on ethnic diversity is from the censuses for 1991, 2001 and 2011, accessed from the Office for National Statistics' NOMIS service (NOMIS, 2013a).

Ethnic diversity is measured using a fractionalisation method. Fractionalisation calculates the probability that two random individuals within a given geographic area will be from different ethnic groups. The fractionalisation calculation for the 2001 and 2011 ethnic diversity variables uses the ethnic origin categories from the 1991 census. The number of ethnic categories increased for the 2001 census and again for the 2011 census so, regardless of any real increase in ethnic diversity, the level of ethnic diversity would appear to be increasing simply because the population is being divided into a greater number of categories. The alignment of the 2001 and 2011 census categories with the 1991 groupings is shown in Table vii.

Table vii: UK census classifications for ethnicity

1991	2001	2011
White	White British	White: English/Welsh/Scottish/Northern Irish/British
	White Irish	White: Irish
	Other White	White: Gypsy or Irish Traveller
		White: Any other White
Black Caribbean	Black Caribbean	Black: Caribbean
Black African	Black African	Black: African
Black Other	Mixed White and Black Caribbean	Mixed: White and Black Caribbean
	Mixed White and Black African	Mixed: White and Black African
	Other Black	Mixed: Any other Black/African/Caribbean
Indian	Asian or Asian British - Indian	Asian: Indian
Pakistani	Asian or Asian British - Pakistani	Asian: Pakistani
Bangladeshi	Asian or Asian British - Bangladeshi	Asian: Bangladeshi
Chinese	Chinese or other - Chinese	Chinese
Asian Other	Mixed – White and Asian	Mixed: White and Asian
	Other Asian	Asian: Any other Asian
Other	Mixed – Other Mixed	Other: Arab
	Other	Other: Any other group
		Mixed: Any other mixed/multiple ethnic background
(10 CATEGORIES)	**(16 CATEGORIES)**	**(18 CATEGORIES)**

An ethnic diversity fractionalisation index score (ED) for each LAD is calculated by summing the squared total of the percentage share of each of ten ethnic groups within the LAD population. This is shown in the following formula, where EG = ethnic group:

$$ED = (\text{share } EG_1)^2 + (\text{share } EG_2)^2 + (\text{share } EG_3)^2 \ldots + \ldots (\text{share } EG_{10})^2$$

This produces an ethnic diversity score on a scale from 0 to 1 where lower scores indicate greater diversity and higher scores indicate greater concentration (i.e. less diversity). This is opposite to the way that we think about ethnic diversity, where a higher value would intuitively indicate more rather than less ethnic diversity, and is also

on a reverse scale to the immigration variable. To make the ethnic diversity variable consistent with the immigration variable, I have reversed the scale and multiplied by 100:

$$ED = 100 - [(\text{share } EG_1)^2 + (\text{share } EG_2)^2 \ldots + \ldots (\text{share } EG_{10})^2]*100$$

The end result is a measure of ethnic diversity on a scale from 0 to 100, where 0 means no ethnic diversity (i.e. everyone belongs to the same ethnic group) and 100 means total diversity (i.e. everyone belongs to a different ethnic group).[3]

Immigration

Data on immigration is from the censuses for 1991, 2001 and 2011, accessed from the Office for National Statistics' NOMIS service (NOMIS, 2013a).

Given the politicised nature of immigration, it is unsurprising that methodologies for measuring immigration are strongly contested (Dorling, 2011). This study uses a measure of immigration that is consistent over the time period and available at LAD level; the percentage of the LAD population born outside the UK. This measure is not perfect. It includes, for example, British citizens born overseas who would not be categorised as 'immigrants' in other measures (e.g. the children of armed forces personnel serving abroad). But it provides a consistent and reliable measure.

To enable closer examination of any overlapping effects from immigration and ethnic diversity, two additional immigration variables

[3] The upper end of the scale is actually nearer to 90. The upper bound is determined by the number of ethnic groups in the equation. The upper bound can only be 100 if the number of ethnic groups allows for 'total ethnic diversity'; that is, if the number of ethnic groups is the same as the number in the population and if the population is evenly distributed across the ethnic groups.

are used in this study; black immigration and white immigration. The intention is to distinguish between the immigrant population which is visibly different from the majority white British population (black immigration) and the immigrant population which, in appearance at least, may not be distinct from the majority population (white immigration). This allows for consideration of whether any effects on social quality from ethnic difference are separate from the effects of being born outside the UK.

The black immigration and white immigration variables do not represent ‘natural’ populations; they are my constructions, based on my decisions about what to include and exclude from these categories. The black and white immigration variables do not sum to the immigration variable. Some countries of birth are excluded because it is not clear whether people born there are likely to sit on the ‘black’ or ‘white’ end of the visible ethnicity spectrum; people born in Central America, South America and the Middle East are not included in either the black immigration or white immigration variable.

For this study, black immigration is defined as the population born in African, Asian and Caribbean countries. White immigration is defined as the population born in Europe or America. Clearly, this is a crude approach. It does not account for people born in African, Asian and Caribbean countries who identify as ethnically ‘white’ or people born in Europe or America who identify as ethnically ‘black’. The approach is also somewhat arbitrary in terms of inclusions and exclusions; the ‘black immigration’ group excludes people from the Middle East who are, arguably, a visible population and should therefore have been included. Similarly, the ‘white immigration’ group excludes people from Australia, an invisible population which should perhaps have been included.

Given the arbitrary and changing nature of ethnicity categorisations, as discussed in earlier chapters, it is neither possible nor useful to

determine ethnicity by country of birth with any accuracy. Although the measures constructed for this study are imperfect they nonetheless give some indication of the size of the black immigrant and white immigrant population in each LAD

Rate of change of ethnic diversity and immigration

The availability of comparable immigration and ethnic diversity data for 1991, 2001 and 2011 enables change over time to be examined in two ways. Firstly, by comparing any effects on social quality from levels of ethnic diversity and immigration in 2001 with any effects from levels in 2011. Secondly, a 'rate of increase' variable can be constructed to show the increase in the level of ethnic diversity and immigration within the LAD. Two rate of increase variables are used in this study, one for ethnic diversity and one for immigration. They measure the percentage increase in the level of ethnic diversity or immigration within each LAD in the previous 10 years. So, the ethnic diversity rate of increase variable for 2001 shows the percentage increase in the LAD ethnic diversity index score from 1991 to 2001 and the 2011 variable shows the percentage increase in the LAD ethnic diversity index score from 2001 to 2011.

Summary of explanatory variables

The six explanatory variables used in this study are:

- **Ethnic diversity** (ED) is the LAD ethnic diversity index score on a scale of 0 to 100 where 0 means no ethnic diversity and 100 represents total ethnic diversity.
- **Immigration** (IMM) is the percentage of the LAD population which is born outside the UK, where 0% indicates no one is born outside the UK and 100% indicates that everyone is born outside the UK.
- **Black immigration** (Black IMM) is the percentage of the LAD population which is born in African, Asian or Caribbean countries, where 0% indicates no one is born in Africa, Asia or the

Caribbean and 100% means that everyone is born in Africa, Asia or the Caribbean.

- **White immigration** (White IMM) is the percentage of the LAD population which is born outside the UK in Europe or the US, where 0% means no one is born in Europe or the US and 100% means that everyone is born in Europe or the US.
- **ED rate of increase** (EDinc) is the percentage increase from 10 years previously in the LAD ethnic diversity index score. The scale is open-ended.
- **IMM rate of increase** (IMMinc) is the percentage increase from 10 years previously in the percentage of the LAD population born outside the UK. The scale is open-ended.

Social quality outcome variables

Operationalising the social quality framework domains into measurable indicators of social quality is strongly constrained by the availability of data meeting the two basic criteria: measurable at LAD-level and comparable for 2001 and 2011. The result is that some indicators are a better fit for the domain than others. For example, Berman and Philips suggest that the economic empowerment indicator could be measured as the distribution of wealth and business directorships by demographic variables. This data is not available at LAD level in England. Instead, the selected indicator for this domain is new business formation at local-level. This is a good measure for local economic health and does reflect economic empowerment to some degree in that new business activity is a measure of individual business start-ups, but is missing any measure of how that start up activity is distributed across the local population, which is what the empowerment domain is driving at. Similarly, Berman and Philips suggest that a measure of inclusion in community services would be the distribution of access to leisure facilities and neighbourhood services. There is no LAD level measure

for this and the alternative used here, trusting the local council and trusting the police, are not very close to reflecting barriers to accessing local services. However, they do provide some indication of how people feel about local service providers, and are the closest approximations derivable from the available data.

Social inclusion dimension

Trusting parliament. This variable is constructed from responses to the Citizenship Survey question: “Do you trust [parliament] a lot, a fair amount, not very much, or not at all?”. For the data modelling the response data is collapsed into a binary variable (trusts a lot or a fair amount/does not trust very much or at all).

Trusting the local council. This variable is constructed from responses to the Citizenship Survey question: “Do you trust [the local council] a lot, a fair amount, not very much, or not at all?”. For the data modelling the response data is collapsed into a binary variable (trusts a lot or a fair amount/does not trust very much or at all).

Trusting the police. This variable is constructed from responses to the Citizenship Survey question: “Do you trust [the police] a lot, a fair amount, not very much, or not at all?”. For the data modelling the response data is collapsed into a binary variable (trusts a lot or a fair amount/does not trust very much or at all).

Social cohesion dimension

Voter turnout in local elections. Local election turnout has been selected as this better reflects the spatial level of analysis for this study than general election turnout. This is a continuous variable which uses data published by the University of Plymouth Election Centre showing the percentage of the registered electorate voting in local government elections (Rallings and Thrasher, 2003 & 2011). Because local elections are held in different years in different LADs the figures are for the year of interest plus or minus one year. So

2001 includes turnout data for 2000 to 2002 and 2011 is data for 2010 to 2012. Data for both time points includes a general election year (2001 and 2010) when local election turnouts are always higher (Rallings and Thrasher, 2010), so the data can be considered comparable between the two time points

Feeling safe. This variable is constructed from responses to the Citizenship Survey question “How safe would you feel walking alone in this neighbourhood after dark?” The survey responses are in four categories which are collapsed into a binary variable for this study (feels safe/does not feel safe).

Registered charities. This is a continuous variable constructed from unpublished data supplied on request by the Charity Commission. The Charity Commission data shows the address of all registered charities in England. I used geo-coding software to sort the address postcodes into LADs and then calculated the number of registered charities by 1,000 population to give a rate of charities per LAD. The City of London is an outlier in this data, with many more registered charities and a smaller population than most LADs, but would have been excluded from the analysis anyway because it is not included as an LAD in all datasets. The data for this variable was supplied as current in 2013 and is only applied to the 2011 time point.

Empowerment dimension

Feeling able to influence decisions about the local area. This variable is constructed from responses to the Citizenship Survey question “Do you agree or disagree that you can influence decisions affecting your local area”. The four response categories in the survey (definitely agree, tend to agree, tend to disagree, definitely disagree) are collapsed into a binary variable (agree/disagree).

New business formation. This is a continuous variable using data from the 2001 census (NOMIS 2013b) and the Office for National

Statistics (2011a) which shows the number of new businesses formed in the past year in each LAD. The number is divided by the LAD population and multiplied by 1,000 to calculate the rate of new business formation per 1,000 population. The 2001 and 2011 figures are not strictly comparable as the measure differs between the two time points. The 2001 figures only include new businesses registering for VAT while the 2011 figure uses wider measures to include smaller, non-VAT registered businesses.

Social capital dimension

Local trust. This variable is constructed from responses to the Citizenship Survey question: "Would you say that many/some/a few/none of the people in your neighbourhood can be trusted". The responses are collapsed into a binary variable (many or some can be trusted/few or none can be trusted).

Civic participation. This is a composite variable within the Citizenship Survey datasets. The variable is constructed from responses to multiple questions in the Citizenship Survey about participation in formal and informal political and volunteering activities within the past 12 months. It is a binary variable where yes means participated in any activity and no means did not participate in any activity.

Watching a lot of TV. This is a binary variable constructed from responses to the Citizenship Survey question about the number of hours respondents spend watching TV. This question was only asked in the 2001 survey. The variable indicates whether respondents watch television for more or less than four hours per day. I have categorised those watching four hours or more per day as 'watching a lot of TV'. Definitions of what constitutes 'a lot of TV' vary across research studies and are not always given. My selection of four or more hours per day to indicate a lot of TV viewing is arbitrary but not

dissimilar from studies of ‘heavy TV viewing’ (for example, Jordan, 2007).

Of the eleven outcome variables used in this study, eight are constructed as categorical (binary) and three as continuous. These are the forms that the variables take when used in the data modelling. However, the categorical variables are also treated as area-level continuous variables for some purposes. For some parts of the analysis and discussion it is helpful to compare all the outcome variables with each other and this is only possible if the variables take the same measurement level. So the eight individual-level categorical variables (trusting parliament, trusting the council, trusting the police, feeling safe, feeling able to influence, local trust, civic participation, watching TV) are occasionally shown as area-level continuous variables for this purpose. In their continuous form, they indicate the percentage of survey respondents within the LAD giving a positive response to the outcome questions.

To recap, the three area-level social quality indicators (voter turnout, registered charities, new business formation) are always in the form of continuous variables. The eight individual-level outcome variables are measured as categorical, binary variables within the data modelling but occasionally take the form of area-level continuous variables, to illustrate some points or to make comparisons with the area-level variables. Unless otherwise stated, it should be assumed that these outcome variables are in their categorical, binary form.

Control variables

To ensure that all dimensions of the social quality framework are accounted for, and to be consistent with other empirical studies in this field, a series of control variables is included in this study. The inclusion of the control variables is intended to account for known or likely effects on the social quality outcome variables from the ethnic

explanatory variables, so that any statistically significant effects from ethnic diversity and immigration can be regarded as additional to the effects from other, known factors.

The adjusted social quality framework identifies that the following indicators should be included as controls in this study:

- Income
- Economic status
- Deprivation
- Residential stability
- Limiting illness or disability
- Qualifications
- Crime rate

Beyond the social quality framework, drawing on the literature in this field, it is relevant to consider the inclusion of a number of additional control variables:

- Sex
- Ethnic origin
- Population density
- Rural/urban area type
- Region
- Age

The control variables are at two levels: individual and area-level. The distinction between individual and area-level measurement is critical for the data modelling procedures, as explained later in this chapter.

Individual-level control variables

The individual-level variables are all derived from the Citizenship Survey and correspond exactly to the 2001 and 2011 time points used in this study. They are:

Sex. This variable is included as gender may have a significant effect on the outcome variables, particularly for the Feeling safe outcome, as women are far less likely to report feeling safe than men. This is a binary variable with categories:

- Male
- Female.

Qualifications. Qualification level is included at both individual and area-level in this study. At individual-level, this is a categorical variable with three categories:

- Degree or higher qualifications;
- A level or GCSE or equivalent qualifications;
- No qualifications.

Economic status reflects the employment security domain in the social quality framework. This dimension might also have been represented by an area-level measure of unemployment. It is used in this study to check for any effects from unemployment, which may well reduce positive experience of social quality. This is a categorical variable with three categories:

- Employed;
- Unemployed;
- Economically inactive.

Ethnic origin. Although not the primary focus of this study, it is within the scope of the research to consider whether social quality differs by ethnicity and by immigration status. This variable merges data on ethnicity and country of birth to create a categorical variable with four categories:

- UK-born - white;
- UK-born - visible ethnic minority;
- Born outside the UK - white;
- Born outside the UK - visible ethnic minority.

Residential stability is included in the social quality framework and measured at both individual and area-level in this study. At individual-level residential stability is measured by the length of time respondents report living within their current neighbourhood. This is a categorical variable with four categories:

- Less than 1 year;
- 1 to 5 years;
- 6 to 29 years;
- 30 years or more.

Age. Although not in the social quality framework, age is included as a control variable in some Putnam studies where it has been shown to have a significant effect in mediating any effects from ethnic diversity on social quality (Sturgis et al, 2014). Age is a categorical variable with three categories:

- Younger (age 0 to 24);
- Middle (age 25 to 64);
- Older (age 65 or older).

Area-level control variables

The area-level control variables are derived from different sources, as summarised below. In some instances, data was not available for the exact 2001 and 2011 points, in which case data from the closest available time point was used.

Deprivation. The key data source for deprivation is the Indices of Multiple Deprivation (IMD) (Department for the Environment, Transport and the Regions, 2000; Department for Communities and Local Government, 2011) This data source is used in almost all the UK Putnam studies. The IMD is commissioned by the government and updated every two years. The IMD data for 2010 uses 38 separate indicators combined into seven domains to calculate the

overall measure of multiple deprivation experienced by people living in each local area in England. The IMD domains are: Income; Employment; Health and Disability; Education, Skills and Training; Barriers to Housing and Other Services; Crime; Living Environment. The IMD provides a single deprivation score for each LAD, ensuring that all seven of the deprivation domains it covers are controlled for in any analysis. In this study, deprivation is a continuous variable using IMD scores for Average of Lower Super Output Area (LSOA). The IMD 2000 data is used for the 2001 time point and IMD 2010 data used for the 2011 time point.

The deprivation variable is constructed from data that is additionally included in this study as separate variables. It is recognised that a single deprivation indicator may have served to cover many of the social quality controls identified in the social quality framework. However, additional indicators are used in this study, partly to better reflect the domains in the social quality framework and partly to give pointers as to what area-level factors other than ethnic diversity and immigration may account for variances in the social quality outcomes. Relying only on a single, broad measure of deprivation to explain outcome variance closes off the exploration of other factors which may explain why social quality varies. The inclusion of deprivation as a single variable and some of its constituent data as additional variables may double count some measures. However, including the additional variables (as shown below) along with deprivation was justified by early testing which showed that their inclusion did not effect whether the ethnic diversity/immigration explanatory variables had any significant effect on the outcome variables, but provided more information about other area-level effects on social quality.

Qualifications. This is a continuous variable derived from 2001 and 2011 census data (NOMIS 2013a) to show the percentage of the LAD population with a degree or higher-level qualification.

Crime rate. This is a continuous variable constructed from reported crime data for each LAD (Home Office, 2010). I have calculated the number of all reported crimes as a rate per 1,000 population. ONS crime data for 2003 is used for the 2001 time point, data for 2011 is used for the 2011 time point.

Income. This is a continuous variable using data for the Annual Survey of Hours and Earnings (ASHE) (NOMIS, 2013c). The variable indicates the median weekly income for LAD residents. ASHE data for 2002 is used for the 2001 time point, data for 2011 is used for the 2011 time point.

Limiting illness or disability (LID). This is a continuous variable using 2001 and 2011 census data (NOMIS, 2013a) to show the percentage of the LAD population with a long term limiting illness or disability. The census data classifications changed between the two time points so data are not directly comparable. The 2001 data is for percentage of population with a long term limiting illness, while the 2011 data is for percentage of population with a long term limiting illness or disability, so includes a greater proportion of the population.

Population density. Although not in the social quality framework, population density is such a powerful part of the ethnic diversity and immigration discourse that it seems important to include this within the data analysis. This is a continuous variable using the 2001 and 2010 ONS mid-year estimates number of persons per square kilometre in each LAD (Office for National Statistics, 2012).

Area type. Neither area type nor region are included in the social quality framework. But because there are distinct geographic patterns in immigration settlement and movement, and in the growth of ethnic diversity, it is important to consider these in terms of an urban/rural typology and in terms of regional differences. The area

type variable is derived from the Department for the Environment, Food and Rural Affairs (DEFRA) post-2009 classifications (Department for the Environment, Food and Rural Affairs, 2009). The classifications indicate different levels of rural settlement across LADs. The DEFRA classification system groups LADs into six classes:

- Major urban (LADs with either 100,000 people or 50% of population in urban areas with a population of more than 750,000);
- Large urban (LADs with either 50,000 people or 50% of their population in or of 17 urban areas with a population between 250,000 and 750,000);
- Other urban (LADs with fewer than 37,000 people or less than 26% of their population in in rural settlements and larger market towns);
- Significant rural (LADs with more than 37,000 people or more than 26% of their population in rural settlements and larger market towns);
- Rural-50 (LADs with at least 50% but less than 80% of population in rural settlements and larger market towns);
- Rural-80 (LADs with at least 80% of population in rural settlements and larger market towns).

Region. This is a categorical variable with each LAD classified by region using the nine Government Office for the Regions (GOR) groupings in use by ONS until March 2011. The nine GOR regions are:

- London;
- South East;
- South West;
- East;
- West Midlands;
- East Midlands;

- Yorkshire & the Humber;
- North East;
- North West.

Residential stability is included in the social quality framework and is measured at area-level by population turnover; that is, migration into and out of local areas. Research on local impacts of migration in England suggests that high population churn is associated with some migrant populations and has an influence on social cohesion in terms of levels of trust and neighbourliness (Poppleton et al, 2013). This variable uses the Special Migration Statistics (Office for National Statistics, 2009) available only from the 2001 census at the time this study was carried out.

Table viii: All variables: data sources and variable type

Variable	Data source	Measure-ment level	Variable type	Data year	
				2001	2011
OUTCOME VARIABLES					
Social inclusion dimension					
Trusting parliament	Citizenship Survey	Individual	Binary	2001	2010/11
Trusting local council	Citizenship Survey	Individual	Binary	2001	2010/11
Trusting the police	Citizenship Survey	Individual	Binary	2001	2010/11
Social cohesion dimension					
Voter turnout	University of Plymouth	Area	Continuous	2000-02	2010-12
Feeling safe	Citizenship Survey	Individual	Binary	2001	2010/11
Registered charities	Charity Commission	Area	Continuous	n/a	2013
Empowerment dimension					
Feeling able to influence local decisions	Citizenship Survey	Individual	Binary	2001	2010/11
New business formation	ONS	Area	Continuous	2001	2011
Social capital dimension					
Local trust	Citizenship Survey	Individual	Binary	2001	2010/11
Civic participation	Citizenship Survey	Individual	Binary	2001	2010/11
Watching a lot of TV	Citizenship Survey	Individual	Binary	2001	n/a
EXPLANATORY VARIABLES					
Ethnic diversity	Census	Area	Continuous	2001	2011
Immigration	Census	Area	Continuous	2001	2011
Black immigration	Census	Area	Continuous	2001	2011
White immigration	Census	Area	Continuous	2001	2011
ED rate of increase	Census	Area	Continuous	2001	2011
IMM rate of increase	Census	Area	Continuous	2001	2011
CONTROL VARIABLES					
Sex	Citizenship Survey	Individual	Binary	2001	2010/11
Qualifications	Citizenship Survey	Individual	Categorical	2001	2010/11
Economic status	Citizenship Survey	Individual	Categorical	2001	2010/11
Ethnic origin	Citizenship Survey	Individual	Categorical	2001	2010/11
Age	Citizenship Survey	Individual	Categorical	2001	2010/11
Residential stability	Citizenship Survey	Individual	Categorical	2001	2010/11
Deprivation	IMD	Area	Continuous	2000	2010
Qualifications	Census	Area	Continuous	2001	2011
Crime rate	ONS	Area	Continuous	2003	2011
Income	ASHE	Area	Continuous	2002	2011
LID	Census	Area	Continuous	2001	2011
Population density	ONS	Area	Continuous	2001	2011
Residential stability	Census	Area	Continuous	2001	n/a
Area type	DEFRA	Area	Categorical	2009	2009
Region	ONS	Area	Categorical	2011	2011

5.3 Constructing the datasets

Five main datasets were constructed for this study:

Area-level datasets for 2001 and 2011

These are two separate datasets, one for each time point in the study. These datasets are comprised of all the variables which are measured at area-level. That is: the six explanatory variables, the nine area-level control variables, the three area-level outcome variables (voter turnout, registered charities, new business formation) and the eight individual-level outcome variables as aggregated area-level variables in continuous form. The area-level datasets are organised by LAD, so the data represent the values for each LAD. The area-level datasets were constructed in Excel and transferred to SPSS for analysis.

Multi-level datasets for 2001 and 2011

These are two separate datasets, one for each time point in the study. They include all the area-level explanatory and control variables and all the individual-level outcome and control variables. These datasets are organised by individual survey respondent. Area-level data was merged with the individual-level data using LAD as the matching variable. These datasets were constructed in SPSS and transferred to MLwiN for analysis.

Single multi-level dataset

A single dataset for the multi-level data was created by merging the multi-level datasets for 2001 and 2011 data and adding a binary variable for year (2001/2011). This dataset is organised by individual survey respondent. The dataset was constructed in SPSS and transferred to MLwiN for analysis.

Chapter Seven presents output from statistical modelling using the area-level datasets in both years and from the single multi-level

dataset. The separate multi-level datasets for 2001 and 2011 were used for preliminary testing and did not generate the output reported in Chapter Seven.

The number of individual and area-level units in each dataset is shown in Table ix. Not all LADs are represented in the Citizenship Survey.[4] To check whether the missing LADs had any effect on the modelling output, three single multi-level datasets were constructed with different combinations of LADs, as follows:

- LADs with any individual units in either year (314 LADs);
- LADs with individual units in both years (240 LADs);
- LADs with more than 20 individual units in both years (158 LADs).

When tested using these different datasets, the overall effects of the explanatory variables on the social quality outcome variables were no different. So the dataset with the highest number of units was used for the final modelling.

Table ix: Datasets constructed for this study

	Number of units in dataset (n)		**Output reported**
	Individual-level	**Area-level**	
Area-level dataset 2001	n/a	325	Yes (Chapter 7)
Area-level dataset 2011	n/a	325	Yes (Chapter 7)
Single multi-level dataset	31,068	314	Yes (Chapter 7)
Multi-level dataset 2001	14,820	267	No
Multi-level dataset 2011	16,281	292	No
TEST single multi-level dataset (only LADs with individual units in both years)	29,024	240	No
TEST single multi-level dataset (only LADs with more than 20 individual units in both years)	25,398	158	No

[4] Some of the Citizenship Surveys LAD omissions are surprising. They include LADs with substantial populations such as Knowsley (population 150,000) from the 2001 survey and Wokingham (population 158,000) from the 2011 survey.

5.4 Statistical modelling

The analysis of the relationship between the explanatory and the outcome variables uses two statistical modelling methods, reflecting the different structures of the datasets. This study is looking at area effects (from ethnic diversity and immigration) on both individual and area-level indicators of social quality. Where the social quality indicators are measured at individual-level, multi-level modelling was used. Where the social quality indicators are measured at area-level, linear regression models were used. The data modelling and interpretation of findings for these two different approaches are explained in detail below.

Multi-level modelling

Multi-level modelling is essentially a multilevel extension of multiple regression analysis (Maas and Hox, 2005) which recognises the hierarchical structure of data that includes more than one level of analysis. The multi-level datasets constructed for this study include both individual-level responses to survey questions and area-level data. Multi-level modelling nests the lower level units (individuals) within the higher-level units (LADs) to enable analysis of how individual survey responses differ between LADs. The multi-level modelling uses logistic regression, carried out in MLwiN.

The models use the logit link. In logit models, the coefficients are the log odds of the explanatory effect on the outcome variable. When coefficients from the logit model are exponentiated they can be interpreted as odds ratios which compare the odds of the outcome occurring with the odds of the outcome not occurring. The logit model takes the form:

$$\text{Logit}(\pi_i) = \log\left[\frac{\pi_i}{1-\pi_i}\right] = \beta_0+\beta_1 x_i$$

(Rasbash et al 2009)

The multi-level modelling for this study followed the five-step approach developed by Hox (2002) and recommended by Tarling (2009):

Step one: no explanatory variables: the variance components model.
This is the model with only the outcome variable and no explanatory variables. When the number of levels is specified, two in this study, MLwiN decomposes the variation in the outcome variable into two sources: the variation at level 2 (between LADs) and the variation at level 1 (between individual survey respondents). Looking at how much variance is at level 2 serves two key purposes. Firstly, it allows a judgement to be made as to whether the area-level variance is of sufficient significance to warrant a multi-level modelling approach. If the level 2 variance is zero, or negligibly small, there is no justification for continuing with multi-level modelling. Secondly, the level 2 variance at this stage provides a baseline against which the contribution of level 2 variables which are introduced into subsequent models can be measured. The amount of level 2 variance in multi-level logistic regression models is indicated by the intra-class correlation, which is explained below.

Step two: random intercepts model with level 1 variables.
This step introduces the level 1 (individual-level) variables into the model. The random intercepts model shows the variance between the area-level units. The individual characteristics within the area units are fixed, so the effects on the outcome variable are constant for all individuals within each area.

Step three: random intercepts model with level 2 variables.
At this step, the level 2 (LAD-level) variables are introduced into the model. The contribution of the level 2 variables in explaining the outcome variance is indicated by the intra-class correlation.

Step four: random coefficients model.

In the random coefficients model, the coefficients of the level 1 variables are allowed to vary, rather than held constant as in the random intercepts model. The focus of interest for this study is variation between areas, rather than variation within areas. Between-area variance is explained by the random intercept model. Random coefficients models were also fitted but provided no better explanation of outcome variance and are not reported in this study.

Step five: including cross-level interactions.

The recommended final step is to include interactions between level 1 and level 2 explanatory variables.

Intra-class correlation

An intra-class correlation (ICC) value was calculated for each model at three stages: the variance components model; the random intercepts model with control variables only; the random intercepts model with the explanatory variable included. MLwiN guidance shows that the ICC is equivalent to the variance partition coefficient in multi-level models using continuous data to show the proportion of the unexplained variance in the outcome variable that is accounted for by higher-level variables (Rasbash et al, 2009). This means that comparing the ICCs for the models with and without the explanatory variables gives an indication of whether the explanatory variable is helping to explain any variance in the outcome variable, or not.

The ICC calculation follows guidance from Rasbash et al (2009). This advises that the measure can be obtained by casting the logistic model in the form of a linear threshold model which assumes a continuous unobserved variable underlying the binary response and for which the logistic distribution for the level-1 residual (ε_{ij}) has a variance of $\pi^2/3 \approx 3.29$ (where π = the probability of an event

occurring). The ICC can therefore be calculated by the equation below, where $\sigma^2_{\mu 0\ is}$ the level 2 coefficient.

$$ICC = \frac{\sigma^2_{\mu 0}}{\sigma^2_{\mu 0} + 3.29}$$

(Rasbash et al 2009, p132)

Determining statistical significance in the multi-level models

The probability of a statistically significant effect of the explanatory variable on the outcome variable is determined by dividing the coefficient by the standard error (both are given in the MLwiN output) to produce a Z score. A Z score for the explanatory variable which is greater than 1.96 denotes a statistically significant effect at 0.05 level of probability and a Z score greater than 2.58 denotes a statistically significant effect at 0.01 level of probability.

The Z score calculated in this way is equivalent to a Wald test statistic (UCLA, 2016). Field (2005) urges caution in using the Wald statistic to determine whether a variable is a significant predictor of the outcome, because large regression coefficients tend to inflate the standard errors leading to underestimates in the Wald statistic and an increased probability of a Type II error occurring (that is, that a predictor variable will be found non-significant when it is in fact making a significant contribution to the model). However, because the regression coefficients in all the models reported in this study are small, the Z statistics provide a reasonable indication of variable significance, so they are used for this purpose and shown in the model output.

Weighting

The Citizenship Survey datasets include weights which enable adjustment of the data to account for the over-sampling of ethnic minorities in both survey years. The individual weighting variables were included within the multi-level datasets constructed for this study. The weights were applied in the MLwiN analysis. The results

of the multi-level modelling reported in Chapter Seven (and in Annex One) are for the models with the survey weighting applied.

Fitting the multi-level models

Model fitting for each of the outcome variables followed the five-step procedure outlined above. The modelling results are reported in Chapter Seven, which presents summary output showing the ICC and the coefficients and statistical significance of the explanatory variables on each outcome. The full output from the multi-level models is in Annex One.

In order to compare the effects of the explanatory variables, the same level 1 and level 2 control variables are included in each model. The control variables included and excluded from the final models are shown in Table x. The decision to keep the same control variables when modelling each outcome variable means that not all models are the best fit for the outcome variables. Some models include control variables that have no effect on the outcome while others exclude significant variables. Losing the best fit model for each outcome was judged to be a necessary trade-off for ensuring that the effects of the explanatory variables are comparable across the models. The control variables retained in the final models were those that were significant for most outcomes.

Table x: Control variables in final multi-level models

Included in final models		**Excluded from final models**	
Individual-level	**Area-level**	**Individual-level**	**Area-level**
Sex	Deprivation	Age	Income
Economic status	Crime rate	Residential stability	Limiting illness or disability
Qualifications	Qualifications		Population density
Ethnic origin			Residential stability
			Area type
			Region

Each of the six explanatory variables was separately modelled for each of the eight multi-level outcome variables, producing 48 final models.

The effect of year in multi-level models

A binary variable for year is included in the single multi-level dataset. The reference year in all models is 2001. In the modelling output, the coefficient of the explanatory variable is the effect of the explanatory variable on the outcome in 2001. To consider how this changes over time, each model includes an interaction of the explanatory variable* Year. In the modelling output, the coefficient of the explanatory variable*Year indicates whether the explanatory variable in 2011 has any additional effect on the outcome variables to that in 2001.

Illustrating effect sizes for multi-level models

In some cases, the size of statistically significant effects from the explanatory variable on the outcome variable are illustrated using the values of the ethnic diversity or immigration explanatory variables for three case study LADs which represent low, average and high levels of ethnic diversity and immigration (these case study areas are introduced in the following chapter). The purpose of these illustrations is to demonstrate the size of the effect of the explanatory variable on the social quality outcome when the explanatory variable values change but all other variables are held steady.

These illustrations do not reflect the actual effect of ethnic diversity or immigration in the case study LADs because the illustrative analyses employ the sample mean value for each of the other area level variables (deprivation, crime rate and qualifications). In reality these area level variables will also vary for the case study LAD and this will affect the size of the effects of the ethnic diversity/immigration variable of interest. However, a decision was made to adopt this approach to illustrate how the size of any effects from ethnic

diversity/immigration vary with the levels of ethnic diversity/immigration which actually occur within local areas.

These illustrative effects are calculated by multiplying the coefficient of the explanatory variable by the value of the explanatory variable for the case study LAD. The calculations for 2001 and 2011 are represented in the equations below, where ethnic diversity (ED) is the explanatory variable, AreaED is the ED value for a case study LAD and $\beta_{ED*Year}$ is the coefficient of the interaction of ED* Year in the model.

2001 log odds of ED on outcome = Cons + (β_{ED*}AreaED)

2011 log odds of ED on outcome = (Cons + β_{Year})+((β_{ED} +$\beta_{ED*Year}$)*AreaED)

The log odds are then exponentiated to give the odds ratio. To facilitate the interpretation of these findings, the odds are then converted to probabilities, as expressed below:

$$\rho = \frac{\text{odds}}{1 + \text{odds}}$$

In the discussion of findings, the predicted probabilities which are calculated for the effect of each explanatory variable on the outcome variable are expressed as percentages. These predicted probabilities can be understood in the following way:

- A predicted probability of 50% means that the outcome is as likely to occur as not occur for the reference group. For example, a person in the reference group is as likely to feel safe as not feel safe.
- A predicted probability which is greater than 50% means that the outcome is more likely to occur than not occur, so a person in the reference group is more likely to feel safe than not feel safe.

- A predicted probability which is <u>less</u> than 50% means that the outcome is more likely to <u>not</u> occur, so a person in the reference group is more likely to feel not safe than safe.

To demonstrate how these illustrative examples are calculated, we can take the value of ethnic diversity (ED) for the case study LAD of Eastleigh to consider the effect of ED on the outcome feeling safe in 2001 and 2011. Eastleigh illustrates average values for ethnic diversity and immigration; the ED values for Eastleigh are 6.32 in 2001 and 11.50 in 2011. The coefficients in the model with feeling safe as the outcome and ED as the explanatory variable are:

β_{Cons} = 2.196
β_{Year} = 0.233
β_{ED} = -0.011
$\beta_{ED*Year}$ = -0.003

The effect of ethnic diversity on feeling safe in Eastleigh is calculated by:

2001	log odds =	2.196 + (-0.011*6.32)	= 2.126
	odds =	$2.126e^x$	= 8.381
	ρ =	8.381/(1+8.381)	= 0.89

2011	log odds =	(2.196+0.233) + ((-0.011+-0.003)*11.50)	= 2.271
	odds =	$2.271\ e^x$	= 9.692
	ρ =	9.692/(1+9.692)	= 0.91

The predicted probabilities of feeling safe in an LAD with the ED value for Eastleigh and sample mean values for all other area-level characteristics are 0.89 in 2001 and 0.91 in 2011. This is interpreted as showing that a reference group person (white, male, employed, degree educated, UK-born) has a predicted probability of feeling safe of 89% in 2001 and 91% in 2011.

The reference group for multi-level models

The multi-level models are interpreted by considering the effect of unit increases in the explanatory variable on the outcome variable for the reference group. The reference group in all models is the composite of the reference categories for each individual-level categorical variable, as shown in Table xi. The reference group in all models is male, educated to degree-level or higher, employed, UK-born-white.

Table xi: Reference groups in multi-level models

Variable	**Reference category**	**Other categories**
Sex	Male	Female
Education	Degree or higher	A level/GCSE/other qualifications No qualifications
Economic status	Employed	Unemployed Economically inactive
Ethnic origin	UK-born-white	UK-born-ethnic minority Born outside UK-white Born outside UK-ethnic minority

Single-level modelling

Three social quality outcomes were modelled using single-level regression analysis. The data for these outcome variables is all at area-level. The outcome variables are all continuous. The unit of analysis is the LAD and the number of units in the analysis is 325.The single-level modelling was carried out in SPSS.

As with the multi-level models, the single-level models fit each explanatory variable for each outcome, keeping the control variables constant across all models. More of the area-level control variables were significant in the single-level models than in the multi-level models. The control variables retained in these models are: deprivation, qualifications, crime rate, income, limiting illness or disability, population density, area type, region. Residential stability

was excluded from these models as it was not significant in 2001 and unavailable for 2011.

As with the multi-level models, the inclusion of the same control variables in all models means that in few cases do the variables provide the best fit, or best explanation for the outcome variable. The priority concern for this study is the comparability of the effects of the explanatory variables, and not identifying the causes of variance in the outcome variables, so consistency across the models is more important than finding the best fit variables for each model. Having said this, a great deal of preliminary testing was carried out to determine which variables best explained the outcome variance and all of the selected control variables are significant in most models.

In contrast to the multi-level models, where data for both years was modelled within a single dataset, the single-level data was modelled separately for 2001 and 2011. With six explanatory variables for two outcome variables in two separate years (voter turnout and new business formation) plus one outcome variable for 2011 only (registered charities), the single-level modelling produced 30 final models.

Calculating effects for single-level models

The effect on the outcome in the single-level models is considered in terms of the effect of a one standard deviation (σ) increase in the explanatory variable on the outcome variable. The size of the effect is calculated by multiplying the unstandardised coefficient of the explanatory variable by one standard deviation in the explanatory variable.

To demonstrate, using the rate of new business formation outcome (Bus) in 2001 with immigration (Imm) in 2001 as the explanatory variable:

β_{Imm} = 0.119

σ_{Bus} = 2.205

σ_{Imm} = 7.959

The Imm coefficient has a positive value and a t value of 3.998 indicating that it has a positive effect on the outcome variable which is significant at a 0.001 level of probability. The effect of Imm on Bus can be interpreted as showing that for every 7.959 percentage point increase in immigration, new business formation increases by 0.947 (0.119 * 7.959) per 1,000 population.

Interpreting the effects for single-level models

The effects of the explanatory variables are shown in terms of the effect of a one standard deviation increase in the explanatory variable on the area-level outcomes. This enables the effect sizes of the explanatory variables to be compared.

5.5 Data testing

Sample size

Sample size is considered critically important for multi-level modelling, although guidance on actual sizes varies. There is general agreement that a large number of higher-level units is required, with a minimum of 30 to 50 units recommended (Maas and Hox, 2005; Tarling, 2009). The 314 higher-level units in the single multi-level dataset used in this study comfortably exceeds the highest recommendations for the minimum number required for multi-level modelling.

Guidance is mixed on the number of lower-level units required within each higher-level unit. Earlier studies suggest that at least 20 or 30

observations are required within each higher-level unit, depending on the nature of the research, but more recent work demonstrates that multi-level models provide accurate predictions even when higher-level units contain only one lower-level unit (Bell et al, 2008). However, multi-level modelling guidance assumes that all higher-level units include at least some lower level units (Maas and Hox, 2005). Using the LAD spatial level meant that my single multi-level dataset comprised 31,000 lower-level units distributed across 325 higher-level units. This left 11 higher-levels unit empty, which I removed from the dataset. If MSOA had been selected as the spatial level, and 31,000 lower level units distributed across 6,700 higher units, many more empty units would have resulted. It is unclear how Putnam studies using the lower spatial level of analysis deal with this problem of numerous higher-level units containing no lower-level observations (for example, Twigg et al, 2010; Sturgis et al, 2010; Laurence, 2011).

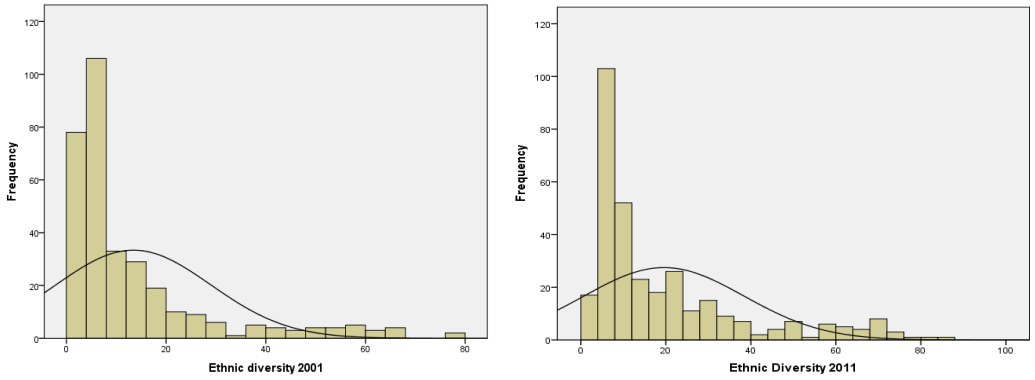
Overall, the main rule for sample sizes in multi-level models appears to be 'the more units the better' at all levels (Browne, 2016). In the multi-level modelling dataset used to generate final models for this study there are 314 higher-level units which each contain from three to 1,209 individual observations. This amply satisfies all guidance on sample size requirements.

Data distribution

The explanatory variables do not follow a normal distribution. Ethnic diversity and immigration levels are unevenly distributed across LADs; a small number of LADs have very high ethnic diversity and immigration levels and large numbers have much lower levels. Consequently, all six of the ethnic diversity and immigration variables are positively skewed. Histograms for the ethnic diversity variable in

2001 and 2011 are shown in Figure i to illustrate the skewness of the data.

Figure i: Ethnic diversity variable distribution by LADs, 2001 and 2011

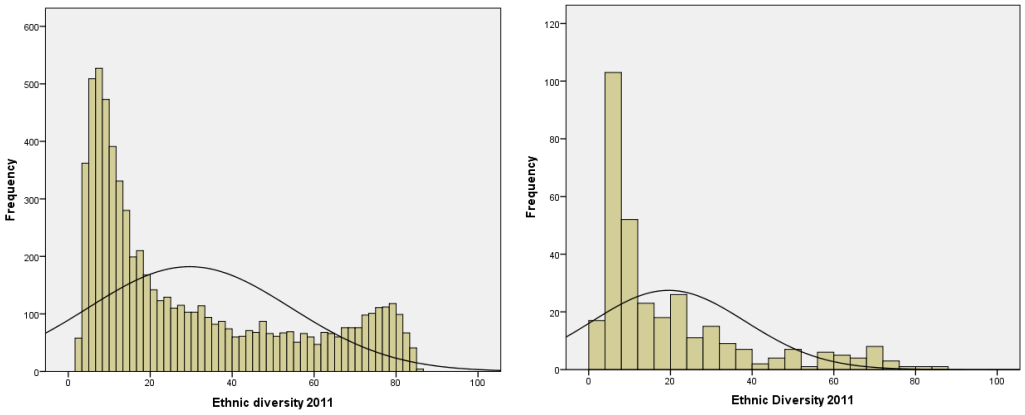


The regression analysis used in this study assumes that data are from normally distributed populations; skewed data may violate this assumption.

Following guidance from Hox (2002), Field (2005), Benoit (2011) and Cornell Statistical Consulting Unit (2012), considerable efforts were made to correct the data distribution, including through log, square root and reciprocal transformations of the explanatory variables and by removing some area types from the dataset. While log transformation in particular did produce a more normal distribution in the data, the need to then transform back the data output in order to interpret the findings was rendered tortuously complex for the multi-level models where the output was also in log odds which needed exponentiating to produce meaningful results. And although removing major urban areas from the dataset also normalised the distribution of the explanatory variables to some degree, this approach makes no sense at all when the focus of interest is precisely on whether higher values in these variables have a greater effect on social quality. So, the explanatory variables were used in the data analysis in their untransformed state in order to retain the data of primary interest.

It is also worth noting here that the skewness of the data distribution when ethnic diversity and immigration are measured at LAD-level, is replicated when these variables are measured at MSOA-level, the more frequently used spatial level in the UK Putnam studies. The distribution of ethnic diversity in 2011 over 6,791 MSOAs is shown on the left, and by 326 LADs on the right.

Figure ii: Ethnic diversity in 2011: data distribution by MSOAs and LADs



There is little guidance on assumptions for logistic regression. Field classes logistic regression as a parametric test and advises that all parametric tests must meet four assumptions; normally distributed data, homogeneity of variance, interval data and independence (Field, 2009, p64). However, other sources indicate that these assumptions are not necessary for logistic regression; independent variables in logistic regression models do not need to be normally distributed, nor do residuals need to be normally distributed (Burns and Burns, 2008, p569).

Multicollinearity

It is important for multiple regression to avoid collinearity between predictor variables. High-levels of collinearity increase the probability of the explanatory variables being found non-significant. Overly-high

correlation levels, or multi-collinearity, would be shown in R values of higher than .80 or .90 (Field, 2005).

The correlations between the area-level predictor variables are shown in Tables xii and xiii. Unsurprisingly, there is a very high correlation between ethnic diversity and immigration (r = .911 in 2001 and .922 in 2011). This is not a problem for the modelling, as each of the ethnic diversity and immigration variables was modelled separately, precisely in order to obtain separate estimates for their effects. The other variables show only one correlation at possible danger level; the correlation between LLI and deprivation in 2001 is .850, although only .321 in 2011. However, collinearity diagnostics carried out on linear regression models of all variables showed no indications of multicollinearity for any variables, so all the control variables could be safely included in the models.

Table xii: Bivariate correlations between area-level predicator variables 2001

	ED	IMM	EDinc	IMinc	Crime	LID	Deprv	Incom	Quals	Popdn
ED	1	.911**	-.424**	.194**	.536**	-.037	.365**	.319**	.475**	.779**
IMM	.911**	1	-.339**	.147**	.484**	-.195**	.186**	.486**	.690**	.808**
EDinc	-.424**	-.339**	1	.061	-.377**	-.126*	-.265**	-.135*	-.083	-.336**
IMMinc	.194**	.147**	.061	1	.140*	.041	.128*	.090	.134*	.188**
Crime	.536**	.484**	-.377**	.140*	1	.370**	.620**	-.062	.127*	.671**
LID	-.037	-.195**	-.126*	.041	.370**	1	.850**	-.662**	-.532**	.124*
Deprv	.365**	.186**	-.265**	.128*	.620**	.850**	1	-.454**	-.295**	.473**
Income	.319**	.486**	-.135*	.090	-.062	-.662**	-.454**	1	.735**	.302**
Quals	.475**	.690**	-.083	.134*	.127*	-.532**	-.295**	.735**	1	.483**
Popden	.779**	.808**	-.336**	.188**	.671**	.124*	.473**	.302**	.483**	1

** correlation is significant at the 0.01 level (2-tailed) *. correlation is significant at the 0.05 level (2-tailed).

Table xiii: Bivariate correlations between area-level predicator variables 2011

	ED	IMM	EDinc	IMinc	Crime	LID	Deprv	Incom	Quals	Popdn
ED	1	.922**	-.366**	.004	.662**	-.560**	.395**	.325**	.369**	.753**
IMM	.922**	1	-.332**	-.008	.670**	-.605**	.285**	.444**	.531**	.809**
EDinc	-.366**	-.332**	1	.440**	-.176**	.039	-.177**	-.072	-.226**	-.291**
IMMinc	.004	-.008	.440**	1	.249**	.076	.300**	-.317**	-.403**	-.013
Crime	.662**	.670**	-.176**	.249**	1	-.241**	.653**	.068	.109	.755**
LID	-.560**	-.605**	.039	.076	-.241**	1	.321**	-.695**	-.648**	-.375**
Deprv	.395**	.285**	-.177**	.300**	.653**	.321**	1	-.447**	-.379**	.501**
Income	.325**	.444**	-.072	-.317**	.068	-.695**	-.447**	1	.762**	.336**
Quals	.369**	.531**	-.226**	-.403**	.109	-.648**	-.379**	.762**	1	.404**
Popden	.753**	.809**	-.291**	-.013	.755**	-.375**	.501**	.336**	.404**	1

** correlation is significant at the 0.01 level (2-tailed) *. correlation is significant at the 0.05 level (2-tailed).

5.6 Preliminary data analysis

My preliminary examinations of the data included univariate and bivariate analysis of all variables and single-level regression modelling on each outcome variable. This testing was extensive and produced far more information than can be reported here. This section reports on key elements of the preliminary testing which helped to inform the final modelling approach.

How well the outcome variables represent the social quality framework

An indication of how well the selected outcome variables represent different facets of social quality was gleaned by looking at how closely correlated they are with each other. Very high correlations between outcomes would suggest that they are measuring the same thing, which would not be useful as I am looking for indicators to measure different things. However, it would be helpful if the outcome indicators within each social quality dimension were more closely correlated with each other than with outcomes from other dimensions. This would indicate a relationship within the dimension and help to validate the selected variables as good indicators of these social quality dimensions. The bivariate correlations between the outcome variables are shown in Tables xiv and xv. Correlations for variables within the same dimension are highlighted.

There are several points to highlight about these correlations. Firstly, and most importantly for the study methodology, none of the correlations are very high, so I am confident that each outcome variable is measuring something distinct from all the other outcome variables. This helps to justify the inclusion of such a wide range of outcome variables within the study; each of them is indicating a separate aspect of social quality. Secondly, the correlations of variables within the same social quality dimensions are reasonably

good; there are significant correlations between all the variables within their shared dimensions. Finally, the correlations hold the same pattern in the 2001 and 2011 data. There are some differences, new business formation tends to be negatively correlated with other outcome variables in 2001 and positively correlated in 2011 (possibly because the 2001 measure is more stringent while the 2011 measure includes smaller new businesses not yet meeting the VAT registration threshold). But broadly, the relationships are the same over the time period, which is helpful for the study methodology. As the relationships between different aspects of social quality are basically unchanged over the time period then any changing effects from increasing ethnic diversity and immigration are simpler to identify and explain, without the complicating ‘noise’ of other changes in the relationships between the social quality variables.

Table xiv: Bivariate correlations between outcome variables, 2001

	Social inclusion			Social cohesion		Empower-ment		Social capital		
	Trust parl	**Trust councl**	**Trust police**	**Voting**	**Feel safe**	**Influ-ence**	**New bus**	**Local trust**	**Civic part**	**Watch TV**
Trust parl	**1**	**.293****	**.258****	-.080	.015	.200**	-.114	.009	-.074	-.086
Trust councl	**.293****	**1**	**.332****	.164**	.113	.246**	-.181**	-.042	.087	-.329**
Trust police	**.258****	**.332****	**1**	.270**	.368**	.087	-.412**	.241**	.138*	-.234**
Voting	-.080	.164**	.270**	**1**	**.314****	.142*	.171**	.300**	.172**	-.213**
Feeling safe	.015	.113	.368**	**.314****	**1**	.003	-.268**	.323**	.240**	-.281**
Influence	.200**	.246**	.087	.142*	.003	**1**	**.243****	.051	.218**	-.156*
New bus	-.114	-.181**	-.412**	.171**	-.268**	**.243****	**1**	.101	-.146*	.192**
Local trust	.009	-.042	.241**	.300**	.323**	.051	.101	**1**	**.283****	**-.136***
Civic part	-.074	.087	.138*	.172**	.240**	.218**	-.146*	**.283****	**1**	**-.296****
Watch TV	-.086	-.329	-.234	-.213	-.281	-.156*	.192**	**-.136***	**-.296****	**1**

** correlation is significant at the 0.01 level (2-tailed) *. correlation is significant at the 0.05 level (2-tailed).

Table xv: Bivariate correlations between outcome variables, 2011

	Social inclusion			Social cohesion			Empower-ment		Social capital	
	Trust parl	**Trust councl**	**Trust police**	**Voting**	**Feel safe**	**Reg chars**	**Influ-ence**	**New bus**	**Local trust**	**Civic part**
Trust parl	**1**	**.412****	**.232****	.110	.038	.147*	.255**	.316**	-.200**	-.032
Trust councl	**.412****	**1**	**.331****	.235**	.211**	.143*	.215**	.249**	-.023	-.004
Trust police	**.232****	**.331****	**1**	.289**	.269**	.214**	.059	.089	.301**	.217**
Voting	.110	.235**	.289**	**1**	**.401****	**.679****	.098	.332**	.414**	.373**
Feeling safe	.038	.211**	.269**	**.401****	**1**	**.360****	.072	.122*	.503**	.420**
Reg. chars	.147*	.143*	.214**	**.679****	**.360****	**1**	.116**	.516**	.235**	.257**
Influence	.255**	.215**	.059	.098	.072	.116*	**1**	**.161****	-.023	-.091
New bus	.316**	.249**	.089	.332**	.122*	.516**	**.161****	**1**	-.157**	.040
Local trust	-.200**	-.023	.301**	.414**	.503**	.235**	-.023	-.157**	**1**	**.406****
Civic part	-.032	-.004	.217**	.373**	.420**	.257**	-.091	.040	**.406****	**1**

** correlation is significant at the 0.01 level (2-tailed) *. correlation is significant at the 0.05 level (2-tailed).

Relationships between the explanatory variables

The bivariate correlations between the ethnic diversity and immigration variables reveal interesting and some unexpected patterns in these relationships.

Ethnic diversity and immigration are highly positively correlated with each other (r=.911 in 2001 and .922 in 2011). Unsurprisingly, both variables are highly positively correlated with themselves over the time period (r=.979 for ethnic diversity and .975 for immigration).

Table xvi: Bivariate correlations between explanatory variables

	ED2001	ED2011	EDinc 2001	EDinc 2011	IMM 2001	IMM 2011	IMMinc 2001	IMMinc 2011
ED2001	1	.979**	-.424**	-.450**	.911**	.932**	.194**	-.078
ED2011	.979**	1	-.443**	-.366**	.870**	.922**	.261**	.004
EDinc2001	-.424**	-.443**	1	.214**	-.339**	-.356**	.061	-.005
EDinc2011	-.450**	-.366**	.214**	1	-.411**	-.332**	.179**	.440**
IMM2001	.911**	.870**	-.339**	-.411**	1	.975**	.147**	-.174**
IMM2011	.932**	.922**	-.356**	-.332**	.975**	1	.232**	-.008
IMMinc2001	.194**	.261**	.061	.179**	.147**	.232**	1	.289**
IMMinc2011	-.078	.004	-.005	.440**	-.174**	-.008	.289**	1

** correlation is significant at the 0.01 level (2-tailed) *. correlation is significant at the 0.05 level (2-tailed).

Ethnic diversity levels and ethnic diversity rates of increase show a moderately strong negative correlation (r = -.424 in 2001 and -.366 in 2011), indicating that LADs with high levels of ethnic diversity are likely to have low rates of increase, and vice versa. The reasons for this are examined more closely in the following chapter. At this stage, it is important to note that the level of ethnic diversity and the rate of increase in ethnic diversity move in opposite directions and may therefore be likely to have opposite effects on social quality.

Immigration levels and immigration rates of increase are significantly but weakly positively correlated in 2001 (r = .147) and not

significantly correlated in 2011. That the negative correlation for ethnic diversity levels and rates of increase is not mirrored in the immigration variables is surprising, given the very high degree of correlation between immigration and ethnic diversity levels. However, the difference in these relationships is explained by the differing patterns in the growth and spread of ethnic diversity and immigration across LADs over the study time period, which are discussed in detail in the following chapter.

The rates of increase in ethnic diversity and immigration are not correlated in 2001 (r = .061) but have a moderately strong, positive correlation in 2011 (r = .440). This is surprising, given that levels of ethnic diversity and immigration are so highly correlated in both years, but reflects the major difference in rates of increase from 1991 to 2001 when ethnic diversity rates of increase were very high in many LADs and immigration rates of increase were much lower. By 2011, the rates of increase in ethnic diversity had slowed down and the immigration rates of increase had increased, bringing the two variables into closer correlation.

All the immigration variables are closely correlated, as would be expected. The strong positive correlation between black immigration and white immigration indicates that both are happening within the same LADs. The correlation between black and white immigration is virtually unaltered over the time points (r = .750 in 2001 and .725 in 2011) showing that as immigration increases and spreads over this period, the occurrence of black and white immigrant populations within the same LADs is unchanged.

Table xvii: Bivariate correlations between immigration explanatory variables

	IMM 2001	IMM 2011	Black IMM 2001	Black IMM 2011	White IMM 2001	White IMM 2011
IMM 2001	1	.975**	.955**	.905**	.906**	.899**
IMM 2011	.975**	1	.955**	.951**	.852**	.900**
Black IMM 2001	.955**	.955**	1	.964**	.750**	.775**
Black IMM 2011	.905**	.951**	.964**	1	.681**	.725**
White IMM 2001	.906**	.852**	.750**	.681**	1	.939**
White IMM 2011	.899**	.900**	.775**	.725**	.939**	1

** correlation is significant at the 0.01 level (2-tailed) *. correlation is significant at the 0.05 level (2-tailed).

Relationships between area-level and individual-level outcome variables

The relationships between the area-level and aggregated individual-level outcome variables are shown in Table xviii for 2011 only (the 2001 relationships are similar). Generally, the area-level indicators are more closely correlated with each other than they are with the aggregated individual-level indicators, even across different dimensions of social quality. This is true for registered charities and new business formation, both of which are more strongly correlated with the area-level variables than with any aggregated individual-level variables. Voter turnout is positively correlated with some aggregated individual-level variables, but its strongest correlation is with the area-level variable for registered charities. Both voter turnout and registered charities could be regarded as indicators of civic engagement, but neither is particularly strongly correlated with the aggregated individual-level civic participation indicator, which is an obvious measure of civic engagement. This pattern of relationships underlines that even when the individual and area-level indicators are measuring very similar things, they are measuring social quality in very different ways, and may well be differently affected by ethnic diversity and immigration.

Table xviii: Bivariate correlations between all outcome variables, 2011

	Individual-level							Area-level		
	Trust parl	**Trust councl**	**Trust police**	**Feel safe**	**Influ-ence**	**Local trust**	**Civic part**	**Voting**	**Reg chars**	**New bus**
Trust parl	1	.412**	.232**	.038	.255**	-.200**	-.032	.110	.147*	.316**
Trust councl	.412**	1	.331**	.211**	.215**	-.023	-.004	.235**	.143*	.249**
Trust police	.232**	.331**	1	.269**	.059	.301**	.217**	.289**	.214**	.089
Feeling safe	.038	.211**	.269**	1	.072	.503**	.420**	.401**	.360**	.122*
Influence	.255**	.215**	.059	.072	1	-.023	-.091	.098	.116*	.161**
Local trust	-.200**	-.023	.301**	.503**	-.023	1	.406**	.414**	.235**	-.157**
Civic part	-.032	-.004	.217**	.420**	-.091	.406**	1	.373**	.257**	.040
Voting	.110	.235**	.289**	.401**	.098	.414**	.373**	1	.679**	.332**
Reg. chars	.147*	.143*	.214**	.360**	.116**	.235**	.257**	.679**	1	.516**
New bus	.316**	.249**	.089	.122*	.161**	-.157**	.040	.332**	.516**	1

** correlation is significant at the 0.01 level (2-tailed) *. correlation is significant at the 0.05 level (2-tailed).

Relationships between the explanatory and outcome variables

Preliminary exploration of the relationship between the explanatory and outcome variables examined their bivariate correlations and compared these between years. The results of this are summarised in Table xix.

Table xix: Bivariate correlations between ethnic diversity/immigration and social quality outcome variables

	Social inclusion			**Social cohesion**			**Empower-ment**		**Social capital**		
	Trust parl	Trust counc	Trust police	Vote	Feel safe	Reg chars	Influ-ence	New bus	Local trust	Civic part	TV watch
ED 2001	Pos	None	Neg	None	Neg	n/a	None	None	Neg	None	None
ED 2011	Pos	Pos	None	Neg	Neg	None	Pos	None	Neg	Neg	n/a
IMM 2001	Pos	None	Neg	None	None	n/a	None	Pos	Neg	None	None
IMM 2011	Pos	Pos	None	Neg	None	None	Pos	Pos	Neg	None	n/a

The results shown in Table xix revealed the following:

- There were significant correlations between ethnic diversity and some outcome variables, and between immigration and some outcome variables. For some outcomes, the correlations were negative, indicating that the social quality outcome decreased as ethnic diversity or immigration increased. For other social quality outcomes the relationship was positive, indicating that the social quality outcome increased with increasing ethnic diversity and immigration. This suggested that ethnic diversity and immigration do have some significant effects on social quality and that these are both positive and negative.

- The varied positive and negative correlations across the social quality indicators suggested that the inclusion of so many outcome indicators was justified. The appearance of positive, negative and non-significant correlations within the same social quality dimensions led to the decision to keep each social quality indicator separate and not to aggregate these to produce composite social quality outcomes. The difference in the ethnic diversity and immigration relationships between the social quality outcomes appeared both interesting and meaningful and it was decided that these should be further explored.

- The explanatory and outcome variable correlations were not always the same in 2011 as they were in 2001. Some significant correlations disappeared in 2011 and others appeared. This indicated that the relationships had indeed changed over time and that this critical dimension of the study was fully justified.

- Finally, the correlations of outcome variables with ethnic diversity were remarkably similar to the correlations with immigration. This may have justified dropping one or other of these explanatory

variables in order to fully focus on either ethnic diversity or immigration. However, it was considered useful to retain both within the study, as a finding that there are no substantive differences in their effects on social quality would in itself make a useful contribution to the work in this field.

5.7 Chapter summary

To summarise the main research design and methodological features of this study:

- The study measures social quality using eleven outcome indicators to represent four dimensions of social quality: social inclusion, social cohesion, empowerment and social capital.

- The study measures the relationship between levels of ethnic diversity and immigration and the social quality indicators at two time points, 2001 and 2011. The study additionally measures the relationship between the social quality indicators and the rates of change in ethnic diversity and immigration from 1991 to 2001, and from 2001 to 2011.

- The study uses logistic regression to model the multi-level relationships between ethnic diversity and immigration, which are measured at area-level, and the eight social quality outcomes measured at individual-level. Linear regression modelling is used for the area-level relationships between ethnic diversity and immigration and the three social quality outcomes measured at area-level.

- Preliminary data analysis indicates that ethnic diversity and immigration are positively correlated with some social quality indicators and negatively correlated with others. The pattern of

these correlations changes between 2001 and 2011, suggesting that change over time may be an important aspect of these relationships.

CHAPTER SIX: ETHNIC DIVERSITY, IMMIGRATION AND SOCIAL QUALITY IN ENGLAND: 2001 TO 2011

This chapter considers what the datasets used in this study show us about changes in England over the 2001 to 2011 period. The 2001 to 2011 decade is the primary focus for this study, but the availability of comparable ethnic diversity and immigration data from 1991 also enables the effects of increases over the preceding decade to be considered.

The chapter moves on to examine what the Citizenship Survey and other data tell us about changes in social quality between 2001 and 2011. Descriptive statistics of the social quality variables used in the data modelling are presented and compared across the 2001 and 2011 timespan. The chapter also considers how social quality might be measurably different for different populations by examining differences in measures of social quality by ethnic origin.

The chapter concludes with three case studies. These illustrate the scale of ethnic diversity and immigration increases, along with changes in social quality, in three LADs in England. The case study LADs have been selected to show the extremes of very high ethnic diversity and immigration in the London borough of Newham, and very low ethnic diversity and immigration in the north east LAD of Allerdale. The third case study area is Eastleigh where ethnic diversity was at the median level for all LADs in 2011, and although immigration in Eastleigh was slightly lower than average, Eastleigh nevertheless represents a reasonable average for England. The case study LADs introduced here are used in subsequent chapters to illustrate how the scale of any causal effects of the increases in ethnic diversity and immigration can be understood and compared.

6.1 A decade of unease

Before considering what the data show about social and demographic change, it is worth briefly recapping some of the defining events of the 2001 to 2011 decade, and remembering how frequently these were linked to issues of immigration or ethnic difference.

Bookended by riots, the period from 2001 to 2011 was a time of rapid social change and considerable social unease. The 2001 rioting of young white and Asian people in Bradford, Oldham and other northern towns sparked concerns about the state of race relations in the UK. These fears were confirmed by findings of the Commission on Community Cohesion which pointed to polarised and segregated communities as the key cause of the riots (Cantle, 2001).

The 2003 decision by the Labour government to support the US invasion of Iraq met with widespread and large scale protests across Britain. British military involvement in Iraq was widely viewed as linked to the 2005 London bombings and subsequent acts characterised as ‘Islamic terrorism’. The 2005 bombings, which killed 52 people and injured many hundreds, brought the causes and consequences of terrorism to the top of the political agenda and marked an increasingly vocal renunciation of multiculturalism (by, for example, Portillo, 2005).

Two waves of European Union enlargement took place in this decade, with ten countries joining in 2004 followed by Bulgaria and Romania in 2007. In large part resulting from this, annual net migration to the UK quadrupled between 1997 and 2010. The government’s underestimate of the number of people from new accession states who would migrate to Britain has since been regarded as a grave miscalculation which strongly contributed to its

downfall and fuelled the rise of the UK Independence Party (Watt and Wintour, 2015).

The UK came to the brink of financial meltdown in 2007 precipitating the deepest economic recession of the post-war period. The Coalition government elected in 2010 ushered in the so-called 'austerity era' in public spending. Unemployment rose rapidly from a national rate of 5% in 2007 to over 8% in 2011, with youth unemployment reaching 21% by 2011 (Office for National Statistics, 2011b).

The 2001 to 2011 decade ended, as it began, with outbreaks of public rioting, more intense and more widespread than in 2001. Although determinedly not viewed as race riots, the 2011 troubles flared up in the aftermath of an incident in Tottenham in which a young black man, Mark Duggan, was shot dead by the police.

6.2 Changes in ethnic diversity

From 1991, the year when ethnicity was first recorded in the national census, to 2011, when the most recent census was taken, ethnic diversity increased steadily across England. In 1991, slightly more than 6% of the population recorded their ethnic group as other than white. By 2011, visible ethnic minorities made up almost 15% of England's population, while people from all ethnic minority groups made up 20% of the total.

Looking only at England's visible ethnic minority population: in 1991, around 3 million people were from visible ethnic minority groups, representing about 6% of the total population. By 2001, this population had increased by 50% to around 4.5 million people (or 9% of the population) and by 2011 had increased by a further 45% to almost 8 million (or 14% of the population).

When white ethnic minorities are included in the ethnic minority total, the 1991 ethnic minority population was 3.6 million (almost 8% of the population). This population increased by around 80% to reach 6.4 million by 2001 (representing 13% of the population) and increased by a further 70% to reach 10.7 million in 2011, making up 20% of the total population.

Changes to the ethnicity questions and response categories since the 1991 census make it difficult to compare ethnic populations over time. The 1991 census did not record whether people were of mixed ethnic origin, nor was there any breakdown of people from white ethnic groups, other than 'born in Ireland'. Despite the challenges in comparing ethnicity data over time, we can see that the increase in ethnic diversity across England was the consequence of significant increases in the population size of a diverse range of ethnic groups.

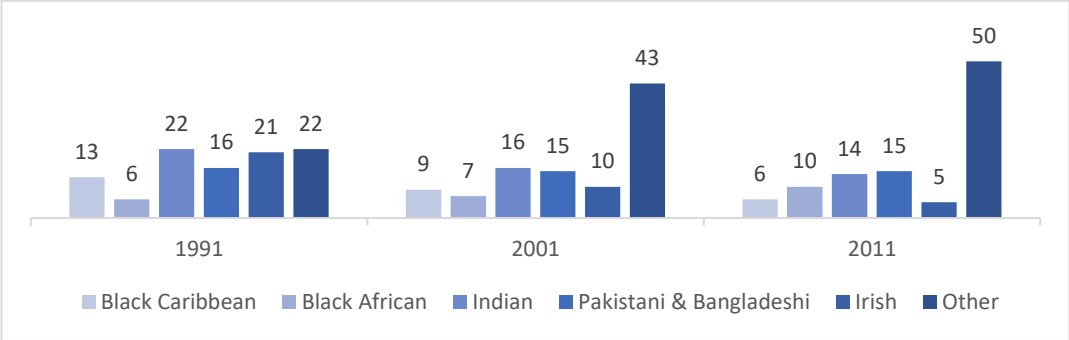
Between 1991 and 2011, every ethnic group population increased in size other than the white British and the white Irish populations, which decreased in number by 2.5% and 33% respectively. These reductions in actual population size, within the overall increase of around 12% in England's population, meant that the white British share of the national population fell from 92% in 1991 to 80% in 2011. Over the same period, there were substantial increases in the population number of all other ethnic groups, from a 19% increase in the black Caribbean population (up from 0.5 million in 1991 to almost 0.6 million 2011) to a fourfold increase in the black African population (up from 0.2 million to 0.9 million in 2011). The Indian population increased by 70% (to 1.4 million), the Pakistani population by 147% (to 1.1 million) and the Bangladeshi population by 176% (to 0.4 million).

Overall, England's visible ethnic minority population increased in size by 47% from 1991 to 2001 and by a further 62% from 2001 to 2011. By contrast, growth in the total ethnic minority population was greater

in the 1991 to 2001 decade, at 66%, than in the 2001 to 2011 decade, at 56%.

The composition of the ethnic minority population changed over the period 1991 to 2011. In 1991, six ethnic minority groups (black Caribbean, black African, Indian, Pakistani, Bangladeshi, Irish) made up almost 80% of the total ethnic minority population. By 2011, these six groups made up only 50% of the total. Some of this change in population share results from the expansion of ethnicity categories in the 2001 census. But the population change is also accounted for by new ethnic minority populations, notably the 'white other' population arriving from eastern European countries between 2001 and 2011. The 'white other' population (not recorded in 1991) grew from 23% in 2001 to represent 27% of all ethnic minorities by 2011. By 2011, the visible ethnic minority population made up a slightly larger proportion of the ethnic minority population than in 1991 (19% compared with 16%). The growth in the black population over this period was mainly within the population of people of African rather than Caribbean origin. The Indian, Pakistani and Bangladeshi populations all grew over the period, but as a share of the total ethnic minority population, the Indian group decreased while the combined Pakistani and Bangladeshi population remained virtually unchanged. The population of people from mixed ethnic groups (not recorded in 1991) almost doubled over the 2001 to 2011 decade to reach 1.2 million, increasing its share of the ethnic minority population from 12% to 14%.

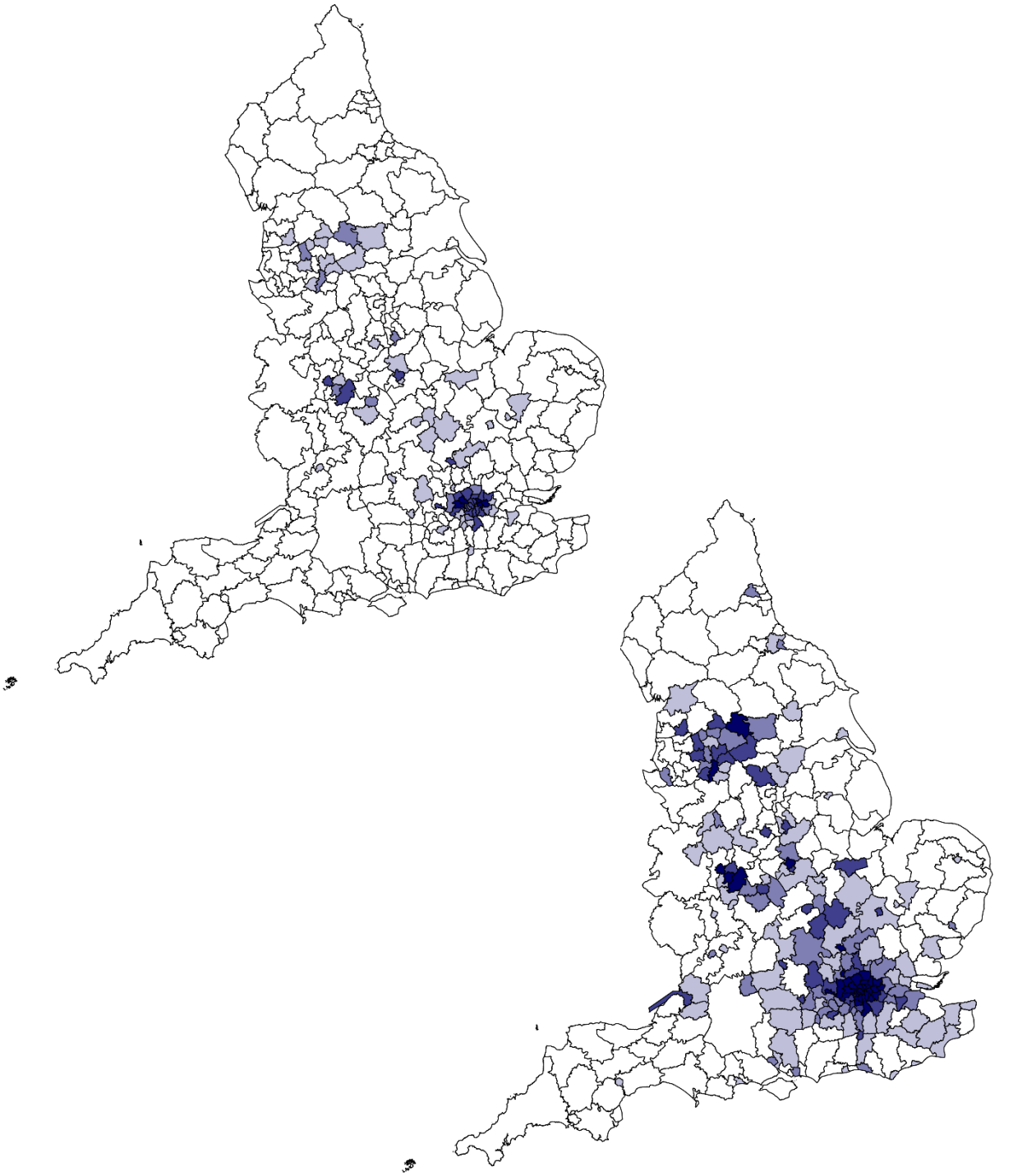
Chart i; England's main ethnic minority groups as a proportion of the total ethnic minority population



As well as increasing, ethnic diversity spread geographically across England, as illustrated in Figure iii. Between 1991 and 2011 ethnic diversity increased within every LAD in England. The concentration of ethnic minority populations in major urban areas such as London, Birmingham and Manchester is apparent on the 1991 map. By 2011, many LADs which had low or moderate ethnic diversity in 1991 had become more diverse and areas with no diversity in 1991 were now diverse. Analysts have shown that the direction of movement of most ethnic groups during this period was away from urban areas and towards suburban and rural areas (Jivraj, 2012). The 2011 map shows how ethnic diversity radiates out from the core areas, particularly from London, so that the entire south-east of England has become more ethnically diverse.

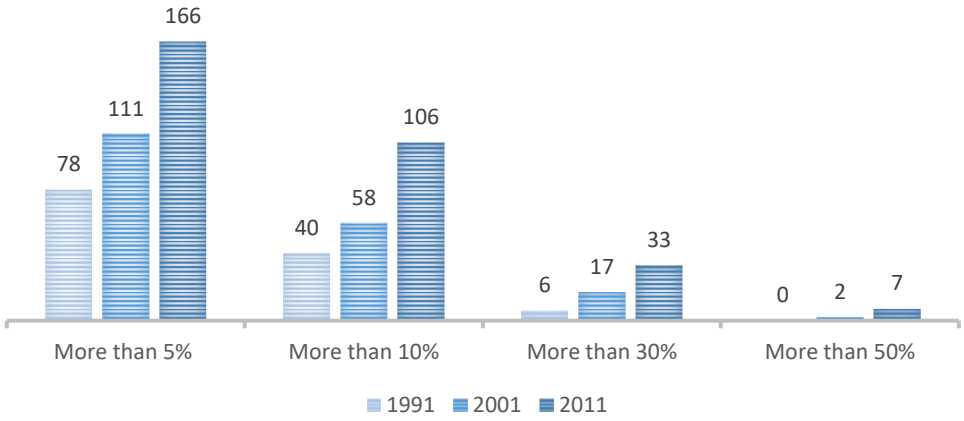
The growth and diffusion of England's ethnic minority population meant that by 2011 more LADs were experiencing increasing ethnic diversity. In 1991, one in ten of the LADs in England had a visible ethnic minority population of more than 10% and only six LADs could be described as 'super diverse', with visible ethnic minorities making up 30% or more of the population, all of them in London: Brent (45%), Newham (42%), Tower Hamlets (36%), Hackney (34%), Ealing (32%) and Lambeth (30%).

Figure iii: Ethnic diversity in England in 1991 (top) and 2011 (bottom)



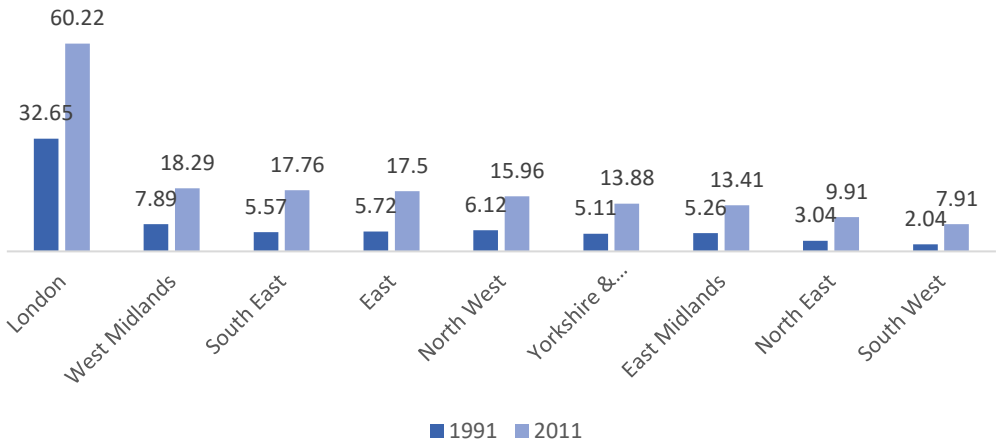
By 2011, one in three LADs in England had a visible ethnic minority population of more than 10%; all of London, most of the south-east, midlands and north-east. And 33 LADs had become ‘super diverse’ including a majority of London boroughs and large metropolitan areas such as Birmingham (42%) and Manchester (33%). In seven LADs, visible ethnic minority groups made up more than half the population: Newham (71%), Brent (64%), Harrow (58%), Redbridge (57%), Tower Hamlets (55%), Slough (54%), Ealing (51%).

Chart ii: Number of LADs with visible ethnic minority populations of more than 5, 10, 30 and 50% of total population



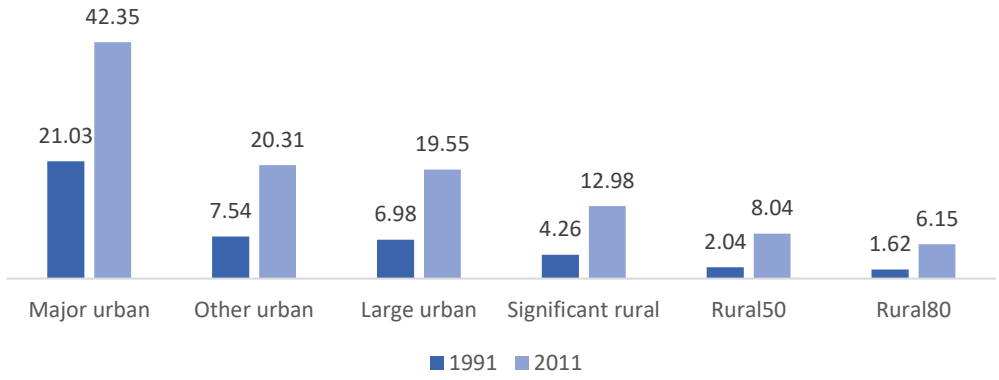
The increase and spread of ethnic diversity between 1991 and 2011 took place across all regions and within all types of area, from major urban to predominantly rural LADs. All regions saw large increases in ethnic diversity, with the largest increases taking place within the regions where ethnic diversity was lowest. In the south-west region, the average ethnic diversity index score rose from 2.04 to 7.91 over the 20-year period, and although retaining the lowest regional ethnic diversity in England this increase of almost 300% was the highest of any region. Conversely, London retained the highest ethnic diversity index score, which rose from 32.65 to 60.22, but at below 100%, this was the lowest increase of any region.

Chart iii: Level of ethnic diversity: average by region [regional average ethnic diversity index score]



Considered by area type, levels of ethnic diversity remained higher over the time period within urban areas, with the highest levels in major urban areas. But the largest increases were in rural areas, with a near 300% increase in the ethnic diversity index score in Rural50 areas over the 20-year period.

Chart iv: Level of ethnic diversity: average by area type [area type average ethnic diversity index score]

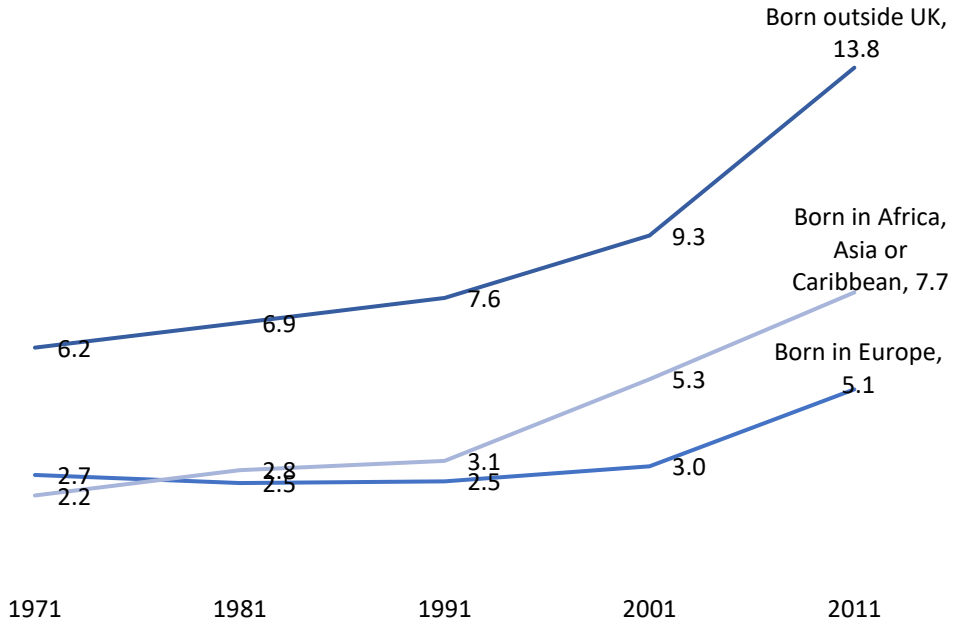


6.3 Changes in immigration

The number of people living in England who were born outside the UK increased considerably between 1991 and 2011. At the time of the 1991 census almost 8% of the population was born outside the UK. By 2011 this had increased to 14% of the population. Like ethnic diversity, immigration both increased and spread geographically over the 1991 to 2011 period, as illustrated in Figure iv. Immigration increased in every LAD in England bar three: Suffolk Coastal, South Northamptonshire and Forest Heath.

The population born outside the UK had been increasing steadily since the 1930s. Dorling (2011) has shown how immigration rates decreased between the 1860s and 1930s but then, as the birth rate fell and the British government encouraged immigration from the colonies, steady increases in the population born outside the UK are recorded in the census data from 1931 onwards. In more recent times, the immigration rate increased steadily from 1971 to 1991 and then more sharply between 1991 and 2001. The rate of increase more than doubled in the next decade, to produce a bigger increase in immigration between 2001 and 2011 than had been seen in the previous 30 years. While the increase in the total population born outside the UK was sharpest between 2001 and 2011, the rise for those born in Africa, Asia and the Caribbean was lower between 2001 and 2011 than it had been between 1991 and 2001.

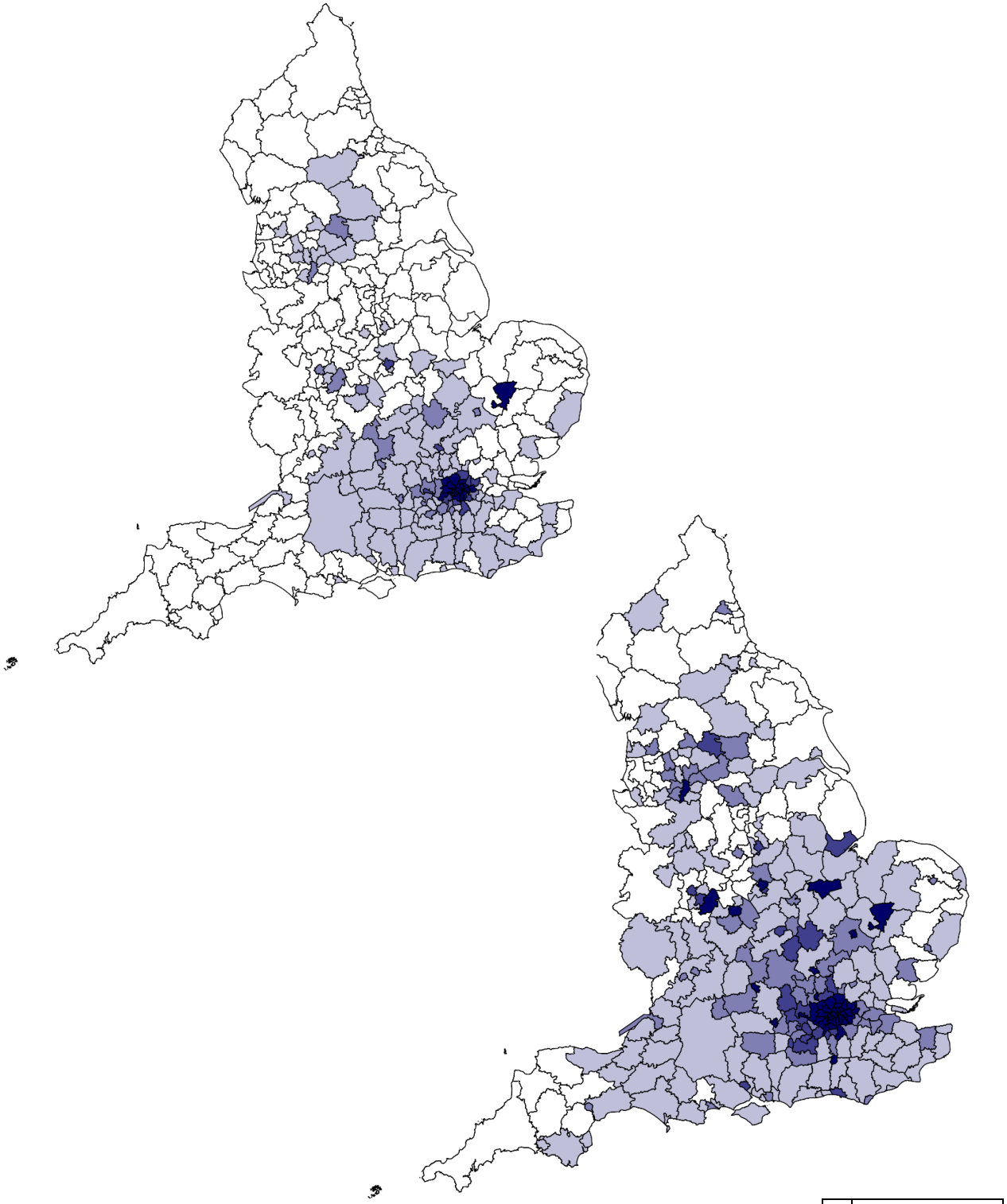
Chart v: Population in England born outside the UK (%)



[Source: Census data from NOMIS, 2013a]

The large increase in people born outside the UK over the 2001 to 2011 decade was accompanied by significant changes in where people were born. The most notable feature was a huge increase in the population born in other European countries and particularly in the eastern European countries which joined the EU during that decade. There was a ten-fold increase in the size of the population born in Poland, from around 56,000 recorded in the 2001 census to over 560,000 in the 2011 census. By 2011, Polish had become the most frequently spoken language after English.

Figure iv: Immigration in England in 1991 (top) and 2011 (bottom)



Aside from the rise in eastern European migration, the main countries of origin for people born outside the UK were largely unchanged from 1991 to 2011. Seven of the top ten countries of origin were the same in all three census years and Ireland, India, Pakistan and Germany were within the top five countries of origin in all years. There were some changes in African countries of origin with Nigeria overtaking Kenya as the main African country of origin. The Caribbean-born population was unchanged, with the majority of Caribbean-born people coming from Jamaica; the population of almost 160,000 people who were born in Jamaica made up just 0.3% of England's population in 2011 (although equivalent to approximately 10% of Jamaica's 2011 population).

Table xx: Most frequent country of birth for population in England born outside UK

1991			2001			2011		
	Number	% of total pop		Number	% of total pop		Number	% of total pop
Rep Ireland	555,805	1.18	Rep Ireland	460,287	0.94	India	682,274	1.29
India	395,563	0.84	India	450,493	0.92	Poland	561,098	1.06
Pakistan	221,776	0.47	Pakistan	304,706	0.62	Pakistan	476,684	0.90
Germany	193,346	0.41	Germany	233,418	0.48	Rep Ireland	395,182	0.75
Jamaica	141,352	0.30	Bangladesh	150,057	0.31	Germany	262,356	0.49
US	128,337	0.27	Jamaica	145,234	0.30	Bangladesh	206,231	0.39
Kenya	109,610	0.23	US	141,198	0.29	Nigeria	188,690	0.36
Bangladesh	101,829	0.22	S Africa	129,302	0.26	S Africa	186,355	0.35
Italy	83,724	0.18	Kenya	126,119	0.26	US	173,470	0.33
Cyprus	75,799	0.16	Italy	98,757	0.20	Jamaica	159,170	0.30

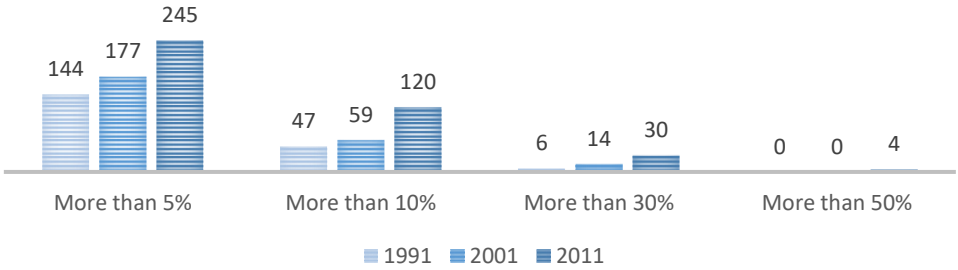
[Source: Census data from NOMIS, 2013a]

Germany and the US are high on the list of countries of origin in all years, but these populations attract very little attention within immigration debates. Many among the German-born population are the children of British soldiers stationed in Germany, born abroad but never considered to be 'immigrants'. The US was in the top ten countries of origin in all three census years. Approximately the same

number of people living in England are born in the US as in Jamaica, but Americans are rarely featured in discussions about immigration. This is despite, as Dorling highlights, taking many of the best-paid jobs in London and accounting for the greatest concentrations of immigrant children in some London boroughs (Dorling, 2011).

As well as increasing, immigration became more geographically widespread between 1991 and 2011. More LADs became areas with significant non-UK-born populations. The number of LADs in England where more than 10% of the population was born outside the UK more than doubled from 47 in 1991 to 120 in 2011.

Chart vi: LADs with populations born outside the UK of more than 5,10, 30 and 50% of total population



Similar to ethnic diversity, immigration remained higher over time in London and major urban areas.

Chart vii: Level of immigration: average by region [regional average immigration percentage]

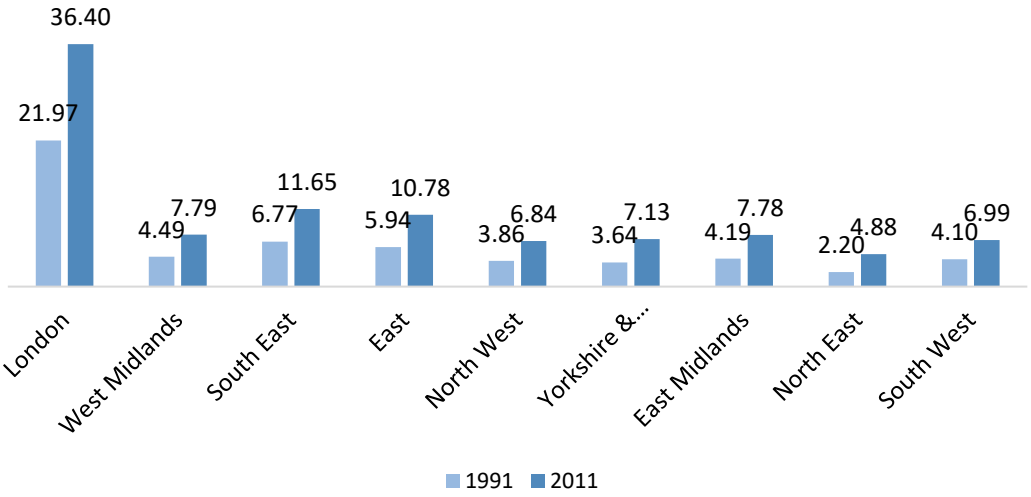
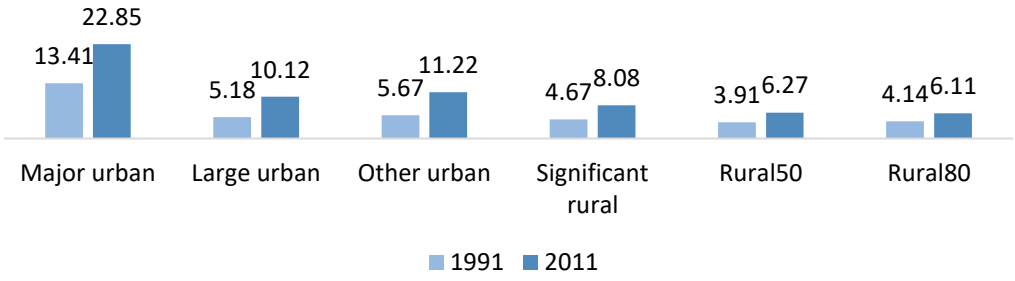


Chart viii; Level of immigration: average by area type (area type average immigration percentage)



6.4 Immigration and ethnicity

By 2011, the proportion of ethnic minorities and proportion of those born outside the UK were similar; both made up approximately 14% of the total population. But while there was considerable overlap, the two populations were different. In 2011, about half of the population born outside the UK was made up of visible ethnic minority groups and half was white. In terms of the ethnic minority population in England, about half of the ethnic minority population in England was born within the UK and half born outside the UK.

Table xxi: Population of England 2011

	White ethnic groups	**Visible ethnic minority groups**	Total
Born in UK	41,939,082 (79.11%)	3,736,235 (7.05%	45,675317
Born outside UK	3,342,060 (6.30%)	3,995,079 (7.54%	7,337,139
Total	45,281,142	7,731,314	53,012,456 (100%)

[Source: Census data from NOMIS, 2013a]

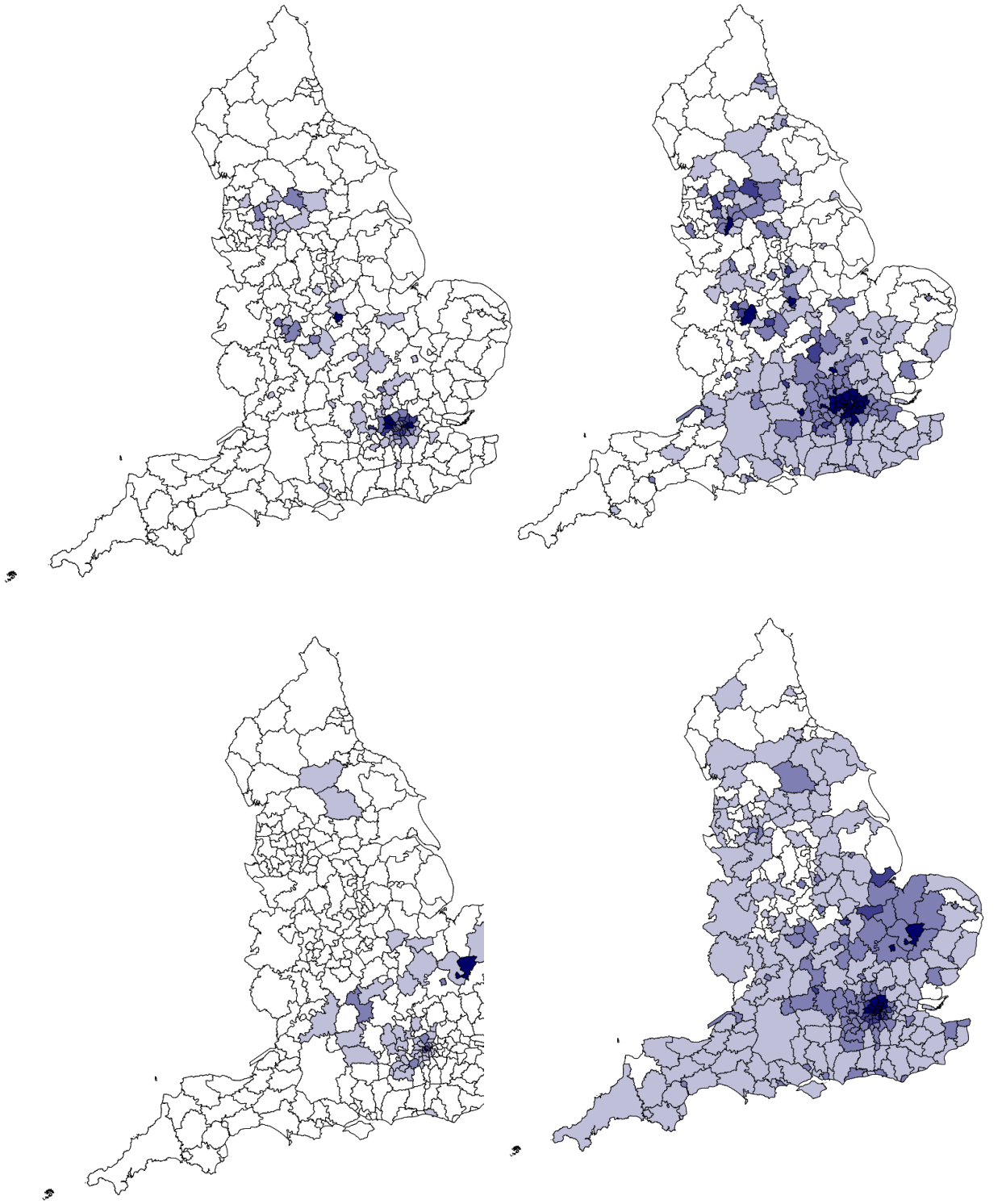
Populations born outside the UK were more dispersed across LADs than ethnic minority populations. In 1991, less than one quarter of England's LADs had an ethnic minority population of 5% or more, while almost half of all LADs had a population of 5% or more people born outside the UK. By 2011 this had increased to half of all LADs

with 5% or more ethnic minority populations and three quarters with 5% or more population born outside the UK.

The changes in black immigration (the population born in Africa, Asia and the Caribbean) and white immigration (the population born in Europe and America) are illustrated in Figure v. The maps show that in 1991 black immigration was more densely concentrated than white immigration. In 1991 the black immigrant population was strongly concentrated in London with some notable populations in the midlands and north-west. In the same year, the white immigrant population was more geographically diffused with significant populations in London and other south-east, midland and eastern LADs.[5] By 2011, the black and white immigrant populations had both spread geographically, with the white immigrant population reaching higher proportions across a far greater area. By 2011, very few LADs in England had a white immigrant population below 2.5%, while black immigration populations were smaller than this in most of the south-west, far north and east of England LADs.

[5] There is a remarkably large white immigrant population in Forest Heath, very visible on the maps in Figure v, resulting from the large number of American service personnel at the US air force bases in Lakenheath and Mildenhall.

Figure v: Black immigration 1991 & 2011 (top left & right) and white immigration 1991 & 2011 (bottom left & right)



	0 - 2.49%
	2.5 - 4.9%
	5 - 9.9%
	10 - 14.9%
	15%+

[% of total LAD population]

6.5 Rates of increase in ethnic diversity and immigration

We have already seen that between 1991 and 2011 the level of ethnic diversity increased in all LADs and the level of immigration increased in all but three LADs. This study considers these increases in ethnic diversity and immigration in two ways. Firstly, by comparing the levels within LADs at the different time points and, secondly, by measuring the rate at which ethnic diversity and immigration increased over the 10 years previous to the 2001 and 2011 time points. The rate of increase measure helps to explore the rapidity of change in ethnic diversity and immigration within LADs over the study period. The rates at which ethnic diversity and immigration grew across England's LADs are illustrated in Figures vi and vii, and summarised in Table xxii.

The rate of increase for ethnic diversity was much higher from 1991 to 2001 than from 2001 to 2011, and the rate of change in immigration was higher from 2001 to 2011 than for the previous decade. In other words, the rate of increase in ethnic diversity slowed down after 2001 while the rate of increase in immigration increased from 2001. Despite this slow-down, the rate of increase in ethnic diversity was higher than the rate of increase in immigration in both decades; the slower rate of increase in ethnic diversity from 2001 to 2011 is higher than the higher rate of increase in immigration in this decade.

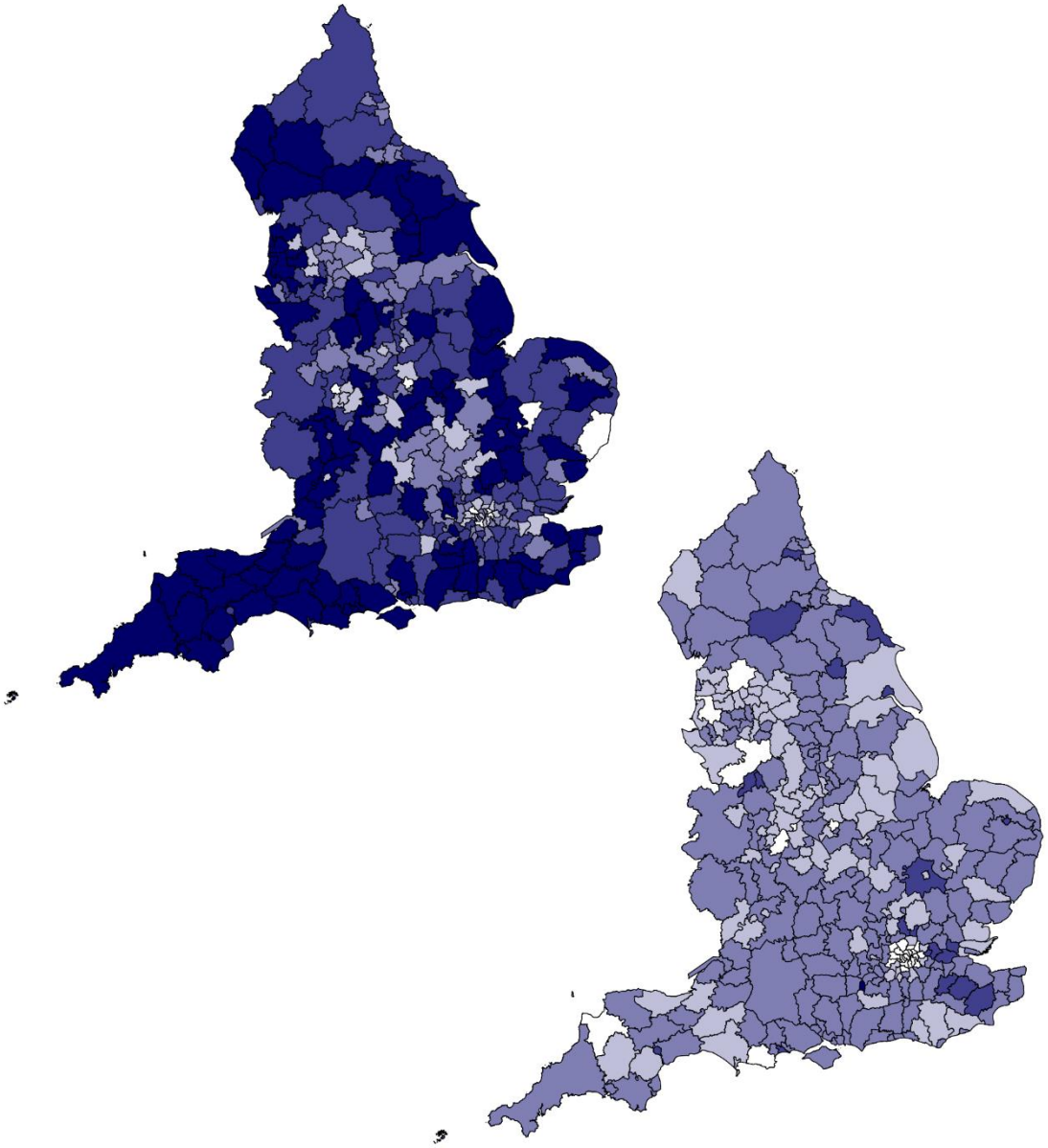
The slow-down in the ethnic diversity rate of increase is in contrast to ethnic diversity levels, which increased steadily from 1991 to 2011. Ethnic diversity level and ethnic diversity rate of increase have a moderately strong, negative correlation in 2001 ($r = -.424$) which remains moderately strong, although slightly weaker in 2011 ($r = -.366$).

The inverse relationship between the level and rate of change in ethnic diversity results from the starting position from where change is measured. In the main, LADs which had high levels of ethnic diversity in 1991 did not experience any rapid change in this over the following ten years. The largest rates of increase from 1991 to 2001 were in LADs where ethnic diversity was lowest to start with. These LADs are all in rural areas, mainly in the south-west, north-west or east of England regions. They include North Dorset, where the ethnic diversity index score of only 0.92 in 1991 rose by over 300% to 3.76 in 2001, and Ryedale where ethnic diversity similarly increased by over 300% from 0.54 to reach 2.19 in 2001. By 2011, the rapid rate of increase of the previous decade had slowed and diversified. The highest rates of increase to 2011 were not only in rural areas but also seen in urban LADs such as Barking and Dagenham, Havering and Gateshead.

Table xxii: Ethnic diversity and immigration rates of increase (%)

	Ethnic diversity Rate of increase			**Immigration Rate of increase**	
	1991 to 2001	**2001 to 2011**		**1991 to 2001**	**2001 to 2011**
Mean	124.82	60.21		19.27	51.39
Median	117.85	58.57		17.60	43.67
Std. Deviation	93.84	26.59		12.74	34.87
Range	1440.94	170.66		125.90	393.76
Minimum	6.80	4.60		-49.52	-2.80
Maximum	1447.74	175.25		76.39	390.96

Figure vi: Ethnic diversity rate of increase 1991 to 2001 (top) & 2001 to 2011 (bottom)

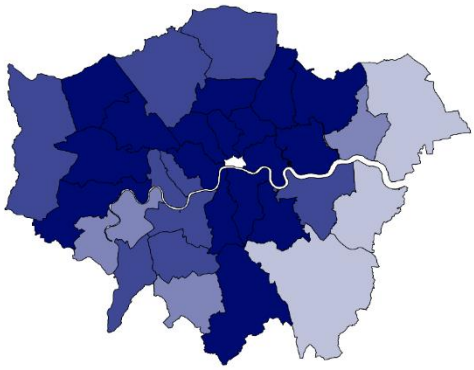


	0 – 24.9%
	25 – 49.9%
	50 – 99.9%
	100 – 149.9%
	150%+

[percentage increase in ethnic diversity index score]

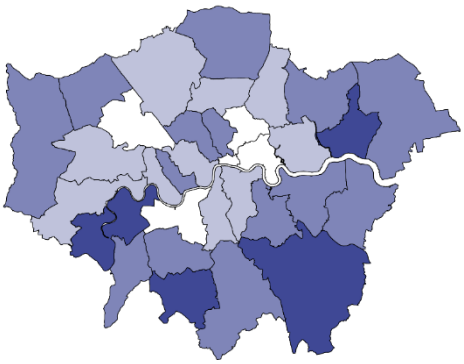
The inverse relationship between levels and rates of increase in ethnic diversity can be seen particularly clearly in London. For London LADs, the negative correlation between ethnic diversity level in 2001 and ethnic diversity rate of increase from 1991 to 2001 is the highest of all regions (r = -.822).

Figure vii: London ethnic diversity 2001 (left) and ethnic diversity rate of increase 1991 to 2001 (right)



	0 – 9.99
	10 – 19.99
	20 – 29.99
	30 – 49.99
	50+

[LAD ethnic diversity index score]



	0 – 24.9%
	25 – 49.9%
	50 – 99.9%
	100 – 149.9%
	150%+

[percentage increase in LAD ethnic diversity index score]

The London boroughs with the highest rates of increase in ethnic diversity were Barking & Dagenham, Richmond, Sutton and Bromley (1st, 2nd, 3rd and 4th highest in London). The same boroughs had the lowest levels of ethnic diversity (27th, 29th, 28th and 30th out of 32 London boroughs). The London boroughs which have a long history of migrant settlement and consequently higher-levels of ethnic diversity since long before 1991 were those where the increases were lowest. Among the lowest rates of increase from 1991 to 2001 were Tower Hamlets, Hackney and Brent (1st, 2nd and 4th lowest), boroughs with among the highest ethnic diversity levels (6th, 4th and 2nd highest). There are some anomalies here; Wandsworth experienced the 3rd lowest rate of increase in ethnic diversity but was not a borough with particularly high levels of ethnic diversity (22nd out

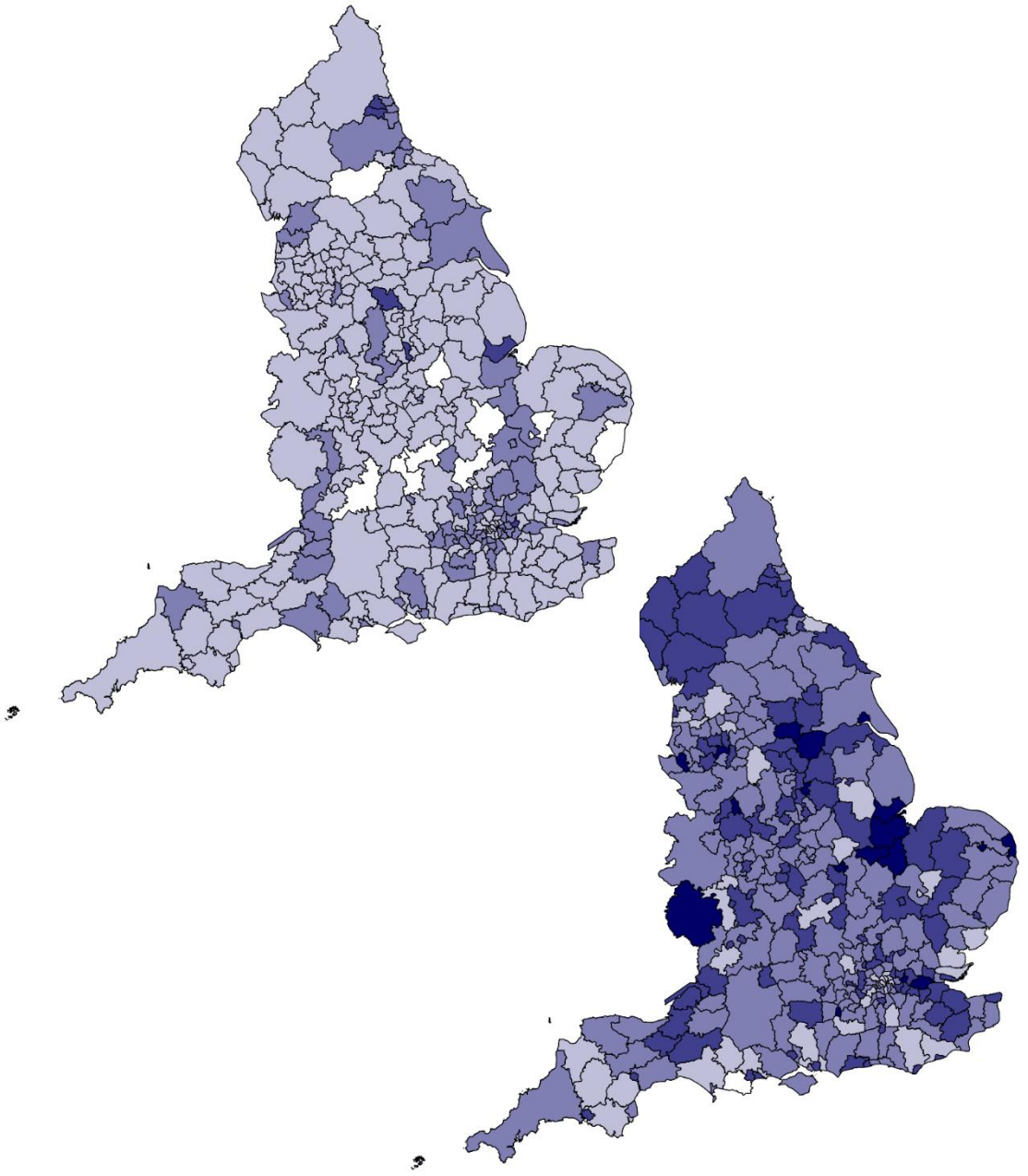
of 32 in 2001). But generally, the greatest rates of increase were in the areas of lowest ethnic diversity.
The immigration rates of increase were smaller than the ethnic diversity rates of increase, in both decades. Over the 20-year period from 1991 to 2011, immigration levels increased by an average of 66% across all LADs, while ethnic diversity increased by around 280%. Over this time span, 80 LADs saw their immigration levels increase by 100% or more, while 100% or higher increases in ethnic diversity took place in 292 LADs.

While the ethnic diversity rate of increase was greatest between 1991 and 2001, more than double the rate of increase than in the subsequent decade, the immigration rate of increase was much greater between 2001 and 2011 than it had been in the previous 10 years. As the maps in Figure viii illustrate, high rates of immigration increase took place across England, particularly in the 2001 to 2011 decade.

Unlike ethnic diversity, any correlation between the rate of increase in immigration and the level of immigration in LADs is very weak; there is a weak, positive correlation in 2001 ($r=.147$) and no correlation at all in 2011 ($r = -.008$).

It is worth remembering that in the ethnic diversity index score, all white ethnic groups are treated as one, so the spread and increase in ethnic diversity shown in the preceding maps is of visible ethnic minorities. The rapid increase in ethnic diversity from 1991 to 2001 results from immigration settlement in previous decades, but there is no ethnicity data from earlier time points, so it is not possible to look back at how the rates of increase in ethnic diversity and levels of immigration are related. Looking forward, it will be instructive to see whether the rapid increases in immigration levels during the 2000s, lead to another rapid rate of increase in ethnic diversity in later decades.

Figure viii: Immigration rate of increase 1991 to 2001 (top) & 2001 to 2011 (bottom)



	-50 – 0%
	0 – 24.9%
	25 – 49.9%
	50 – 99.9%
	100%+

[percentage increase in percentage of population born outside UK]

Tables xxiii and xxiv show the 10 LADs with the highest levels and highest rates of increase for ethnic diversity and immigration in 2001 and 2011. For both ethnic diversity and immigration, the LADs with the highest levels are London boroughs which have long been associated with migrant settlement. The LADs with the highest rates of change in ethnic diversity and immigration are mainly rural areas, although include some urban areas such as London borough of Barking and Dagenham, Kingston upon Hull and Newcastle upon Tyne, which have no recent history of migrant settlement.

Table xxiii: LADs with highest levels and rates of increase in ethnic diversity

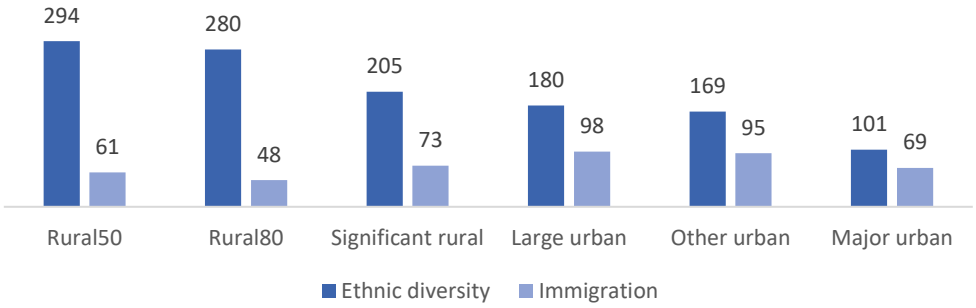
ETHNIC DIVERSITY LEVEL		**ETHNIC DIVERSITY RATE OF INCREASE**	
2001	**2011**	**2001**	**2011**
Newham	Newham	Isles of Scilly	Rushmoor
Brent	Brent	North Dorset	Exeter
Ealing	Redbridge	Ryedale	Norwich
Hackney	Harrow	Purbeck	Thurrock
Harrow	Ealing	Mendip	Kingston upon Hull
Tower Hamlets	Slough	Wyre	Ashford
Lambeth	Waltham Forest	Malvern Hills	York
Southwark	Hounslow	West Dorset	Isles of Scilly
Haringey	Tower Hamlets	Derbyshire Dales	Richmondshire
Redbridge	Luton	Corby	Barking&Dagenham

Table xxiv: LADs with highest levels and rates of increase in immigration

IMMIGRATION LEVEL		**IMMIGRATION RATE OF INCREASE**	
2001	**2011**	**2001**	**2011**
Brent	Brent	Barking&Dagenham	Boston
Kens'ton&Chelsea	Newham	Gateshead	Kingston upon Hull
Westminster	Westminster	NewcastleuponTyne	South Holland
Newham	Kens'ton&Chelsea	Sheffield	Fenland
Ealing	Ealing	Broxtowe	Barking&Dagenham
Haringey	Harrow	Boston	Corby
Camden	Haringey	Greenwich	Thurrock
Tower Hamlets	Hounslow	Canterbury	Stoke-on-Trent
Hackney	Tower Hamlets	Portsmouth	Salford
H'smith & Fulham	H'smith & Fulham	EastCambridgeshire	Great Yarmouth

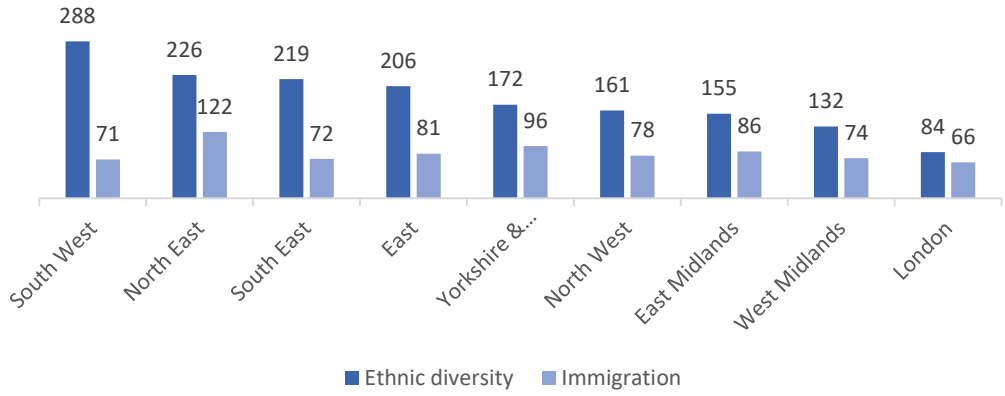
By area type, the average increase in ethnic diversity from 1991 to 2011 was greatest in rural areas and smallest in major urban areas. Immigration rates of increase over this period were greatest in large and other urban areas and lowest in the most rural areas.

Chart ix: Average rates of increase from 1991 to 2011 in ethnic diversity and immigration by area type (%)



Comparing across regions, average rates of increase in ethnic diversity and immigration between 1991 and 2011 were both lowest in London. The highest average increases in ethnic diversity were in the south west and north east regions, while immigration increases were highest in the north east and Yorkshire & Humberside regions.

Chart x: Average rates of increase from 1991 to 2011 in ethnic diversity and immigration by region (%)



6.6 Changes in social quality

Between 2001 and 2011 ethnic diversity and immigration grew and became more widespread throughout England. What happened to social quality over the same period?

Changes in the selected social quality indicators

On the indicators included within this study, social quality generally improved over the period. Table xxv shows the mean values across all LADs for the 11 social quality indicators. The means are comparable for all but three of these indicators: no comparison is possible for registered charities (for which data is only available for 2011); watching a lot of TV (data only available for 2001); and new business formation (change in measure between 2001 and 2011).

Table xxv: Social quality change from 2001 to 2011

	Mean for all LADs		Change 2001 to 2011
	2001	2011	
Social inclusion			
Trusting parliament	39.7	41.6	Increase
Trusting the local council	53.4	67.4	Increase
Trusting the police	76.5	82.4	Increase
Social cohesion			
Voter turnout	31.7	41.8	Increase
Feeling safe	66.7	72.6	Increase
Registered charities	*n/a*	*3.3*	*Not comparable*
Empowerment			
Influencing	44.5	40.7	Decrease
New business formation	*5.3*	*7.2*	*Not comparable*
Social capital			
Local trust	69.3	77.7	Increase
Civic participation	35.7	30.7	Decrease
Watching a lot of TV	*44.7*	*n/a*	*Not comparable*

Social quality was higher in 2011 than in 2001 on all but two of the comparable indicators; civic participation and feeling able to influence decisions about the local area, where positive responses decreased. Considered across the social quality domains; social inclusion and social cohesion increased over the decade, empowerment decreased and social capital declined on one measure (civic participation) and increased on the other (local trust).

Perhaps surprisingly, there were increases on all the trust measures. From a fairly low base of just under 40%, trust in parliament increased slightly to almost 42% in 2011. This is in spite of the parliamentary expenses scandal which broke in 2009 leading to criminal prosecutions against eight MPs and media claims about the '*huge loss of faith*' in British institutions (Slack, 2013). Trust in local councils also increased from around 53% in 2001 to over 67% in 2011. This substantial increase again seems surprising against the media backdrop of persistent negative coverage of local authorities during the 2000s, focused particularly on failings in local council child protection services, as in the Victoria Climbie and Baby P cases.

Local trust increased over the decade. This is the indicator which is most strongly associated with Putnam's theory of declining social capital, so this is an important point to remember; more people said that they trust the people who live around them in 2011 than did in 2001. This indicator is second only to trusting the police in the proportion of people who responded positively; 69% in 2001 rising to 78% in 2011. And the increase in positive responses over the decade is the second largest, behind the increase for trusting the local council. Especially when they are taken together with the increases in trust in the police, parliament and local councils, these figures point to the opposite of the decline in social quality identified by Putnam (Putnam, 2000, 2002, 2007).

The proportion of people feeling safe in their local areas also increased over the decade, from 67% to 73%. It is no surprise to find that men had a higher positive response rate on this indicator than women. In 2011, 82% of men reported feeling safe walking alone after dark in their local area but only 64% of women. The increase in feeling safe largely resulted from women, who showed an eight percentage point increase on this indicator between 2001 and 2011 (from 56% to 64%) compared with only a two percentage point increase for men (80% to 82%).

Two indicators showed a decline from 2001 to 2011; civic participation, where the proportion engaged in civic activity decreased from 36% to 31%, and feeling able to influence decisions about the local area, where the proportion decreased from 45% to 41%. These decreases would appear to concur with Putnam's 'bowling alone' thesis of declining engagement in public and social spheres (Putnam, 2000).

For the three area-level indicators of social quality included in this study, only voter turnout rates are comparable for 2001 and 2011. On this indicator, social quality increased over the period, from an average turnout of 31% for local elections in the year nearest to 2001 to 36% in the year nearest to 2011. This increase is consistent with the trend in general election turnout which increased from 59% in the 2001 election to 66% in the 2010 election (Rallings and Thrasher, 2010), although the longer-term trend in voter turnout has been downward since the 1990s (Tetteh, 2008).

Other changes in social quality

There is a wealth of additional social quality data which did not meet the requirements for this study but which nonetheless helps to build a picture of social quality in early 21st century England. Three variables from the Citizenship Survey which could not be used as social quality

outcomes for this study are considered here; residential stability, satisfaction with local areas and feelings of belonging.

Residential stability could be an indicator of social quality. Arguably, people will live for longer in areas which have high social quality and will move away more quickly from areas where social quality is lower. Or, a more rapid population turnover may be a cause of lower social quality, while greater stability in the residential population may lead to higher social quality. Either way, it is worth considering whether residential stability changed over the 2001 to 2011 period.

If residential instability is measured by the proportion of survey respondents who have lived in a local area for less than one year, then this was unchanged over the decade. In 2001, 6% of respondents had lived in the local area for less than one year. By 2011, 7% had lived in the area for less than one year. Nor was there any change at the other end of the scale. In both 2001 and 2011 15% of respondents had lived in the local area for more than 30 years. This virtually unchanging picture is backed up by census data which shows that internal migration in 2011 (when 87.7% of the population of England lived at the same address as one year previously) was almost identical to 2001 (87.8%). Residential stability did not change over the study period, remaining high across England with no significant variances between regions or between urban/rural area types.

Most people like living in their local area. Only a small minority express any strong dissatisfaction with the area where they live. This did not change between 2001 and 2011, as far as responses to the Citizenship Survey show. Different questions were asked in the two surveys; the 2001 survey asked whether people enjoyed living in their local area, while the 2011 survey asked how satisfied people were with their local area as a place to live. In 2001, 8% of respondents said they did not enjoy living in their local area. In 2011,

7% said they were dissatisfied with their local area as a place to live (these negative responses are better compared than the positive responses as only the negative reply options are the same while the positive and neutral categories differ in the 2001 and 2011 questions). Because there was no change in outright dissatisfaction with local areas, it is reasonable to infer that the great majority of people like living in their local area, and there was no change in this from 2001 to 2011.

Finally, the degree to which people feel they belong to their local area could also be considered an indicator of social quality, notwithstanding the difficulties of defining how 'local' and 'belonging' should be measured. A question about belonging to the local area was asked in the 2011 Citizenship Survey, to which 79% of respondents felt that they very strongly or fairly strongly belonged. The nearest equivalent question in the 2001 survey asked whether neighbours look out for each other in this area, to which 78% of respondents replied 'yes', 'definitely' or 'to some extent'. The high percentage of positive responses to both questions suggests that a large majority of people felt positively attached to the areas where they live, and that this was unchanged over the 2001 to 2011 period.

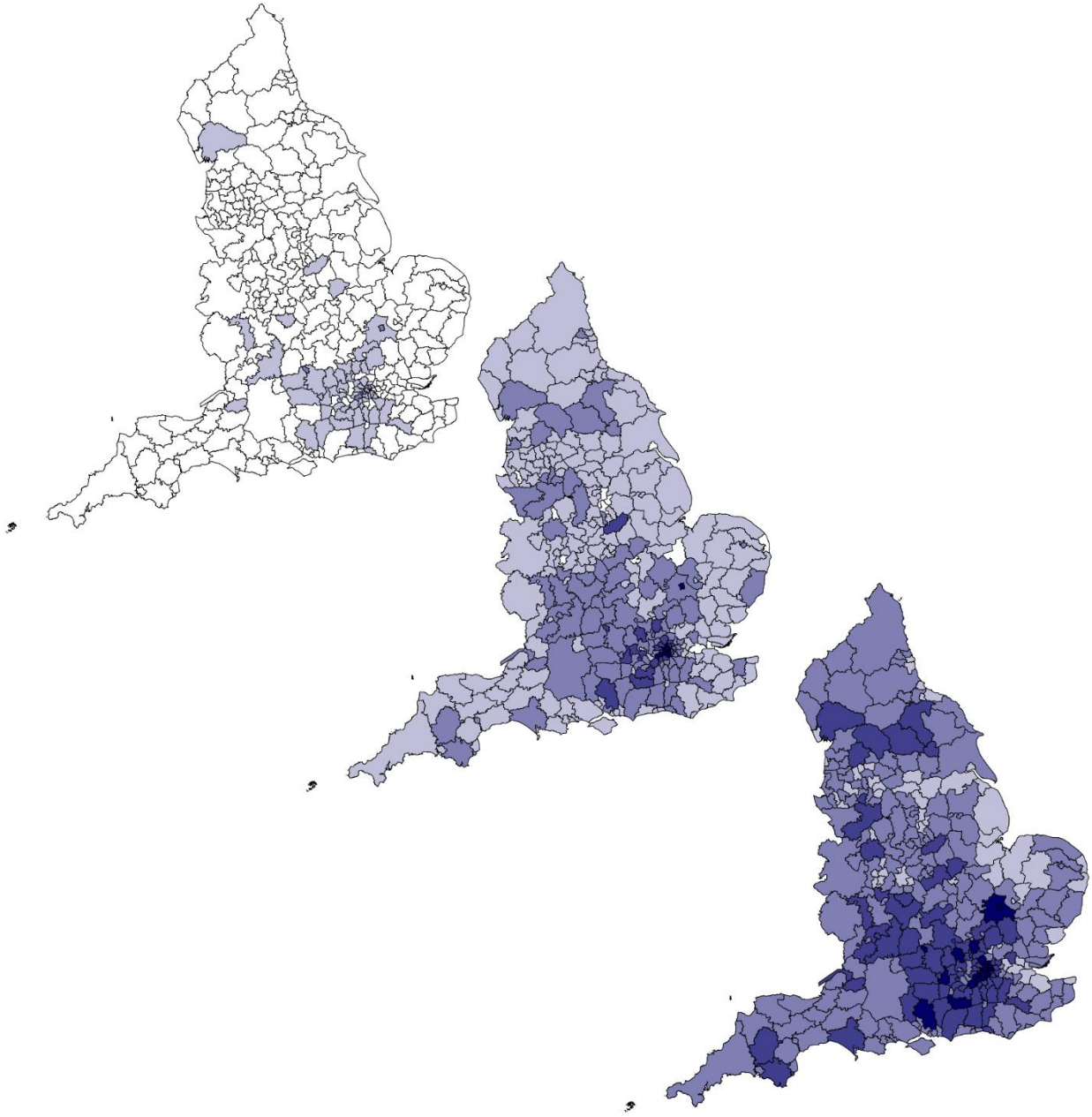
Qualifications and social quality

The strongest and most consistent factor correlating with social quality is the level to which people are educated. People with higher educational qualifications are more likely to give positive responses to social quality questions, and area-measures of social quality are higher in places where a greater proportion of the population has higher-level qualifications. Like ethnic diversity and immigration, and in part related to immigration, the population with higher-level qualifications grew over the 1991 to 2011 period and spread across England. This increase helps to explain why social quality rose over the 2001 to 2011 decade.

The proportion of people educated to degree or higher-level increased considerably over the 2001 to 2011 decade, the continuing result of university expansion initiated by the Conservative government in the 1980s. Across England slightly more than 7% of the population had a degree or higher-level qualifications in 1991, rising to almost 20% in 2001 and 27% in 2011.

As the maps in Figure ix illustrate, in 1991 only a small number of LADs had a sizeable population of people with higher-level qualifications. By 2011, this picture was reversed, with only a small number of LADs having a relatively low population with higher qualifications. In 1991, only six LADs had a higher-level qualified population of over 20%; by 2011, 271 LADs had at least 20% degree-qualified populations. In both years, the LADs with the largest populations of highly qualified people were the wealthier London boroughs and the university cities of Oxford and Cambridge. A strong association between qualification levels and income also explains the variance between LADs; higher average income LADs have higher qualified populations. In 2011, in poorer LADs like Sandwell, Kingston upon Hull and Knowsley only 15% of those populations had a higher-level qualification, compared with over 50% of the populations in wealthier Wandsworth, Richmond upon Thames and Kensington & Chelsea.

Figure ix: Higher-level qualifications in England 1991 (left), 2001 (centre) and 2011 (right)



	0 – 9.9%
	10 –19.9%
	20 – 29.9%
	30 – 39.9%
	40%+

[percentage of LAD population with a degree or higher-level qualification]

The geographic variance in higher-level qualifications is linked to ethnic diversity and immigration. Educational attainment varies by ethnicity. All ethnic groups experienced improvements in educational outcomes between 1991 and 2011, with the bigger increase in the 2001 to 2011 decade, and the largest increases for people from Indian, Pakistani, Chinese and Black Caribbean groups. Some of this increase reflects differences in the education levels of migrant populations; in 2011, over one third (35%) of people born outside the UK had a degree compared with one quarter (26%) of the UK-born population (Lymperopoulou and Parameshwaran, 2014).

Local areas which have greater ethnic diversity and higher immigration have more highly educated populations. In the dataset for this study, there are positive correlations between the levels of ethnic diversity and higher qualifications in LADs ($r = .475$ in 2001 and .369 in 2011), and even stronger correlations between higher qualifications and immigration levels ($r = .690$ in 2001 and .531 in 2011). More ethnic minority people had higher qualifications in 2011, whether born in the UK (29%) or outside the UK (27%), than white people born in the UK (19%). The highest qualified group in this study was white people born outside the UK, of which 31% had at least degree-level education in 2011.

For every social quality indicator measured at individual-level, in both 2001 and 2011, people with higher-level qualifications were most likely to respond positively. For example, in 2011, 78% of respondents with a higher-level qualification said that they trust people in their local area compared with 65% of people with no qualifications, and 41% of people with higher qualifications had engaged in civic activities compared with 20% of those with no qualifications.

The greater prevalence of higher qualifications within the immigrant and ethnic minority populations, the greater tendency for people with

higher qualifications to give positive responses to social quality questions, and the increase in the ethnic minority and immigrant populations, combine to increase the positive social quality outlook over the 2001 to 2011 period.

What of the two social quality outcomes which declined over this period; civic participation and feeling able to influence decisions about local areas? Both outcomes have a statistically significant relationship with qualification-levels; graduates were more likely than non-graduates to report civic participation and feeling able to influence local decisions. But the large increase in the higher-qualified population was offset by bigger decreases for people with higher-level qualifications on both indicators. In fact, feeling able to influence local decisions actually increased among people with no qualifications over the period, from 29% to 32%, in contrast to the large decline from 57% to 48% for those with higher-level qualifications. The reasons for this are not explained by the data and would need further investigation which, although interesting, is tangential to the focus of this study.

Social quality and ethnicity

Different ethnic groups appear to enjoy different levels of social quality. Positive attitudes vary by ethnicity and immigration status for all the social quality indicators which are measured at individual-level. The effect of individual-level characteristics on individual opinions is not the focus of this study, which is concerned with area-level effects, but the individual-level effects of ethnicity point to differences in the experience or perception of social quality which have implications, discussed later in this thesis, for how social quality outcome variables in studies like this are constructed or selected.

In the social inclusion dimension, there was an increase on all three indicators from 2001 to 2011 for the three ethnic origin groups other

than the white UK-born group. For white UK-born people, trust in parliament decreased over the period and while trust in the police and local councils increased for this group, the increases were smaller than for all other groups. When considered by specific ethnic groups, the increase in trusting parliament was greatest for Asian people, moderate for black people and decreased for white people over the 2001 to 2011 period. Trust in the police and the local council increased for all ethnic groups with the greatest increase for black people. The higher social inclusion reported by ethnic minority groups is confirmed by data from other sources showing that migrant groups come with a very positive view of British democracy and tend to have higher-levels of trust in parliament and politicians than white British people (Heath and Khan, 2012).

In the social cohesion dimension, white people tended to feel safer in their local areas than ethnic minority people, for both UK and non UK-born people. Within ethnic groups, Asian people were less likely than white and black people to feel safe in their local area. But the differences between ethnic groups and between UK-born and non UK-born groups on this indicator are small. Over the decade, the percentage of people feeling safe increased for all ethnic origin groups, with the greatest increase for ethnic minority people born outside the UK.

In the empowerment dimension, ethnic minority and non UK-born groups had a slightly more positive view than white UK-born people about their ability to influence local decisions. By ethnic group, feeling able to influence was highest among black people and increased for both black and Asian people from 2001 to 2011. Again this finding confirms that ethnic minorities have greater faith in Britain's democratic institutions (Heath and Khan, 2012).

Feeling able to influence local decisions is one of only two social quality indicators where there was a decline between 2001 and 2011.

This decline was for all ethnic origin groups but greatest for the white UK-born group and smallest for the ethnic minority population born outside the UK. By specific ethnic group, the proportion of Asian and black people who feel able to influence decisions actually increased from 2001 to 2011.

Finally, in the social capital dimension, civic participation was much lower for ethnic minority people born outside the UK than for other groups, but being non UK-born seems not to be the most important factor here as white people born outside the UK had civic participation rates which were about the same as UK-born ethnic minority people, both of which were slightly lower than for white UK-born people. Local trust was higher for white UK-born people than for ethnic minority and non UK-born people. Local trust was lowest for black people, although increased most for this group between 2001 and 2011. Between 2001 and 2011, local trust increased for all groups, other than white people born outside the UK. For white people born in the UK and for ethnic minority people, both UK and non UK-born, there were substantial increases in local trust.

There are no clear patterns of variance in social quality outcomes by ethnic group; positive response rates are higher for ethnic minority and immigrant respondents than for white UK-born people on some indicators and lower on others. In general, the changes in positive responses to social quality questions were consistent for all ethnic origin groups; positive attitudes increased for all groups on most indicators and decreased for all groups on the civic participation and feeling able to influence local decisions indicators. The exceptions were trusting parliament, where positive attitudes decreased for the white UK-born population and increased for all other groups, and local trust where the positive response from white non UK-born people remained static.

Chart xi: Social quality positive responses by ethnic origin, 2011 (%)

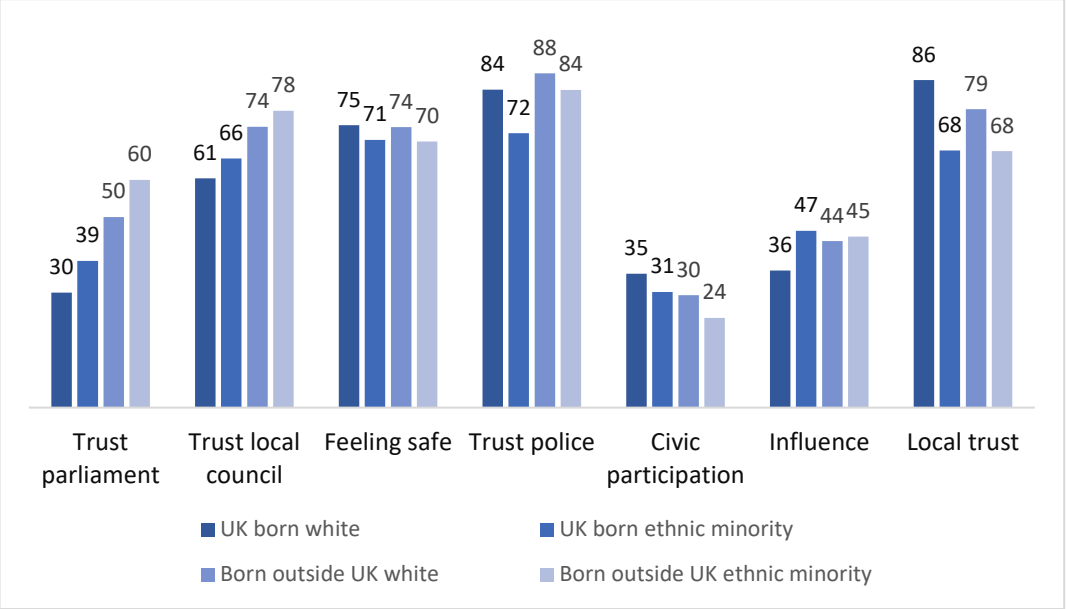


Chart xii: Social quality positive responses by ethnic group, 2011 (%)

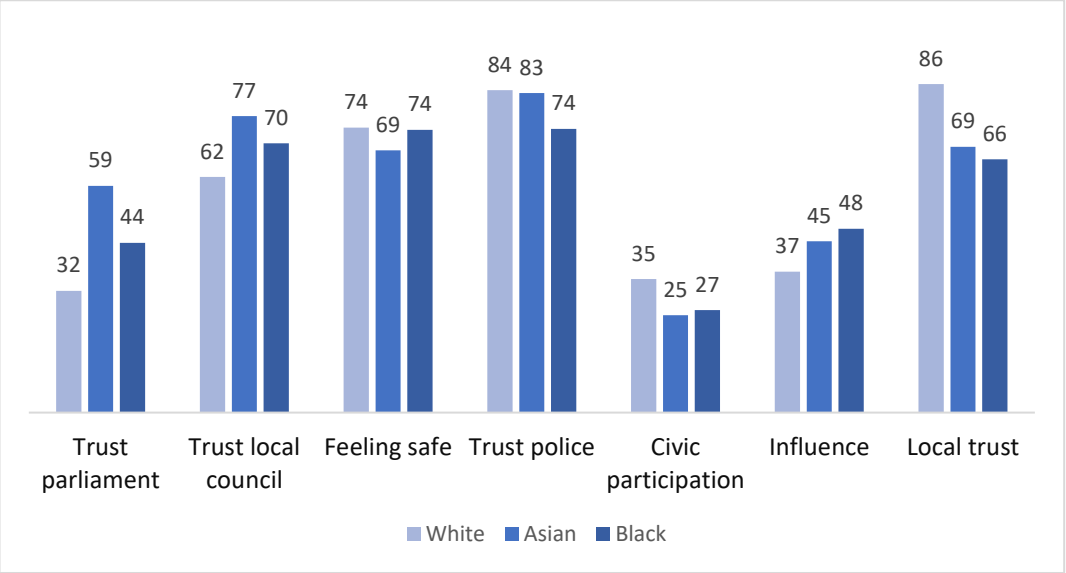
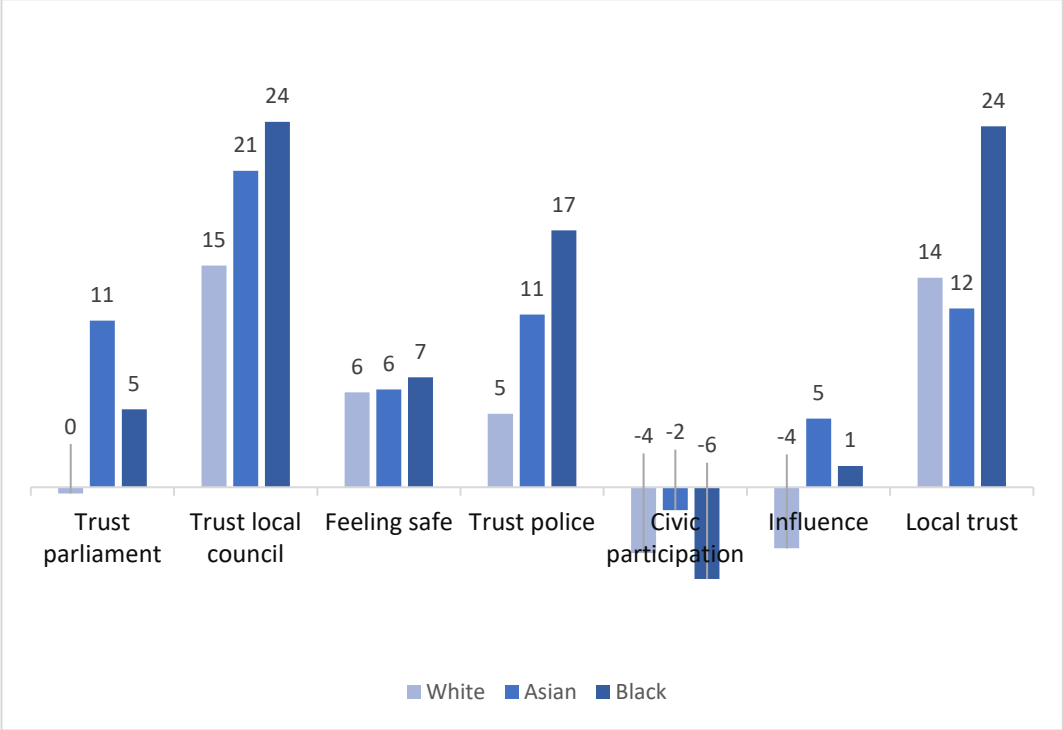


Chart xiii: Change in positive responses by ethnic origin, 2001 to 2011 (percentage point)

Chart xiv: Change in positive responses by ethnic group, 2001 to 2011 (percentage point)



Social quality and racial prejudice

Visible ethnic minority people are less likely to trust people in their local area, less likely to feel safe walking alone after dark in their local area and less likely to trust the police than white people. This is the case regardless of whether people are born within or outside the UK. These indicators are linked to feelings of security and lower positive reporting by ethnic minority people suggests that they feel less safe than white people. A key factor which could explain this difference is racial prejudice.

It is difficult to quantify racial prejudice and there are no measures which reliably track this over the 2001 to 2011 time period, which is why it is not included in this study as an indicator of social quality. However, in considering changes in social quality within the context of increased ethnic diversity and immigration, it is relevant to look at what may have happened to racial prejudice over this period, in as far as the available data enable this.

In the 2011 Citizenship Survey, 11% of ethnic minority respondents said they had personally experienced racial harassment, compared with 2% of white respondents (this question was not asked in 2001). A much higher proportion of visible ethnic minority than white people reported that racial or religious harassment was a problem, even if they were not affected by it; 59% of ethnic minority people compared with 33% of white people. Ethnic minorities born outside the UK were more likely to experience racial harassment and to see it as a problem than UK-born ethnic minorities. These variables are associated with the local trust, feeling safe and trusting the police social quality indicators. People who reported that racial harassment was a problem were significantly more likely to report that they do not trust people in their local area, do not feel safe in their local area and do not trust the police. Ethnic minority respondents who reported that

racial harassment is a problem were even less likely to feel safe, trust the police or trust other people in their local area.

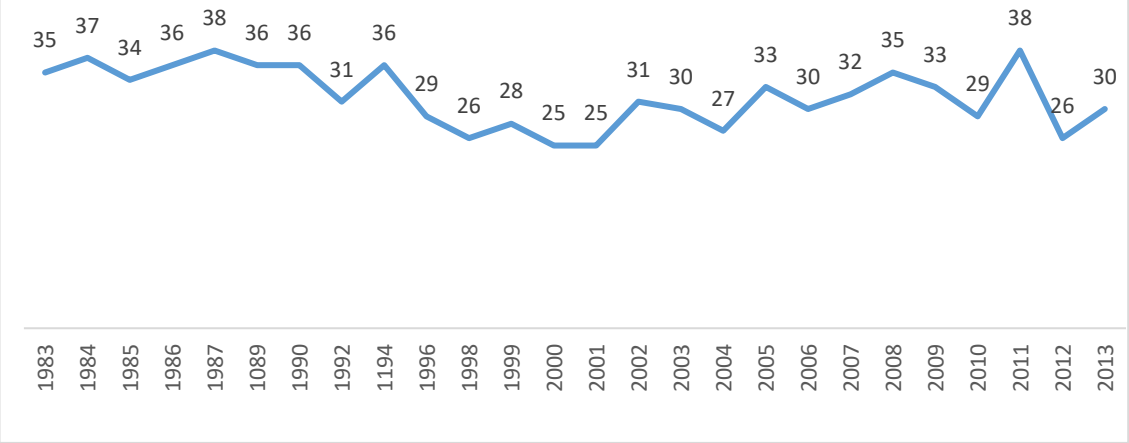
It is difficult to gauge whether racial prejudice increased or decreased over the study period. Survey questions about being racially prejudiced are highly susceptible to social desirability bias (so much so that they are used in some research methods guides to illustrate social desirability bias, see Vogt, 1993, for example). The desire to produce socially acceptable responses may underestimate the real extent of racial prejudice. On measures of experiencing racial prejudice, there is a lack of consistency in survey questions and other forms of data collection which make it impossible to compare data over time.

The British Social Attitudes survey has been asking the following question about self-reported racial prejudice for 30 years: *"Would you describe yourself as very prejudiced/a little prejudiced against people of other races?"* (NatCen Social Research, 2014).The level of racial prejudice was remarkably constant from 1983 to 2013. The percentage of those who describe themselves as racially prejudiced never rose above 38% and never fell below 25%. There is no clear upward or downward trend over the 30-year period compared with, for example, views on same-sex relationships, believing that sex before marriage is sometimes wrong, and belief that people who want children should get married, which all showed clear downward trends over the same time scale.

In 2013, slightly more men (32%) than women (29%) described themselves as very or a little prejudiced and older people (aged 55+) were much more likely than younger people (aged 17 to 34) to describe themselves as racially prejudiced. People with degree-level education were far less likely than all other levels of education to say they are racially prejudiced (19% of those with a degree compared with 38% of those with no qualifications). From 2001 to 2011 there

was an overall increase in self-reported racial prejudice, from 25% to 38% of respondents, with a particularly sharp increase between 2010 and 2011. But set against the longer term picture of relatively small fluctuations with no clear upward or downward trend from 1983 to 2013, the 2001 to 2011 increase in racial prejudice does not stand out as remarkable.

Chart xv: Population self-reporting racial prejudice, 1983 to 2013 (%)



[Source: British Social Attitudes survey, NatCen Social Research, 2014]

In both 2001 and 2011, the Citizenship Survey asked a question about whether there was more or less racial prejudice in Britain than five years ago. In both years a majority of respondents considered that racial prejudice was the same or greater than five years earlier (77% in 2001 and 74% in 2011). Interestingly, ethnic minority people were significantly more likely than white people to report that racial prejudice had declined; 26% in 2001 and 23% in 2011, compared with 17% and 13% for white respondents.

A survey carried out for British Future in 2013 (Katwala, 2013) asked respondents to compare racial prejudice in Britain to 20 years previously; 51% of respondents felt that there was less racial prejudice in 2013 than 20 years earlier and 19% thought it was about the same. Only 18% of respondents considered that racial prejudice was higher in 2013 than it had been in 1993. The survey asked

whether people felt that different forms of prejudice had increased or decreased over the past 20 years. There were differences in responses by ethnicity. More than half of white respondents believed that racial prejudice had decreased in the past 20 years in various areas of life including in job applications, media coverage and political representation. Ethnic minority people were less inclined to see prejudice as decreasing; there were no areas of life where a majority of ethnic minority people felt that racial prejudice had decreased.

Research commissioned by the Runnymede Trust and carried out in 2013 found that many ethnic minority people but very few white people had experienced racism and discrimination. Experiences of discrimination were highest for Black Caribbean people; 44% had experienced discrimination at work, 37% by the police and 37% at school, college or university. Black African respondents had also experienced high levels of discrimination; 40% at work, 31% at school, college or university and 28% when looking for a job. Black Caribbean and Black African people reported more discrimination than other ethnic groups on every measure other than applying for social housing, where more discrimination was reported by eastern European respondents. Experiences of discrimination were lowest for white British people; 3% reported discrimination at work and 3% in looking for work (Runnymede Trust, 2013).

Interestingly, the Runnymede Trust research found that black people experienced far more discrimination from their local council (25% of black Caribbean and 5% of black African respondents reported this) than other ethnic groups (8% of eastern Europeans, 1% of Pakistani and 1% of Indian respondents). And yet on the social quality indicator used in this study, black people were more inclined to trust the local council than white people, although less likely than Asian people; in 2011 77% of Asian, 70% of black and 62% of white respondents said that they trusted the local council.

Clearly, much depends on what is asked, and probably on who is asking the questions. We cannot tell from the available data whether racial harassment (as measured in the Citizenship Survey), racial prejudice (as measured in the British Futures survey) and racial discrimination (as measured by Runnymede Trust's survey) are perceived by those who experience them to have similar or different effects on their quality of life. So while common sense and other research (although there is surprisingly little on this subject) suggest that social quality for ethnic minority people is negatively affected by racial harassment, prejudice and discrimination, there is insufficient data to more firmly link these experiences to lower feelings of personal and neighbourhood security.

6.7 Case study areas

To explore what the changes from 2001 to 2011 in ethnic diversity, immigration and social quality look like within LADs, I have selected three case study areas; Allerdale, Newham and Eastleigh. These case study LADs represent very low, very high and average ethnic diversity respectively, as indicated by their ethnic diversity index scores for 2011. The case study LADs are not the highest, lowest and average LADs on all ethnic diversity and immigration indicators, but they are close to this on most.

The summary data in Tables xxvi and xxvii shows how the case study LADs compare with the median and mean values for all the study variables, in 2001 and in 2011. In these tables, the values for the social quality outcome variables represent the proportion of respondents who responded positively to the survey questions; in the case study areas of Allerdale and Eastleigh these are based on fairly small samples.

The inclusion of these case studies serves several purposes. Firstly, they illustrate the huge differences between LADs in their experiences of ethnic diversity and immigration over the study period; from the very low levels but high rates of increase in Allerdale, to the very high levels but low rates of increase in Newham. Secondly, the case studies are a useful way to compare changes in ethnic diversity and immigration alongside changes in social quality over the same period. In all three case study areas, the overall picture is of improving social quality over the 2001 to 2011 decade. With a few exceptions, these three LADs experienced the same increases on the social quality indicators that were seen nationally. Finally, these case study LADs will reappear in Chapters Seven and Eight where they are used to help illustrate the size of any statistically significant effects on social quality from average, very high and very low levels of ethnic diversity and immigration. It is hoped that their inclusion here as case studies will help to make these later illustrations more interesting.

Table xxvi: Summary statistics for all LADs and case study LADs 2001

	ALL LADs			Allerdale	Newham	Eastleigh
VARIABLES	**Mean**	**StdDev**	**Median**			
EXPLANATORY						
ED	13.43	15.54	6.35	1.81	79.92	6.32
IMM	7.89	7.96	5.26	1.78	38.10	4.94
Black IMM	4.34	5.59	2.37	0.64	34.24	2.27
White IMM	3.57	3.20	2.60	1.01	6.90	2.48
ED rate of inc	124.88	93.69	118.11	164.60	25.84	95.17
IMM rate of inc	19.74	12.74	17.60	18.03	37.52	11.09
OUTCOME				(n=23)	(n=251)	(n=54)*
Social inclusion						
Trust parliament	35.34	14.04	35.94	19.05	49.14	28.85
Trust local council	54.58	15.09	54.23	42.86	62.81	53.85
Trust police	78.98	10.11	79.45	91.30	68.95	85.19
Social cohesion						
Voter turnout	31.03	7.49	32.00	33.90	27.00	36.40
Feel safe	69.71	14.09	70.37	78.26	59.60	81.48
Reg charities	n/a	n/a	n/a	n/a	n/a	n/a
Empowerment						
Influence	43.83	15.56	43.48	26.09	39.91	42.31
New bus	4.80	2.20	4.53	3.49	3.29	5.23
Social capital						
Local trust	73.04	16.85	75.25	78.26	53.98	85.42
Civic participation	37.78	12.88	37.68	17.39	22.71	20.37
Watch TV	44.68	12.10	45.81	68.18	51.46	48.15
CONTROL						
Crime rate	100.12	44.18	89.31	82.61	163.71	67.70
Deprivation	22.17	11.45	19.93	27.80	56.18	10.56
Higher quals	19.51	7.29	17.96	15.94	21.31	18.59
LLI	11.12	2.55	10.80	12.90	13.10	8.70
Income	402.53	64.24	388.25	382.10	384.00	415.60
Pop density	1517.59	2119.63	568.23	75.34	6885.20	1457.25

*n=number of cases from Citizenship Survey in this case study LAD

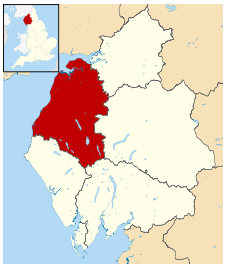
Table xxvii: Summary statistics for all LADs and case study LADs 2011

	ALL LADs			Allerdale	Newham	Eastleigh
VARIABLES	**Mean**	**StdDev**	**Median**			
EXPLANATORY						
ED	19.55	18.83	11.41	2.66	84.99	11.5
IMM	11.47	10.41	8.20	2.70	53.70	7.30
Black IMM	5.90	6.57	3.40	0.90	39.60	3.70
White IMM	5.01	3.96	3.93	1.58	12.73	3.32
ED rate of inc	59.72	28.00	58.28	47.03	6.34	82.04
IMM rate of inc	51.39	34.87	43.67	51.52	40.93	47.74
OUTCOME				(n=38)	(n=416)	(n=32)
Social inclusion						
Trust parliament	36.51	13.31	35.29	26.32	60.97	20.00
Trust local council	64.91	12.59	66.67	64.86	77.04	63.33
Trust police	83.73	7.94	84.40	81.58	77.91	87.50
Social cohesion						
Voter turnout	41.75	4.52	41.60	41.20	52.30	42.00
Feel safe	75.92	12.18	76.37	86.84	59.62	84.37
Reg charities	3.06	1.53	2.67	4.15	2.16	3.38
Empowerment						
Influence	39.06	12.17	38.98	24.32	56.52	32.26
New bus	6.72	3.15	6.08	5.32	7.26	6.57
Social capital						
Local trust	84.46	11.96	86.21	81.08	59.95	93.55
Civic participation	33.95	12.59	33.33	26.32	23.32	31.25
Watch TV	n/a	n/a	n/a	n/a	n/a	n/a
CONTROL						
Crime rate	67.83	26.49	62.71	53.56	143.16	57.69
Deprivation	19.17	8.41	17.33	22.30	41.84	10.49
Higher quals	27.12	7.63	25.90	22.80	30.10	27.90
LLI	21.87	4.56	21.67	26.42	14.94	18.37
Income	510.50	80.29	496.60	444.80	498.20	528.80
Pop density	1609.73	2285.71	590.13	75.77	6628.82	1533.87

*n=number of cases from Citizenship Survey in this case study LAD

ALLERDALE

England's least ethnically diverse area



Allerdale is a district in the county of Cumbria, in the north west region of England, with a population of 96,422 in 2011. Population density in Allerdale is among the lowest in England, with only 75 people per km^2 in 2001 and 76 in 2011. The area belongs to the Rural-80 group in the DEFRA classifications, meaning that at least 80% of the population lives in rural settlements or market towns.

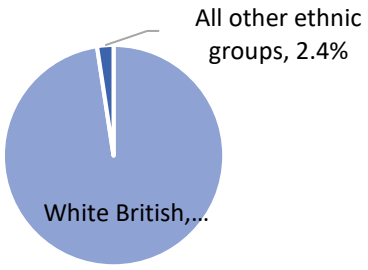
Allerdale was home to the world's first commercial nuclear power station, built in the 1950s and still operating today as Sellafield. With Allerdale's traditional industrial base in decline since the 1970s, the nuclear industry has become the LAD's most significant economic sector, and a growing proportion of Allerdale's population is dependent on Sellafield for employment. Allerdale has a notably low rate of new business formation, although survival rates for new businesses are above the national average (Peck et al, 2010). As part of the Lake District National Park, tourism plays an important role in the local economy. However, the district is prone to flooding and many businesses have been disrupted by repeated flooding, which was particularly severe in 2009. The Labour party lost overall control of Allerdale Borough Council in 2003 although has since remained the single biggest party on the Council. Candidates from the British National Party stood for election to Allerdale Council in 2003, 2007 and 2011, without success, receiving less than 3% of votes each time. The UK Independence Party (UKIP) has been represented on the Council since 2013.

On the 2011 ethnic diversity index, Allerdale ranked as the least ethnically diverse LAD in England. The 2011 ethnic diversity index

score of 2.66 was well below the LAD median of 11.41. The 2011 census found that 97.6% of the population was white British, which was considerably above the average of 79.8% across England. Ethnic diversity was low in Allerdale on all measures, including the number of households where people live in mixed ethnic partnerships; just 1.8% of households in Allerdale compared with 4.6% across England.

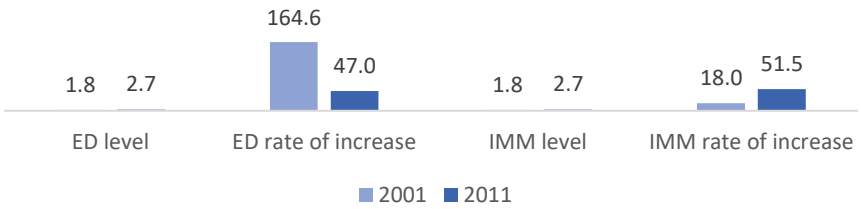
Immigration was also very low in Allerdale. The 2011 census found that 2.7% of the population was born outside the UK, compared with the LAD median of 8.2%. Black immigrants made up less than 1% of the population in 2011 and white immigrants accounted for 1.6% of the population.

Chart xvi: Allerdale population by ethnic group, 2011



Although ethnic diversity and immigration levels remained low in Allerdale relative to the averages across England, the area experienced a rapid increase in ethnic diversity between 1991 and 2001, when the ethnic diversity score more than doubled, although this rate of increase slowed to below the national average increase between 2001 and 2011. The rate of increase in immigration was similar in Allerdale to the average of all LADs.

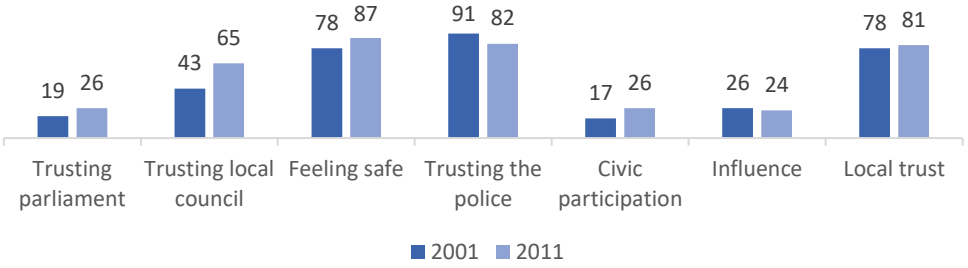
Chart xvii: Allerdale: Ethnic diversity and immigration variables



Allerdale was below average on the social inclusion indicators for both years, trust in parliament was particularly low. But the district was higher than average on social capital indicators; civic participation in Allerdale was low in 2001 but showed a substantial increase between 2001 and 2011, and local trust was higher than the national average. On the social cohesion indicators, the number of registered charities in Allerdale (4.2 per 1,000 population) was higher than the England average (3.5). Allerdale scored very high on other social quality indicators, not included in this study. In the 2001 Citizenship Survey, 96% of Allerdale respondents reported that they enjoyed living there. In 2011, 97% of respondents in Allerdale felt that people in the local area got on well together and 89% were satisfied with living there.

On area-level measures, incomes in Allerdale were well below the average for England, as were the new business start-up rate and the number of people with degree or higher qualifications. The 2001 responses indicate that 68% of Allerdale respondents watched a lot of TV.

Chart xviii: Changing social quality in Allerdale (individual-level variables)



[Citizenship Survey 2001 n = 23; 2011 n = 38

Chart ixx: Changing social quality in Allerdale (area-level variables)

NEWHAM

England's most ethnically diverse area

Newham is a London borough in the east of the capital with a population of 307,984 in 2011. Like all major urban areas, population density in Newham is high, with 6,629 people per km^2 in 2011.

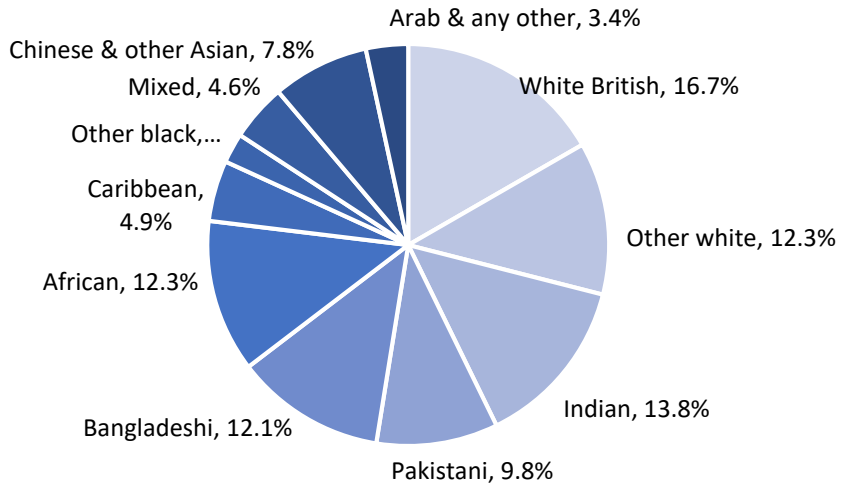
Newham Borough Council has been led by Britain's first directly elected mayor, Robin Wales, since 2002. The Council was Labour-majority throughout the 2000s and Labour won all 60 Council seats in the 2010 election. UKIP fielded a candidate in Newham for the first time in the 2010 Council election but secured only 0.1% of the votes.

Newham has long been one of the most deprived LADs in the UK. Throughout the decade, unemployment was higher than average and incomes were lower. The new business start-up rate was similar to the average for England but lower than other London boroughs. London's selection as host for the 2012 Olympic games meant considerable infrastructure development in Newham, where the main stadium, athletes' village and other key event venues were sited. The social and economic changes anticipated from the Olympic regeneration investment were not yet apparent in 2011, when Newham remained the third most deprived of the 326 LADs in England.

Newham is the most ethnically diverse LAD in England. In the 2011 census the single largest ethnic group was white British but this only accounted for 16.7% of Newham's population. Newham's ethnic diversity index score was 79.9 in 2001 rising to 85.0 in 2011. Conversely, the rate of increase in ethnic diversity in Newham

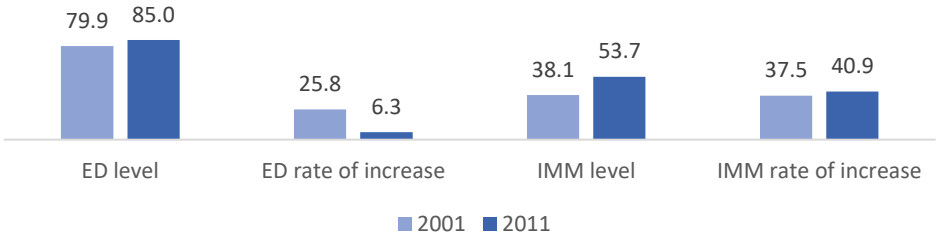
between 1991 and 2011 was the fourth lowest of all LADs in England.

Chart xx: Newham population by ethnic group, 2011



Newham has one of largest immigrant populations of any LAD. It had the fourth highest immigration level in 2001, the second highest in 2011 and the highest black immigration level in 2011, with 40% of the LAD population born in African, Asian or Caribbean countries, compared with an average of around 3% for all LADs.

Chart xxi: Newham: Ethnic diversity and immigration variables

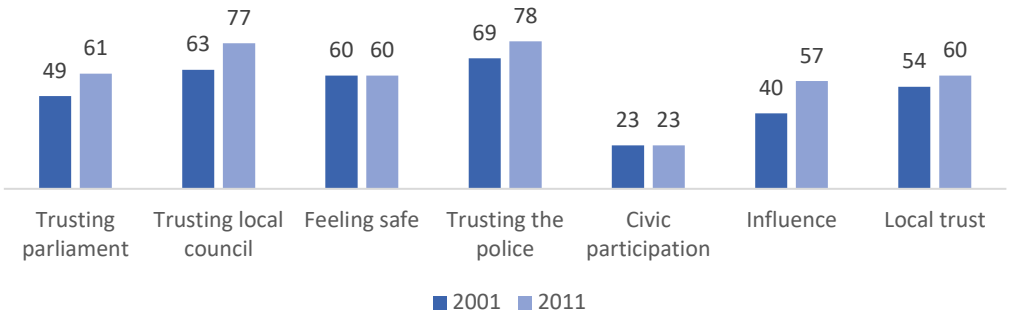


A higher than national-average proportion of Newham residents have degree-level or higher qualifications but this is lower than in most London boroughs. The University of East London has its main campus in Newham, with around 23,000 students in 2011. The university has one of the highest proportions of ethnic minority students of any higher education institution in the UK but, in common with other universities with large proportions of ethnic minority

students, the university ranks very low in the league tables; ranking 117th (out of 118) in The Guardian's university league table for 2011 (The Guardian, 2010).

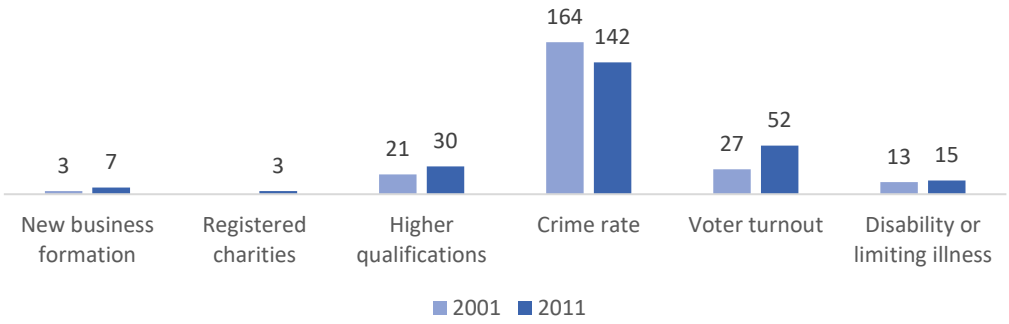
On the social quality indicators, trusting parliament and trusting the local council were higher than average but trusting the police and civic participation were lower. Local trust was lower than average but feeling able to influence local decisions showed a big rise from 2001 to become higher than average in 2011. On other social quality indicators, 86% of respondents to the 2001 Citizenship Survey enjoyed living in the area. In 2011, 88% felt people in the local area got on well and 74% were satisfied with living there. Finally, just over half (51%) of the 2001 respondents watched a lot of TV.

Chart xxii: Changing social quality in Newham (individual-level variables)



[Citizenship Survey 2001 n = 251; 2011 n = 416]

Chart xxiii: Changing social quality in Newham (areal level variables)



EASTLEIGH

A place of average ethnic diversity

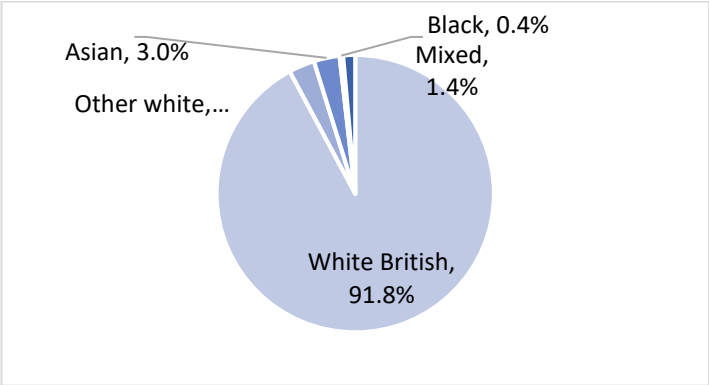
Eastleigh is in the county of Hampshire in the south east of England. Eastleigh's 2011 population was 125,199 and population density was 1,534 people per km^2. Eastleigh is a 'significant rural' district in the DEFRA categories meaning that more than 26% of the population lives in rural settlements and larger market towns.

Eastleigh Borough Council has been led by the Liberal Democrat party for many years. In the 2011 Council elections, the Liberal Democrats won 38 of 44 seats, with four going to the Conservatives and two to independent candidates. Eastleigh's economy is increasingly retail-based and its manufacturing and engineering sectors are in decline. Its location on the M3 motorway and good train links to London combine to give Eastleigh one of the largest out-commuting populations in Hampshire (SQW, 2011).

Eastleigh is more affluent than the national average, with higher incomes and lower deprivation, but is close to average on these measures for the south east region. Eastleigh routinely features in 'top 20' lists of good quality places to live in the UK, although it seems never to appear in the top ten.

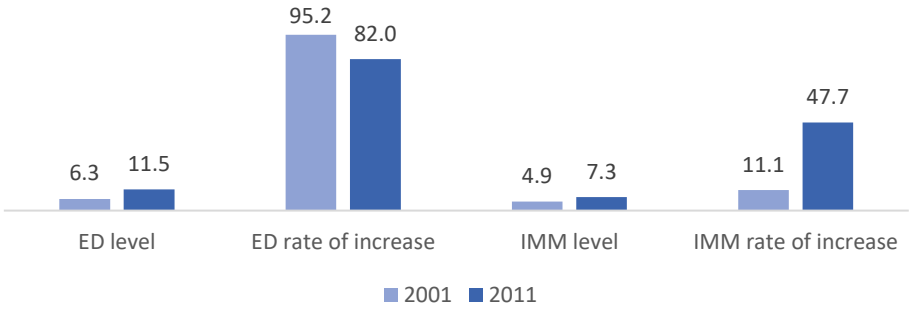
Ethnic diversity in Eastleigh in 2011 was exactly at the median average for England LADs of 11.5. What this means in terms of ethnic groups is that 92% of Eastleigh's population was white British and 'other white' people accounted for 2.3% of the population. The largest single ethnic minority group was Indian, accounting for 1.6% of the population.

Chart xxiv: Eastleigh population by ethnic group, 2011



The 2001 immigration level in Eastleigh was 4.9% rising to 7.3% in 2011, slightly below the LAD averages of 5.3% in 2001 and 8.1% in 2011.

Chart xxv Eastleigh: Ethnic diversity and immigration variables

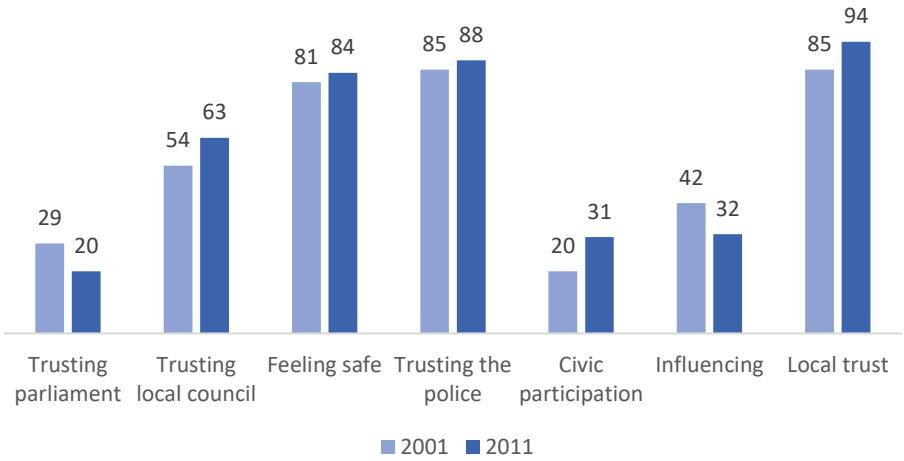


Eastleigh is about average on most measures, not just ethnic diversity and immigration. Incomes were slightly above the national average for 2011 while the number of people with higher-level qualifications matched the average. New business formation rates were slightly lower than average as was the rate for registered charities.

On the social quality indicators, Eastleigh was very low on trusting parliament and civic participation and below average on trusting the local council and feeling able to influence local decisions, but higher than average on the feeling safe, trusting the police and local trust

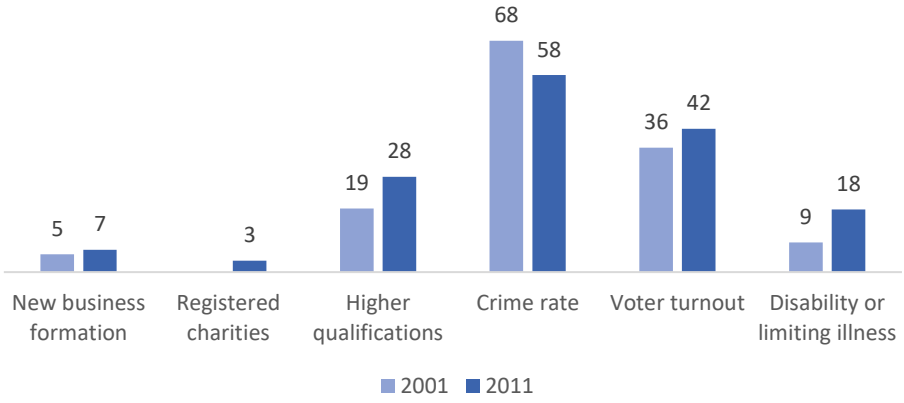
indicators. In the 2001 Citizenship Survey, 98% of Eastleigh respondents enjoyed living in the area. In 2011, 96% said that people in the local area got on well together and 88% were satisfied with living there. Finally, just 48% of the Eastleigh respondents in 2001 watched a lot of TV.

Chart xxvi Changing social quality in Eastleigh (individual-level variables)



[Citizenship Survey 2001 n=54 2011 n = 32]

Chart xxvii: Changing social quality in Eastleigh (area-level variables)



6.8 Chapter summary

There were major changes in ethnic diversity, immigration and social quality across England in the decade from 2001 to 2011. To summarise the key changes of relevance to this study:

- Ethnic diversity and immigration increased considerably between 2001 and 2011, as had also happened in the previous decade.

- Ethnic diversity and immigration became more widespread between 2001 and 2011, with many more LADs experiencing higher levels of both.

- The rates of increase in ethnic diversity were greatest in LADs where the levels of ethnic diversity were lowest.

- On the majority of indicators, social quality increased between 2001 and 2011. A majority of people reported feeling safe and happy living in their local areas and this increased over the decade.

- It is important to remember that local trust, the indicator most commonly used in the Putnam studies, actually increased over the 2001 to 2011 period.

- The increase in social quality from 2001 to 2011 is linked to growing numbers of people with higher-level qualifications, which in turn is linked to increased immigration.

- Compared with people who are white UK-born, ethnic minority and non UK-born people have higher social quality in terms of social inclusion (trusting parliament and local councils) and empowerment (feeling able to influence decisions about their

local area) and lower social quality in terms of social cohesion (feeling safe in their local area) and social capital (local trust and civic participation).

- The poorer social quality experienced by ethnic minority and immigrant populations on the social cohesion and social capital indicators may be linked to their experiences of racism and racial prejudice, but exploring this connection is beyond the scope of this study.

Despite catastrophic economic decline and regular outbreaks of social unrest, the picture of social quality in England in the decade between 2001 and 2011 is far from gloomy. Social quality was high on most indicators and rose on many. Against a popular discourse of social decline which was strongly linked to increases in immigration, a large majority of people felt safe in their local areas, trusted people in those local areas and trusted institutions such as the police and the local council. On some indicators social quality was lower, trusting parliament, civic participation and feeling able to influence local decisions, and declined over the decade for the last two. But these declines do not counter the general conclusion that social quality in England was high in 2001 and had risen even higher by 2011.

CHAPTER SEVEN: STATISTICAL MODELLING RESULTS

7.1 Explanatory variable effects on social quality outcomes

This chapter presents findings from the statistical modelling. Summary model output is presented for the indicators within each of the four social quality dimensions; social inclusion, social cohesion, empowerment and social capital. The full model output tables are in Annexes One (multi-level models) and Two (single-level models). Discussion of what these findings mean follows in Chapter Eight.

Summary output for each social quality indicator is shown in separate tables. The summary output tables from the eight social quality variables in multi-level models differ from the three tables showing output from the single-level models.

In the multi-level model output tables, the coefficient of the explanatory variable (B) is for the reference year (2001) and is noted in the table as having a non-significant (ns), significant at 0.05 (*) or significant at 0.01(**) effect on the social quality outcome variable, as indicated by the Wald test-equivalent Z score. These tables also show the coefficient of the interaction of the explanatory variable*year, which indicates whether there is a significant additional effect from the explanatory variable on the social quality outcome variable over time. The intra-class correlation (ICC) for the model is shown in the final column. (See Chapter Five, section 5.4. page 169 for explanation of the Wald test-equivalent Z score and the ICC).

In the single-level model output tables, the final column explains the effects on the outcome for those explanatory variables which have a statistically significant effect in the model. These effects are shown in terms of the change in the outcome variable from a one standard deviation increase in the explanatory variable. The standard deviation values for the explanatory variables are given in Table xxvi

(for 2001) and Table xxvii (for 2011) in Chapter Six (pages 237 and 238).

7.2 Model output

7.2.1 The social inclusion dimension

Table xxviii: Trusting parliament: multi-level model summary output

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	-0.539	0.026	-20.518		
Level 2	0.134	0.019	7.011		0.039
CONTROL VARIABLES ONLY					
Cons	-0.465	0.051	-9.115		
Level 2	0.031	0.008	4.060		0.009
ETHNIC DIVERSITY					
Cons	-0.411	0.057	-7.199		
ETHNICDIVERSITY	-0.165	0.151	-1.090	ns	
ETHNICDIVERSITY*2011	0.330	0.148	2.226	*	
Level 2	0.031	0.007	4.151		0.009
IMMIGRATION					
Cons	-0.428	0.062	-6.942		
IMMIGRATION	-0.002	0.003	-0.619	ns	
IMMIGRATION*2011	0.007	0.003	2.853	**	
Level 2	0.030	0.007	4.085		0.009
BLACK IMMIGRATION					
Cons	-0.423	0.055	-7.729		
BLACK IMMIGRATION	-0.003	0.003	-0.788	ns	
BLACK IMMIGRATION*2011	0.011	0.003	3.309	**	
Level 2	0.029	0.007	3.989		0.009
WHITE IMMIGRATION					
Cons	-0.417	0.064	-6.533		
WHITE IMMIGRATION	-0.009	0.008	-1.069	ns	
WHITE IMMIGRATION*2011	0.018	0.007	2.531	*	
Level 2	0.030	0.007	4.156		0.009
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	-0.468	0.072	-6.515		
ED increase	0.000	0.001	0.106	ns	
ED increase*2011	-0.001	0.001	-0.976	ns	
Level 2	0.030	0.007	4.050		0.009
IMMIGRATION RATE OF INCREASE					
Cons	-0.415	0.064	-6.518		
IMM increase	-0.001	0.001	-1.788	ns	
IMM increase*2011	-0.002	0.001	-1.452	ns	
Level 2	0.028	0.007	3.945		0.009

Table xxix: Trusting the local council: multi-level model summary output

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	0.427	0.023	18.553		
Level 2	0.091	0.015	6.061		0.027
CONTROL VARIABLES ONLY					
Cons	-0.024	0.049	-0.490		
Level 2	0.042	0.009	4.710		0.013
ETHNIC DIVERSITY					
Cons	0.130	0.065	2.020		
ETHNIC DIVERSITY	-0.583	0.173	-3.376	**	
ETHNIC DIVERSITY*2011	0.498	0.123	4.046	**	
Level 2	0.040	0.010	4.191		0.012
IMMIGRATION					
Cons	0.127	0.073	1.740		
IMMIGRATION	-0.011	0.004	-2.595	**	
IMMIGRATION*2011	0.010	0.003	3.871	**	
Level 2	0.041	0.009	4.377		0.012
BLACK IMMIGRATION					
Cons	0.100	0.063	1.586		
BLACK IMMIGRATION	-0.013	0.005	-2.523	**	
BLACK IMMIGRATION*2011	0.013	0.003	3.949	**	
Level 2	0.041	0.009	4.332		0.012
WHITE IMMIGRATION					
Cons	0.158	0.079	2.016		
WHITE IMMIGRATION	-0.033	0.012	-2.797	**	
WHITE IMMIGRATION*2011	0.030	0.009	3.388	**	
Level 2	0.039	0.009	4.313		0.012
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	-0.085	0.066	-1.278		
ED increase	0.001	0.001	1.445	ns	
ED increase*2011	-0.002	0.001	-2.227	*	
Level 2	0.042	0.009	4.661		0.013
IMMIGRATION RATE OF INCREASE					
Cons	-0.038	0.063	-0.604		
IMM increase	0.000	0.001	0.151	ns	
IMM increase*2011	-0.002	0.001	-2.026	*	
Level 2	0.042	0.009	4.647		0.013

Table xxx: Trusting the police: multi-level model summary output

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	1.483	0.025	59.084		
Level 2	0.090	0.014	6.384		0.026
CONTROL VARIABLES ONLY					
Cons	1.499	0.048	31.511		
Level 2	0.035	0.010	3.656		0.011
ETHNIC DIVERSITY					
Cons	1.554	0.062	25.146		
ETHNIC DIVERSITY	-0.178	0.150	-1.187	ns	
ETHNIC DIVERSITY*2011	0.317	0.132	2.397	*	
Level 2	0.035	0.010	3.586		0.010
IMMIGRATION					
Cons	1.572	0.067	23.428		
IMMIGRATION	-0.005	0.003	-1.443	ns	
IMMIGRATION*2011	0.006	0.002	2.463	*	
Level 2	0.036	0.010	3.649		0.011
BLACK IMMIGRATION					
Cons	1.552	0.060	26.075		
BLACK IMMIGRATION	-0.005	0.004	-1.257	ns	
BLACK IMMIGRATION*2011	0.008	0.003	2.398	*	
Level 2	0.035	0.010	3.631		0.011
WHITE IMMIGRATION					
Cons	1.648	0.070	23.513		
WHITE IMMIGRATION	-0.027	0.009	-2.938	**	
WHITE IMMIGRATION*2011	0.020	0.007	2.972	**	
Level 2	0.033	0.009	3.613		0.010
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	1.475	0.073	20.172		
ED increase	0.001	0.001	0.403	ns	
ED increase*2011	0.000	0.001	-0.025	ns	
Level 2	0.035	0.010	3.658		0.011
IMMIGRATION RATE OF INCREASE					
Cons	1.598	0.064	24.883		
IMM increase	-0.002	0.001	-2.573	*	
IMM increase*2011	0.000	0.001	-0.257	ns	
Level 2	0.031	0.009	3.401		0.009

The model output for the three social inclusion indicators shows that area-level factors, as indicated by the ICC, have a small effect on social inclusion.

Area-level factors have the largest effect on whether people trust parliament. The ICC for the trusting parliament model with no explanatory variables indicates that around 4% of the unexplained variance in the outcome is due to area-level factors. When area-level control variables are added most of the area-level variance is accounted for and now only 1% of the unexplained variance in the outcome variable is at area-level. Adding the explanatory variables to the model makes no difference to the ICC, so even when the explanatory variables are significant they contribute very little to explaining why trust in parliament varies between LADs.

Area level factors have less effect on whether people trust the local council. The ICC for the trusting local council model with no explanatory variables indicates that less than 3% of the unexplained variance in the outcome is at area-level. When area-level variables are added to the model, around 1% of variance in the outcome remains unexplained at area-level. The addition of the explanatory variables does very little to explain the outcome variance.

Area-level variables have similarly little effect on trusting the police. The ICC for the trusting the police model with no explanatory variables is 0.026. So less than 3% of the variance in the outcome is explained by area-level factors. When area-level variables are included in the model but without explanatory variables, the ICC is 0.011. The explanatory variables make little difference to the ICC for each model.

Ethnic diversity and immigration have differing effects on the three indicators within the social inclusion dimension.

For trusting parliament, none of the explanatory variables has a statistically significant effect in 2001. There is a statistically significant, positive additional effect in 2011 on trusting parliament from ethnic diversity and immigration, including both black and white immigration. The rate of increase in ethnic diversity and immigration has no effect in either year.

For trusting the local council, there is a statistically significant, negative effect from ethnic diversity and immigration in 2001, including from both black and white immigration. These explanatory variables remain statistically significant for the additional 2011 effect, but now have positive effects. However, the size of the positive additional 2011 effects are smaller than the negative 2001 effects, so the overall effects on trusting the council remain negative for 2011. The ethnic diversity rates of increase have no effect on trusting the local council in 2001 and a significant, negative effect in 2011.

For trusting the police, there are no statistically significant effects from ethnic diversity, immigration or the ethnic diversity rate of increase in 2001. There is a negative effect from white immigration (but no significant effect from black immigration) in 2001 and a negative effect from the immigration rate of increase in 2001. The additional 2011 effects on trusting the police are significant and positive for four of the explanatory variables; ethnic diversity, immigration, black immigration and white immigration. For white immigration, the positive 2011 effect is smaller than the negative 2001 effect, so the additional 2011 effect on trusting the police remains negative. There are no significant additional 2011 effects from the ethnic diversity or immigration rates of increase.

7.2.2 The social cohesion dimension

Table xxxi: Voter turnout: single–level model summary output:

	MODEL			Explanatory variable			Effect on outcome variable
	AdjR^2	**F**	**Sig**	**B**	**t**	**Sig**	
2001							
Control variables only	.405	12.201	**				
Ethnic Diversity	.409	11.835	**	0.063	1.778	ns	no effect
Immigration	.403	11.553	**	0.008	0.099	ns	no effect
Black immigration	.404	11.625	**	0.088	0.906	ns	no effect
White immigration	.405	11.667	**	-0.184	-1.136	ns	no effect
ED rate of increase	.403	11.552	**	3.367	0.006	ns	no effect
IMM rate of increase	.404	11.598	**	-0.015	-0.718	ns	no effect
2011							
Control variables only	.650	29.519	**				
Ethnic Diversity	.653	28.360	**	0.038	1.767	ns	no effect
Immigration	.651	28.176	**	-0.072	-1.350	ns	no effect
Black immigration	.650	28.046	**	0.069	1.006	ns	no effect
White immigration	.669	30.456	**	-0.415	-4.001	**	1SD increase in White Imm → 1.64 decrease in voter turnout (-0.415*3.96)
ED rate of increase	.662	29.567	**	-0.022	-3.237	**	1SD increase in EDinc → 0.62 decrease in voter turnout (-0.022*28.00)
IMM rate of increase	.662	29.573	**	-0.018	-3.243	**	1SD increase in IMMinc → 0.63 decrease in voter turnout (-0.018 *34.87)

Table xxxii: Feeling safe: multi-level model summary output

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	1.028	0.029	35.014		
Level 2	0.173	0.017	10.472		0.050
CONTROL VARIABLES ONLY					
Cons	2.071	0.071	29.347		
Level 2	0.096	0.014	6.992		0.028
ETHNIC DIVERSITY					
Cons	1.199	0.169	7.082		
ETHNIC DIVERSITY	1.098	0.208	5.274	**	
ETHNIC DIVERSITY*2011	0.278	0.192	1.447	ns	
Level 2	0.071	0.012	5.834		0.021
IMMIGRATION					
Cons	2.397	0.088	27.304		
IMMIGRATION	-0.026	0.004	-5.910	**	
IMMIGRATION*2011	0.000	0.003	0.069	ns	
Level 2	0.083	0.013	6.140		0.024
BLACK IMMIGRATION					
Cons	2.242	0.084	26.589		
BLACK IMMIGRATION	-0.025	0.005	-4.655	**	
BLACK IMMIGRATION*2011	-0.008	0.004	-1.845	ns	
Level 2	0.079	0.013	6.035		0.024
WHITE IMMIGRATION					
Cons	2.428	0.106	22.820		
WHITE IMMIGRATION	-0.064	0.015	-4.167	**	
WHITE IMMIGRATION*2011	0.008	0.008	0.982	ns	
Level 2	0.094	0.014	6.721		0.028
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	2.141	0.097	22.022		
ED increase	-0.002	0.001	-1.371	ns	
ED increase*2011	0.003	0.001	2.088	*	
Level 2	0.096	0.014	7.014		0.028
IMMIGRATION RATE OF INCREASE					
Cons	2.124	0.086	24.784		
IMM increase	-0.001	0.001	-1.255	ns	
IMM increase*2011	-0.002	0.001	-1.683	ns	
Level 2	0.092	0.014	6.773		0.027

Table xxxiii: Registered charities: single-level model output

	MODEL			Explanatory variable			Effect on outcome variable
	AdjR^2	**F**	**Sig**	**B**	**t**	**Sig**	
2011							Registered charity LAD mean = 3.06, SD = 1.53
Control variables only	.705	41.332	**				
Ethnic Diversity	.705	39.430	**	-0.007	-1.280	ns	No effect
Immigration	.702	38.849	**	-0.008	-0.632	ns	No effect
Black immigration	.702	39.007	**	-0.017	-1.132	ns	No effect
White immigration	.702	38.843	**	0.015	0.605	ns	No effect
ED rate of increase	.706	39.734	**	0.005	2.314	*	1SD increase in EDinc → 0.14 per 1,000 pop increase in Reg Charities (0.005*28.00)
IMM rate of increase	.701	38.787	**	0.000	0.228	ns	No effect

The three social quality indicators within the social cohesion dimension include two with single level data (voter turnout and registered charities) and one with multi-level data (feeling safe).

For voter turnout, the models for 2001 are a reasonable fit; R^2 = .405 for the model with no explanatory variables, indicating that around 40% of the variability in the outcome is explained by the variables in this model. The explanatory variables barely increase the model fit and none are significant. The 2011 models for voter turnout are a better fit, R^2 = .650 for the model with no explanatory variables, indicating that 65% of the variability in voter turnout is explained by the variables in the model. In 2011, white immigration levels and the ethnic diversity and immigration rates of increase all have a significant, negative effect on voter turnout.

The data for registered charities is only available for 2011. The model fit is good, R^2 = .705, indicating that about 70% of the variance in the rate of registered charities by population within LADs is explained by the variables included in the model. The addition of the explanatory variables does not improve the model fit. Aside from a statistically significant positive effect from the ethnic diversity rate of increase, none of the ethnic diversity and immigration explanatory variables has a significant effect on how many registered charities there are by population within local areas.

The multi-level models for feeling safe show that area-level variables account for little of the variance between LADs in whether people feel safe walking on their own in their local area. Without explanatory or control variables the model ICC is 0.050, meaning that about 5% of the unexplained variation in the feeling safe outcome can be attributed to area-level factors. When area-level variables are included in the model, but with no explanatory variables, ICC is 0.029, indicating that about 3% of the unexplained variability in the outcome is attributable to area-level factors that are not in the model. For the model with ethnic diversity, the ICC is 0.022, indicating that with the inclusion of ethnic diversity, approximately 2% of the unexplained variability in the outcome is attributable to area-level factors.

The explanatory variable effects on feeling safe are inconsistent. In 2001, there is significant positive effect from ethnic diversity but significant negative effects from immigration, including from both black and white immigration. The rate of increase explanatory variables are not significant in 2001. None of the explanatory variables has a significant additional effect in 2011 with the exception of the ethnic diversity rate of increase which has a positive effect.

7.2.3: The empowerment dimension

Table xxxiv: Feeling able to influence decisions about the local area: multi-level model summary output

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	-0.349	0.019	-18.172		
Level 2	0.048	0.008	5.931		0.014
CONTROL VARIABLES ONLY					
Cons	0.156	0.045	3.447		
Level 2	0.026	0.007	3.616		0.008
ETHNIC DIVERSITY					
Cons	0.145	0.057	2.531		
ETHNIC DIVERSITY	0.056	0.174	0.324	ns	
ETHNIC DIVERSITY*2011	0.068	0.170	0.402	ns	
Level 2	0.026	0.007	3.598		0.008
IMMIGRATION					
Cons	0.128	0.061	2.086		
IMMIGRATION	0.002	0.003	0.671	ns	
IMMIGRATION*2011	0.000	0.003	0.086	ns	
Level 2	0.026	0.007	3.567		0.008
BLACK IMMIGRATION					
Cons	0.136	0.054	2.501		
BLACK IMMIGRATION	0.003	0.004	0.766	ns	
BLACK IMMIGRATION*2011	0.003	0.005	0.543	ns	
Level 2	0.026	0.007	3.532		0.008
WHITE IMMIGRATION					
Cons	0.112	0.066	1.713		
WHITE IMMIGRATION	0.008	0.009	0.884	ns	
WHITE IMMIGRATION*2011	-0.007	0.008	-0.941	ns	
Level 2	0.026	0.007	3.651		0.008
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	0.181	0.063	2.854		
ED increase	0.000	0.001	-0.529	ns	
ED increase*2011	-0.001	0.001	-0.449	ns	
Level 2	0.026	0.007	3.567		0.008
IMMIGRATION RATE OF INCREASE					
Cons	0.227	0.051	4.463		
IMM increase	-0.002	0.001	-1.815	ns	
IMM increase*2011	0.001	0.001	0.840	ns	
Level 2	0.025	0.007	3.526		0.008

Table xxxv: New business formation: single-level model summary output

	MODEL			Explanatory variable			Effect on outcome variable
	AdjR²	**F**	**Sig**	**B**	**t**	**Sig**	
2001							
Control variables only	.472	15.736	**				
Ethnic Diversity	.471	14.942	**	0.009	0.658	ns	No effect
Immigration	.496	16.430	**	0.119	3.998	**	1 SD increase in Imm → 0.95 per 1000 pop increase in new business formation (0.119*7.96)
Black immigration	.477	15.300	**	0.075	1.997	*	1 SD increase in Black Imm → 0.42 per 1,000 pop increase in new business formation (0.075*5.59)
White immigration	.488	15.941	**	0.199	3.215	**	1SD increase in White Imm → 0.64 per 1,000 pop increase in new business formation (0.199* 3.2)
ED rate of increase	.474	15.129	**	0.004	1.514	ns	No effect
IMM rate of increase	.474	15.114	**	-0.012	-1.465	ns	No effect
2011							
Control variables only	.558	22.356	**				
Ethnic Diversity	.559	21.359	**	0.018	1.263	ns	No effect
Immigration	.565	21.921	**	0.075	2.397	*	1 SD increase in Imm → 0.79 per 1,000 pop increase in new business formation (0.075 * 10.49)
Black immigration	.561	21.598	**	0.065	1.749	ns	No effect
White immigration	.560	21.532	**	0.100	1.583	ns	No effect
ED rate of increase	.559	21.389	**	-0.006	-1.150	ns	No effect
IMM rate of increase	.563	21.782	**	-0.009	-2.143	*	1SD increase in IMMinc → 0.31 per 1,000 pop decrease in new business formation (-0.009*34.87)

There are two social quality indicators in the empowerment dimension: feeling able to influence decisions about the local area, which has a multi-level data structure, and the rate of new business formation in local areas, which has single level data.

Area-level factors have a negligible effect on whether or not people feel they can influence decisions which are made about their local area. The ICC for the model with no explanatory variables is 0.014. That is, only about 1% of unexplained variation in the outcome variable is attributable to area-level factors. With area-level control variables but no ethnic diversity or immigration explanatory variables included the ICC is 0.008, indicating that only 0.8% of unexplained variance is due to area-level factors. The addition of the explanatory variables does not additionally explain variance in this outcome variable and none of the explanatory variables has a significant effect in the models.

New business formation rates appear higher in 2011 than in 2001. The mean for LADs was 4.80 new businesses per 1,000 population in 2001 and 6.72 per 1,000 population in 2011. But the methodology for compiling these statistics changed between 2001 and 2011 so the data are not comparable between the two time points.

The new business formation models have moderate R^2 values. R^2 is .472 in 2001 and .558 in 2011 for the models with control variables only, indicating that without explanatory variables the 2001 model accounts for about 47% and the 2011 model for about 56% of the variability in the outcome. The addition of explanatory variables does very little to improve the model fit.

Ethnic diversity is not significant for new business formation in either 2001 or 2011. Immigration is significant in both years. In 2001, as immigration increases by 1SD (7.96 percentage points) new

business registration increases by 0.95 new businesses per 1,000 population.

7.2.4 The social capital dimension

Table xxxvi: Local trust: multi-level model summary output:

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	1.465	0.043	34.181		
Level 2	0.424	0.035	12.045		0.114
CONTROL VARIABLES ONLY					
Cons	1.737	0.061	28.588		
Level 2	0.132	0.019	6.823		0.039
ETHNIC DIVERSITY					
Cons	1.853	0.092	20.078		
ETHNIC DIVERSITY	-0.763	0.234	-3.261	**	
ETHNIC DIVERSITY*2011	-0.667	0.214	-3.116	**	
Level 2	0.109	0.017	6.280		0.032
IMMIGRATION					
Cons	1.955	0.102	19.204		
IMMIGRATION	-0.020	0.006	-3.579	**	
IMMIGRATION*2011	-0.009	0.004	-2.179	*	
Level 2	0.109	0.016	6.697		0.032
BLACK IMMIGRATION					
Cons	1.796	0.088	20.356		
BLACK IMMIGRATION	-0.016	0.006	-2.447	*	
BLACK IMMIGRATION*2011	-0.019	0.005	-3.984	**	
Level 2	0.114	0.017	6.641		0.034
WHITE IMMIGRATION					
Cons	2.045	0.111	18.374		
WHITE IMMIGRATION	-0.057	0.018	-3.143	**	
WHITE IMMIGRATION*2011	-0.016	0.013	-1.287	ns	
Level 2	0.112	0.017	6.704		0.033
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	1.871	0.089	21.122		
ED increase	-0.003	0.002	-2.207	*	
ED increase*2011	0.007	0.002	3.396	**	
Level 2	0.128	0.019	6.737		0.038
IMMIGRATION RATE OF INCREASE					
Cons	1.882	0.089	21.172		
IMM increase	-0.003	0.002	-2.047	*	
IMM increase*2011	0.004	0.002	1.827	ns	
Level 2	0.128	0.019	6.851		0.037

Table xxxvii: Civic participation: multi-level model summary output

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	-0.638	0.023	-27.719		
Level 2	0.091	0.012	7.432		0.027
CONTROL VARIABLES ONLY					
Cons	0.280	0.048	5.825		
Level 2	0.039	0.007	5.476		0.012
ETHNIC DIVERSITY					
Cons	0.352	0.060	5.856		
ETHNIC DIVERSITY	-0.301	0.190	-1.579	ns	
ETHNIC DIVERSITY*2011	0.096	0.150	0.642	ns	
Level 2	0.039	0.007	5.468		0.012
IMMIGRATION					
Cons	0.385	0.064	6.061		
IMMIGRATION	-0.008	0.004	-2.096	*	
IMMIGRATION*2011	0.002	0.003	0.722	ns	
Level 2	0.037	0.007	5.422		0.011
BLACK IMMIGRATION					
Cons	0.351	0.054	6.484		
BLACK IMMIGRATION	-0.009	0.005	-1.904	ns	
BLACK IMMIGRATION*2011	0.003	0.004	0.657	ns	
Level 2	0.037	0.007	5.409		0.011
WHITE IMMIGRATION					
Cons	0.350	0.069	5.101		
WHITE IMMIGRATION	-0.013	0.010	-1.257	ns	
WHITE IMMIGRATION*2011	0.000	0.008	-0.004	ns	
Level 2	0.039	0.007	5.469		0.012
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	0.280	0.070	3.968		
ED increase	0.000	0.001	0.005	ns	
ED increase*2011	0.000	0.001	0.121	ns	
Level 2	0.039	0.007	5.476		0.012
IMMIGRATION RATE OF INCREASE					
Cons	0.276	0.061	4.555		
IMM increase	0.000	0.001	-0.158	ns	
IMM increase*2011	-0.002	0.001	-2.214	*	
Level 2	0.039	0.007	5.384		0.012

Table xxxiii: Watching a lot of TV: Multi-level model summary output

	B	SE	Z	SIG	ICC
VARIANCE COMPONENTS MODEL					
Cons	-0.160	0.027	-5.995		
Level 2	0.080	0.014	5.867		0.024
CONTROL VARIABLES ONLY					
Cons	-0.702	0.061	-11.423		
Level 2	0.036	0.009	4.068		0.011
ETHNIC DIVERSITY					
Cons	-0.699	0.072	-9.757		
ETHNIC DIVERSITY	-0.016	0.194	-0.084	ns	
Level 2	0.036	0.009	4.074		0.011
IMMIGRATION					
Cons	-0.716	0.075	-9.513		
IMMIGRATION	0.001	0.004	0.268	ns	
Level 2	0.036	0.009	4.039		0.011
BLACK IMMIGRATION					
Cons	-0.706	0.068	-10.328		
BLACK IMMIGRATION	0.001	0.005	0.102	ns	
Level 2	0.036	0.009	4.058		0.011
WHITE IMMIGRATION					
Cons	-0.756	0.078	-9.633		
WHITE IMMIGRATION	0.011	0.010	1.088	ns	
Level 2	0.035	0.009	3.932		0.011
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	-0.667	0.082	-8.149		
ED increase	0.000	0.001	-0.625	ns	
Level 2	0.036	0.009	4.025		0.011
IMMIGRATION RATE OF INCREASE					
Cons	-0.690	0.073	-9.442		
IMM increase	-0.001	0.002	-0.293	ns	
Level 2	0.036	0.009	4.074		0.011

There are three social quality indicators in the social capital dimension, all with multi-level data structures; local trust, civic participation and watching a lot of TV.

Area-level factors have a substantial effect on local trust. Before control or explanatory variables are added to the model, the ICC is 0.114 indicating that about 11% of the unexplained variation in the

outcome is due to area-level factors. When control variables are added to the model the ICC is 0.039, so more than half of the area-level effect on local trust is explained by inclusion of the variables for crime rate, deprivation and higher-level qualifications. The addition of the explanatory variables has an effect on the ICC, particularly for ethnic diversity (ICC for this model is 0.032) and immigration (ICC for this model is 0.032) and so makes some contribution to explaining variation in the local trust outcome.

Area-level factors make a greater contribution to explaining local variance in local trust than for the other indicators of social capital. They make little difference to variation in civic participation. The ICC for the civic participation model with no control or explanatory variables is 0.027; that is, about 3% of the unexplained variance in the outcome is due to area-level factors. When area-level variables are included, but with no explanatory variables, ICC is 0.012, so the inclusion of the area-level variables has helped explain some of the variation in the outcome. But the addition of explanatory variables makes very little difference to the ICC, indicating that these variables are not doing much to explain area-level variance in civic participation. Similarly for TV watching. The ICC for the TV watching model with no control or explanatory variables is 0.024, reducing to 0.011 when control variables are introduced to the model, but with no further reduction when the ethnic diversity and immigration variables are added.

The explanatory variables have a significant and substantial effect on local trust but very little or no effects on the other indicators of social capital. There are no statistically significant explanatory variable effects on civic participation other than a negative effect from immigration in 2001 and a negative effect from the immigration rate of increase in 2011. The 2001 negative effect from immigration is significant only at the 0.05 level of probability and neither black immigration nor white immigration alone has a statistically significant

effect. The data for TV viewing is only available for 2001. None of the explanatory variables has a significant effect on whether or not people report watching a lot of TV.

Local trust is negatively affected by the area-levels of ethnic diversity and, to a smaller degree, immigration. These negative effects occur in both 2001 and 2011. The negative effect of immigration appears more strongly associated with black immigration, which has a statistically significant negative effect on local trust in 2001 and 2011, than white immigration, which has a negative effect in 2001 but no additional effect in 2011. The ethnic diversity rate of increase and immigration rate of increase both have a significant, negative effect on local trust in 2001. There is no significant additional 2011 effect from the immigration rate of increase but the 2011 additional effect from ethnic diversity rate of increase on local trust is a positive one.

7.3 Summary of findings

With each of the six explanatory variables modelled for each of the eleven social quality outcome variables, some in multi-level models combining data for both years and some in single-level models with separate data for 2001 and 2011, the final output gives 120 results, which are complex to keep track of. In the discussion of the findings from the statistical modelling, which follows in Chapter Eight, summary tables which distil and illustrate the findings are presented.

In all of the summary tables, a statistically significant effect from the explanatory variable on the outcome variable is marked as ‘Pos’ or ‘Neg’ depending on the direction of the effect. The “2001” column shows whether the explanatory variable has a statistically significant effect on the outcome variable. The “Additional effect 2011” column shows the change to the explanatory variable effect when the coefficient for the explanatory variable*year is added. It is worth remembering that in some cases the direction of the 2011 additional

effect is opposite to that of the 2001 effect, and that when these are summed the overall effect on the outcome may remain as for 2001; for example, this happens for the effects of ethnic diversity and immigration on trusting the local council, where the positive additional effects in 2011 are generally smaller than the negative effects in 2001, so the overall effects from ethnic diversity and immigration on the local council in 2011 remain negative.

A summary table in this format for all 120 results is shown on the following page, in Table xxxx.

Table xxxix, below, provides a prompt for how the summary tables should be interpreted.

Table xxxix: How to interpret the summary tables

"2001" column		**"Additional effect 2011" column (Add effect)**	
Table shows	**Interpretation**	**Table shows**	**Interpretation**
Ns	The explanatory variable has no effect on the outcome variable	Ns	Over time, there is no change to the 2001 effect
Pos	The explanatory variable has a significant positive effect on the outcome variable	Pos	Over time, there is a significant, positive change to the 2001 effect
Neg	The explanatory variable has a significant negative effect on the outcome variable	Neg	Over time, there is a significant, negative change to the 2001 effect
*	Effect is statistically significant at 0.05 level of probability		
**	Effect is statistically significant at 0.01 level of probability		

Table xxxx: Summary of all findings: effects of all explanatory variables on all social quality indicators

	Ethnic diversity		Immigration		Black IMM		White IMM		ED rate of increase		IMM rate of increase	
	2001	**Add effect 2011**	**2001**	**Add effect 2011**	**2001**	**Add effect 2011**	**2001**	**Add effect 2011**	**2001**	**Add effect 2011**	**2001**	**Add effect 2011**
Social inclusion												
Trusting parliament	ns	Pos*	ns	Pos**	ns	Pos**	ns	Pos*	ns	ns	ns	ns
Trusting council	Neg**	Pos**	Neg**	Pos**	Neg**	Pos**	Neg**	Pos**	ns	Neg*	ns	Neg*
Trusting the police	ns	Pos*	ns	Pos*	ns	Pos*	Neg**	Pos**	ns	ns	Neg*	ns
Social cohesion												
Voter turnout	ns	ns	ns	ns	ns	ns	ns	Neg**	ns	Neg**	ns	Neg**
Feeling safe	Pos**	ns	Neg**	ns	Neg**	ns	Neg**	ns	ns	Pos*	ns	ns
Reg charities	No data	ns	No data	ns	No data	ns	No data	ns	No data	Pos*	No data	ns
Empowerment												
Influencing	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
New business[a]	ns	ns	Pos**	Pos*	Pos*	ns	Pos**	ns	ns	ns	ns	Neg*
Social capital												
Local trust	Neg**	Neg**	Neg**	Neg*	Neg*	Neg**	Neg**	ns	Neg*	Pos**	Neg*	ns
Civic participation	ns	ns	Neg*	ns	ns	ns	ns	ns	ns	ns	ns	Neg*
Watching a lot of TV	ns	No data	ns	No data	ns	No data	ns	No data	ns	No data	ns	No data

[a] The new business variable is not comparable between the time points so caution is needed when considering the additional effects over time for this outcome.

CHAPTER EIGHT: DISCUSSION OF FINDINGS

This chapter considers what the data modelling results can tell us about the effects of ethnic diversity and immigration on social quality. Firstly, this section discusses the findings in relation to the primary research questions:

1. Do ethnic diversity and immigration have any effects on a range of indicators of social quality in local areas of England?

2. Do any effects from ethnic diversity and immigration on social quality change over time?

The chapter then considers what the modelling results tell us in two areas which are not primary research questions, but where the research design and data have generated interesting findings:

- Do levels of immigration by black and white ethnic groups have different effects on social quality?

- Do ethnic diversity and immigration have differing effects on social quality measured at individual-level and area-level?

The chapter moves on to consider what factors other than ethnic diversity and immigration might help to explain why social quality outcomes vary between local areas. The chapter ends by exploring whether the modelling results make sense within the dimensions of the social quality framework, or if arranging the social quality indicators within other groups helps to better explain the pattern of results.

8.1 The effects of ethnic diversity and immigration on social quality

Ethnic diversity and immigration have an effect on some but not all of the selected indicators of social quality. These effects are mixed; ethnic diversity and immigration have a positive effect on some aspects of social quality and a negative effect on others. These effects are summarised in Table xxxxi.

Table xxxxi: Summary of findings: effects of ethnic diversity and immigration on social quality indicators

	Ethnic diversity			Immigration	
	2001	Add effect 2011		2001	Add effect 2011
Social inclusion					
Trusting parliament	ns	Pos**		ns	Pos**
Trusting the local council	Neg**	Pos**		Neg**	Pos**
Trusting the police	ns	Pos*		ns	Pos*
Social cohesion					
Voter turnout	ns	ns		ns	ns
Feeling safe	Pos**	ns		Neg**	ns
Registered charities	no data	ns		no data	ns
Empowerment					
Influencing	ns	ns		ns	ns
New business formation	ns	ns		Pos**	Pos*
Social capital					
Local trust	Neg**	Neg**		Neg**	Neg**
Civic participation	ns	ns		Neg*	ns
Watching a lot of TV	ns	no data		ns	no data

There are more non-significant effects than significant effects from ethnic diversity, but the effects from immigration are as likely to be significant as non-significant. For both ethnic diversity and immigration, the effects which are statistically significant are almost evenly divided between positive and negative.

There is no clear pattern of effects from ethnic diversity and immigration across the four social quality dimensions. Within the social inclusion and social cohesion dimensions, ethnic diversity and immigration have all possible effects (positive, negative and none). Ethnic diversity has no effects in the empowerment dimension, while immigration has no effects and positive effects on the indicators in this dimension. In the social capital dimension, ethnic diversity and immigration have negative effects or no effects on the social quality indicators.

The effects of ethnic diversity and immigration differ in frequency. More social quality outcomes have statistically significant effects from immigration than from ethnic diversity. As Table xxxxi illustrates, ten out of 20 results are statistically significant in the immigration models compared with seven out of 20 results for the ethnic diversity models. For two social quality indicators, ethnic diversity has no effect while immigration shows a significant effect; ethnic diversity has no effect on new business formation or civic participation in either year while immigration has a significant positive effect on new business formation in both years and a significant negative effect on civic participation in 2001.

The effects of ethnic diversity and immigration on social quality are generally the same as each other. Neither have any effect on voter turnout, the number of registered charities, feeling able to influence local decisions, or watching a lot of TV. Both have negative effects on trusting the local council in 2001 and positive effects in 2011. Both have a positive effect on trusting parliament and trusting the police in 2011, having no effect in 2001. Both have a negative effect on local trust in both 2001 and 2011.

The one notable difference between the effects of ethnic diversity and immigration is the positive effect of ethnic diversity and the negative effect of immigration on feeling safe in 2001. This result is anomalous to the similar direction of any statistically significant

effects from ethnic diversity and immigration on all other social quality outcomes. The same direction of effects is consistent with the high positive correlation between the ethnic diversity and immigration explanatory variables (r=.911 in 2001). It is therefore difficult to explain why the significant effects from ethnic diversity and immigration on feeling safe are in opposing directions. This indicator of social quality has not been used in previous studies in this field (see Table ii on page 99 for a list of the outcome variables used in the Putnam studies) so there is no empirical research which offers an explanation for this unexpected result. The 2011 effects for this outcome are consistent; neither ethnic diversity nor immigration has any significant additional effect on feeling safe. This means that the increases in ethnic diversity and immigration from 2001 to 2011 make no difference to their effect on feeling safe, which remain positive for ethnic diversity and negative for immigration.

Area-level effects on individual-level social outcome variables

For the social quality outcomes which are measured at individual-level, the area-level variables in the multi-level models explain very little of the variance in social quality outcomes, with the exception of the local trust indicator.

Table xxxxii shows the ICC for the models with no predictor variables (in column a), with control variables only (column b) and with the ethnic diversity variable included (column c) (ICCs for the models with immigration variables are not included in this table as the values are identical or very close to those for the models with ethnic diversity). The ICC is expressed as a percentage which indicates approximately how much of the Level 2 variance between LADs is unexplained by the area-level variables included in the model. The ICC values in column a, where there are no area-level variables, indicates the proportion of all variability between LADs that is attributed to Level 2. Any reduction from column a to column b is a measure of how much Level 2 variance is accounted for by the

addition of the area-level control variables. A reduction from column b to column c indicates how much Level 2 variance is accounted for when the ethnic diversity explanatory variable is added to the model.

The ICC values in column a show that area-level factors are least relevant for explaining the variability between LADs in feeling able to influence local decisions and have most relevance for local trust. Comparing the values in column c with those in column b shows that ethnic diversity goes some way to explaining outcome variance for feeling safe and local trust, but has no or negligible effects on the other indicators. The ICC for local trust remains high even when the control and ethnic diversity variables are included, indicating that there are other area-level factors, not included in this study, which help to explain the variance in local trust.

Table xxxxii: Summary of intra class correlations for multi-level models

Social quality outcome	**a** **No predictor variables**	**b** **Control variables only**	**c** **Ethnic diversity added**
Trusting parliament	3.9%	0.9%	0.9%
Trusting the local council	2.7%	1.3%	1.2%
Trusting the police	2.6%	1.1%	1.0%
Feeling safe	5.0%	2.8%	2.1%
Feeling able to influence local decisions	1.4%	0.8%	0.8%
Local trust	11.4%	3.9%	3.2%
Civic participation	2.7%	1.2%	1.2%
Watching a lot of TV	2.4%	1.1%	1.1%

Area-level effects on area-level social outcome variables

For the social quality outcomes measured at area-level, the only significant effects are from immigration, which has a positive effect on new business formation in 2001 and a weaker but still positive effect in 2011. Ethnic diversity has no effect on the social quality outcomes measured at area-level.

Effect sizes

To consider the relative sizes of the effects which ethnic diversity and immigration have on social quality, Table xxxxiii shows the effect sizes in a comparable format. These effect sizes are calculated by multiplying the coefficient by one standard deviation (SD) in the explanatory variable. For the multi-level modelled data, taking ethnic diversity as an example, the effect size of ethnic diversity (ED) is shown as:

For 2001: $\beta_{ED} * 1SD_{ED}$

For 2011: $(\beta_{ED} + \beta_{ED}*_{2011}) * 1SD_{ED}$

Only explanatory variables which have statistically significant effects on the social quality outcomes are included in Table xxxxiii. New business formation, while having statistically significant effects from immigration, is excluded from this table because the effect sizes are not comparable with those for the multi-level modelled outcomes.

Table xxxxiii: Effect sizes of ethnic diversity and immigration for explanatory variables with significant effects on outcome variables

	Ethnic diversity		Immigration	
	2001	**2011**	**2001**	**2011**
Trusting parliament	ns	3.107	ns	0.052
Trusting local council	-9.060	-1.601	-0.088	-0.010
Trusting police	ns	2.617	ns	0.010
Feeling safe	17.063	nsc	-0.207	nsc
Local trust	-11.857	-26.927	-0.159	-0.302
Civic participation	ns	nsc	ns	-0.062

ns = not statistically significant nsc = no statistically significant change from 2001

Table xxxxiii shows that any significant effects from ethnic diversity and immigration on the social quality outcomes, whether positive or negative, are generally small. There are three exceptions to this, where effect sizes are much larger: the negative effect of ethnic diversity on local trust; the positive effect of ethnic diversity on feeling

safe, the negative effect of ethnic diversity on trusting the local council. For the social quality outcomes where both have an effect, the effects of ethnic diversity are much larger than the effects of immigration.

Another way to illustrate and compare the sizes of the ethnic diversity and immigration effects is to consider how they affect the predicted probabilities of the social quality outcomes occurring, using the method described in Chapter 5 (page 172). Table xxxxiv shows predicted probabilities for the three social quality outcomes in multi-level models where the explanatory variables have the greatest effect: trusting the council, feeling safe, local trust. The predicted probabilities are of the outcome occurring for the reference group (male, white, UK born, employed, with degree level qualification) when a local area takes the sample mean values for all variables in the model and the ethnic diversity and immigration values of the case study areas. The intention is to illustrate the size of the explanatory variable effects in a comparable way by holding all other values constant and varying only the value of the explanatory variables from very low (using the ethnic diversity and immigration values for Allerdale), median (using the values for Eastleigh), to very high (using the values for Newham).

Table xxxxiv illustrates that the predicted probabilities for the reference group without adding the explanatory variable values (the zero rows) are markedly different for the three social quality outcomes. The reference group predicted probability of trusting the local council is only 39% in 2001; someone in the reference group is more likely to not trust the local council than to trust the local council. In contrast, the predicted probability of feeling safe in the zero explanatory variable value case is very high; someone in the reference group has a 91% probability of feeling safe in their local area in 2001, rising to 93% in 2011.

Table xxxxiv: Reference group predicted probabilities for selected outcomes

Explanatory variable value	ETHNIC DIVERSITY		IMMIGRATION	
	2001	2011	2001	2011
Trusting the local council				
Zero	38.88	56.98	52.90	58.53
Very low (Allerdale)	28.41	53.49	52.69	58.51
Average (Eastleigh)	2.79	35.15	51.86	58.46
Very high (Newham)	0.00	0.10	43.12	57.96
Feeling safe				
Zero	90.86	92.78	91.46	92.57
Very low (Allerdale)	96.03	99.21	91.30	92.27
Average (Eastleigh)	99.97	100.00	90.63	91.39
Very high (Newham)	100.00	100.00	80.48	76.45
Local trust				
Zero	74.84	72.84	87.38	91.85
Very low (Allerdale)	61.58	19.98	87.21	91.48
Average (Eastleigh)	4.88	0.00	86.50	90.40
Very high (Newham)	0.00	0.00	76.86	71.48

The predicted probabilities change substantially when the values of ethnic diversity in the case study areas are added, and change to a much lesser degree with the values of immigration in the case study areas are added. For local trust, for example, the negative effect of ethnic diversity reduces the 2001 predicted probability from 75% when there is zero ethnic diversity, to 62% when the very low ethnic diversity area value from Allerdale is added, and to 5% when the median ethnic diversity area value (as represented by Eastleigh) is added. When the very high ethnic diversity value of Newham is added, the predicted probability of local trust falls to zero.

The large effect of ethnic diversity on local trust contrasts with the small effect size of immigration on local trust. Even when immigration takes the highest local area value (as for Newham), the predicted probability of local trust in 2001 falls only from 87% to 77% due to the effect of immigration.

For the social quality outcomes measured at area-level, only business formation is significantly affected by the explanatory variables. Table xxxv in Chapter Seven (page 263) showed that the 2001 model predicts a 0.95 per 1,000 population increase in new business formation from each one standard deviation increase in immigration. The actual mean business formation rate for LADs in 2001 is 4.80, so an increase of almost one new business per 1,000 population can be considered a fairly large effect.

The size of the immigration effect on new business formation can be illustrated in terms of the predicted number of new businesses in an LAD with average population and an immigration level equal to one standard deviation. The 2001 LAD average population is 150,733 and the standard deviation for immigration is 7.96. The model predicts that in 2001 an LAD with average population size and an immigration level of 7.96 would have 143 new businesses more than if the immigration level was zero ((150,733*0.95)/1,000). In 2011 the level of immigration still has a positive effect although the size of the effect is smaller (0.79 new businesses per 1,000 population, compared with 0.95 in 2001). To illustrate, despite the increase in the LAD mean population size from 150,733 in 2001 to 163,093 in 2011, the model predicts 129 additional new businesses in 2011 (as calculated by (163,093*0.79)/1,000).

Summary of ethnic diversity and immigration effects on social quality

To summarise the findings for the effects of ethnic diversity and immigration on the social quality indicators:

- Ethnic diversity and immigration have an effect on some but not all of the social quality indicators. Where there is a statistically significant effect, the direction of the effect is varied; some social quality outcomes are positively affected by ethnic diversity and immigration while others are negatively affected.

- Significant effects from ethnic diversity and immigration are as likely to be positive as negative.

- There are more significant effects from immigration than from ethnic diversity.

- When both have a significant effect on the same outcome, the effects of ethnic diversity are substantially larger than those from immigration.

- There is no clear pattern of effects from ethnic diversity and immigration across the four dimensions of the social quality framework. The social inclusion and social cohesion dimensions include non-significant as well as significant positive and significant negative effects. The empowerment dimension includes non-significant and positive effects. The social capital dimension includes non-significant and negative effects.

- For the social quality outcomes measured at individual-level, area-level factors are generally not of great importance in explaining variance between LADs. Area-level factors have the most relevance for explaining variations in local trust. The area-level factors included in this study do not explain all of the variance in local trust.

- For the social quality outcomes measured at area-level, immigration has a positive effect on new business formation. No other area-level indicators of social quality are affected by ethnic diversity or immigration. The effect of immigration on new business formation appears fairly large, but there are no other statistically significant effects with which to compare this.

8.2 The temporal effects of ethnic diversity and immigration on social quality

In this study, the effects of ethnic diversity and immigration on social quality over time are measured in two ways; by comparing the effects of levels of ethnic diversity and immigration in 2001 with the effects of levels in 2011, and by looking at the effects of the rates of increase in ethnic diversity and immigration in the 10 years to 2001 and the 10 years to 2011. In the following discussion, levels of ethnic diversity and immigration are also sometimes referred to as 'stocks' and the rates of increase sometimes referred to as 'flows'.

Comparing effects of levels in 2001 and 2011

When the effects of levels of ethnic diversity and immigration are compared for 2001 and 2011, the direction of change over the time period can be considered to be either positive or negative. Where a negative effect is greater in 2011 than in 2001, this can be considered a negative change over time. Conversely, a negative effect which is weaker in 2011 than in 2001 can be considered a positive change over time. Where there is no significant effect in 2001 and a positive effect in 2011, this can be considered a positive change over time. The changes over time for effects from levels of ethnic diversity and immigration are summarised in Table xxxxv. Table xxxxv excludes the social quality outcomes which cannot be compared over time (registered charities, new business formation, watching a lot of TV).

When considered in terms of direction of change over time, there is a clear pattern of effects across the four social quality dimensions and this pattern is the same for the effects of ethnic diversity and immigration. The effects of ethnic diversity and immigration on social inclusion move in a positive direction over time. The effects of ethnic diversity and immigration on social capital move in a negative direction over time, although not entirely as their effects on the civic

participation indicator of social capital are unchanged over time. There is no change over time from the effects of ethnic diversity and immigration on indicators in the social cohesion and empowerment dimensions.

Table xxxxv: Summary of findings: Direction of change over time

	Ethnic diversity		**Immigration**	
Social inclusion				
Trusting parliament	No effect becomes positive	+ve	No effect becomes positive	+ve
Trusting local council	Negative effect becomes less negative	+ve	Negative effect less negative	+ve
Trusting the police	No effect becomes positive	+ve	No effect becomes positive	+ve
Social cohesion				
Voter turnout	No effect no change		No effect no change	
Feeling safe	Positive effect no change		Negative effect no change	
Empowerment				
Influencing	No effect no change		No effect no change	
Social capital				
Local trust	Negative effect increases	-ve	Negative effect increases	-ve
Civic participation	No effect no change		Negative effect no change	

Rates of increase in ethnic diversity and immigration

A measure of change over time is included in the modelling in the form of the rate of increase in ethnic diversity and immigration within LADs. Table xxxxvi summarises the effects on social quality from the rates of increase in ethnic diversity and immigration in local areas in 2001 and the additional effect for 2011.

Table xxxxvi shows that where the ethnic diversity rate of increase has a significant effect on social quality outcomes, these effects are both positive and negative. In contrast, where the immigration rate of increase has a significant effect, the effect is always negative.

The effects of the rate of increase variables are generally consistent with the level of ethnic diversity and immigration variables in terms of whether or not they have any effect on the social quality outcomes. Like the levels of ethnic diversity and immigration, the rates of increase in ethnic diversity and immigration have no effect on TV watching or on whether people feel they can influence decisions about their local area.

Table xxxxvi Summary findings: Effects of ethnic diversity and immigration rates of increase compared over time

	Ethnic diversity rate of increase			Immigration rate of increase	
	2001	Add effect 2011		2001	Add effect 2011
Social inclusion					
Trusting parliament	ns	ns		ns	ns
Trusting council	ns	Neg*		ns	Neg*
Trusting police	ns*	ns		Neg*	ns
Social cohesion					
Voter turnout	ns	Neg**		ns	Neg**
Feeling safe	ns	Pos*		ns	ns
Registered charities	n/a	Pos*		n/a	ns
Empowerment					
Influencing	ns	ns		ns	ns
New business formation	ns	ns		ns	Neg*
Social capital					
Local trust	Neg*	Pos**		Neg*	ns
Civic participation	ns	ns		ns	Neg*
Watching a lot of TV	ns	ns		ns	n/a

In a similar way to the levels of ethnic diversity and immigration, the effects of ethnic diversity and immigration rates of increase are almost but not entirely consistent with each other. Ethnic diversity and immigration rates of increase both have a significant negative effect in 2011 on trusting the local council and voter turnout, having shown no significant effect in 2001. Both have a negative effect on local trust in 2001, with no significant additional effect in 2011 on this outcome from immigration rate of increase, but a positive effect from

ethnic diversity rate of increase. The rate of change in ethnic diversity has a positive effect on feeling safe and registered charities in 2011 only, while the immigration rate of increase has a negative effect on new business formation in 2011 only.

The effects of the rate of increase in ethnic diversity and immigration are different from the effects from levels of ethnic diversity and immigration, but not in any clear or consistent ways, as illustrated in Table xxxxvii.

Table xxxxvii Summary findings: Effects of ethnic diversity and ethnic diversity rates of increase

	Ethnic diversity		ED rate of increase			Immigration		IMM rate of increase	
	2001	Add effect 2011	2001	Add effect 2011		2001	Add effect 2011	2001	Add effect 2011
Social inclusion									
Trust parl	ns	Pos*	ns	ns		ns	Pos**	ns	ns
Trust council	Neg**	Pos**	ns	Neg*		Neg**	Pos**	ns	Neg*
Trust police	ns	Pos*	ns	ns		ns	Pos*	Neg*	ns
Social cohesion									
Voter turnout	ns	ns	ns	Neg**		ns	ns	ns	Neg*
Feel safe	Pos**	ns	ns	Pos*		Neg**	ns	ns	ns
Reg chars	no data	ns	no data	Pos*		no data	ns	no data	ns
Empowerment									
Influence	ns	ns	ns	ns		ns	ns	ns	ns
New bus	ns	ns	ns	ns		Pos**	Pos*	ns	Neg*
Social capital									
Local trust	Neg**	Neg**	Neg*	Pos**		Neg**	Neg*	Neg*	ns
Civic part	ns	ns	ns	ns		Neg*	ns	ns	Neg*
Watch TV	ns	no data	ns	no data		ns	no data	ns	no data

Neither rates of increase nor levels have any effects on the watching TV and influencing local decisions outcomes. For the social quality outcomes which are most frequently affected by the explanatory variables – local trust and trusting the local council – there are

consistent effects from ethnic diversity and immigration but differences in the effects from levels and rates of change.

A comparison of the relative size of effects on social quality from levels and rates of change in ethnic diversity and immigration is shown in Table xxxxviii where the coefficients for explanatory variables which have a significant effect on the social quality outcomes are multiplied by one standard deviation in the explanatory variable. It is important to remember that the effect sizes on social quality indicators measured at area-level (voter turnout, registered charities and new business formation) are not comparable with those measured at individual-level. Only social quality outcomes for which the explanatory variables have significant effects are included Table xxxxviii.

Table xxxxviii: Effect sizes for levels and rates of change in ethnic diversity and immigration

	Ethnic diversity level		**ED rate of increase**			**Immigration level**		**IMM rate of increase**	
	2001	**Add effect 2011**	**2001**	**Add effect 2011**		**2001**	**Add effect 2011**	**2001**	**Add effect 2011**
Social quality outcomes measured at individual-level									
Trust parl	ns	3.107	ns	ns		ns	0.052	ns	ns
Trust council	-9.060	1.601	ns	-0.028		-0.088	0.010	ns	-0.070
Trust police	ns	2.617	ns	ns		ns	0.010	-0.025	ns
Feel safe	17.063	ns	ns	0.028		-0.207	ns	ns	ns
Local trust	-11.857	-26.927	-0.281	0.112		-0.159	-0.302	-0.038	ns
Civic part	ns	ns	ns	ns		ns	-0.062	ns	-0.070
Social quality outcomes measured at area-level									
Voting	ns	ns	ns	0.000		ns	ns	ns	-4.882
Reg chars	No data	ns	No data	2.352		No data	ns	No data	ns
New bus	ns	ns	ns	ns		3.439	2.561	ns	-3.348

There are few cases where it is possible to compare effect sizes on outcomes from the rate of increase with the effects size from the level of ethnic diversity or immigration. Where this is possible for ethnic diversity effects, the levels of ethnic diversity have a far

greater effect than the rate of increase in ethnic diversity, as can be seen in Table xxxxviii in their effects on local trust. Where comparisons for immigration are possible, for their effects on trusting the local council and civic participation in 2011 for example, the effects from level and rate of increase are similar in size to each other, and all are relatively small. Comparable effect sizes can also be seen for immigration on new business formation in 2011 where the size effect of the immigration level is similar to the size of the immigration rate of increase effect, although these are in opposite directions.

The levels and the rates of increase have opposite effects on some variables in a small number of cases. There are 34 pairings of level and rate of increase which are directly comparable (17 each for ethnic diversity and immigration), of which four pairs show significant and opposite effects. These are:

- Ethnic diversity on trusting the council in 2011 (positive for level and negative for rate of increase);
- Immigration on trusting the council in 2011 (positive for level and negative for rate of increase);
- Ethnic diversity on local trust in 2011 (negative for level and positive for rate of increase);
- Immigration on new business formation in 2011 (positive for level and negative for rate of increase).

Where ethnic diversity level and rate of increase have opposite effects on the same social quality outcomes, the size of the effect for the level is greater than the size of the effect for rate of increase. Where there are opposing effects from levels and rates of increase in immigration, the effect sizes are similarly very small on trusting the local council, and similarly reasonably large on new business formation.

To explore the opposite effects of stocks and flows in ethnic diversity and immigration, both explanatory variables were included in single models for those outcome variables where they showed opposite effects. Summary output from this modelling is shown in Table il.

Table il: Level and rate of increase variables in the same model

	B	SE	Z	SIG
Ethnic diversity and ED rate of increase on trusting the local council, 2011				
Cons	-0.006	0.063	-0.102	
ED*2011	0.275	0.106	2.590	**
ED rate of increase	0.000	0.001	-0.059	ns
Immigration and IMM rate of increase on trusting the local council, 2011				
Cons	0.016	0.058	0.270	
IMM*2011	0.006	0.002	3.115	**
IMM rate of increase	-0.001	0.001	-0.937	ns
Ethnic diversity and ED rate of increase on local trust, 2011				
Cons	1.718	0.082	21.000	
ED*2011	-0.903	0.176	-5.120	**
ED rate of increase	-0.001	0.001	-0.836	ns
Immigration and IMM rate of increase on new business formation, 2011				
Cons	-8.006	2.602	-3.077	
IMM 2011	.074	.031	.017	*
IMM rate of increase 2011	-0.009	.004	.033	*

When modelled together with the level of ethnic diversity or immigration, the statistically significant effects from the rate of increase disappear for all but the new business formation outcome. This is consistent with the relative size of the effects (as shown in Table xxxxviii), which tend to be greater for levels than for rates of increase, but are similar in size of their effect on the new business formation outcome.

Predicting future ethnic diversity and immigration effects

Comparing the results of the statistical models for 2001 and 2011 only tells us the direction of change in the relationship between the

explanatory and the outcome variable. It cannot tell us the path of travel in this relationship from the 2001 time point to the 2011 time point. Because we do not know the path of travel, we cannot know if the effects of ethnic diversity or immigration on the social quality outcomes will continue in the positive or negative direction shown in the change from 2001 to 2011.

The limitations of the time series data available for this study mean that very little can be said about the longer term, future direction of the relationship between the explanatory and outcome variables. More data for the years in between 2001 and 2011 would give more clues as to how to plot the likely line of travel beyond 2011, as of course would data for the post-2011 years. In the absence of such additional data, the temporal analysis within this study is confined only to the change from 2001 to 2011 and cannot indicate the trajectory of that change or predict its future path.

Summary of temporal effects

To summarise the findings on the changing effects over time from ethnic diversity and immigration:

- Comparing the effects from levels of ethnic diversity and immigration on social quality indicators in 2001 and 2011 shows a clear pattern of change over time across the four dimensions of the social quality framework. The effects from ethnic diversity and immigration levels move in a positive direction for social inclusion, in a negative direction for social capital, with no change over time for social cohesion and empowerment.

- The same social quality indicators which are affected by ethnic diversity and immigration stocks are also affected by ethnic diversity and immigration flows, with some exceptions. Some indicators of social quality are unaffected by either increasing stocks or flows. Feeling able to influence local decisions and TV

watching are not affected at all, while trusting parliament, registered charities and civic participation are largely unaffected.

- The rates of increase in ethnic diversity and immigration have significant effects on fewer indicators of social quality than the levels of ethnic diversity and immigration.

- Where immigration rates of increase have a significant effect on social quality outcomes, these effects are always negative. Significant effects from ethnic diversity rates of increase are both negative and positive.

- The levels of ethnic diversity and immigration and the rates of increase in ethnic diversity and immigration have opposite effects on some indicators of social quality; trusting the local council, local trust and new business formation.

- Because the effects from levels are greater than the effects from rate of increase, when levels and rates of increase are modelled together, the level of ethnic diversity or immigration continues to have a statistically significant on trusting the local council and local trust, but the effect from the rate of increase disappears. The effect of immigration levels and rates on new business formation is an exception here.

- The scope of temporal analysis is limited by the availability of comparable data at only two time points. It is not possible to derive longer term projections of the relationships between ethnic diversity or immigration and the social quality outcomes from the available data.

8.3 Additional findings of interest

Do levels of immigration by black and white ethnic groups have different effects on social quality?

The inclusion of explanatory variables which approximately indicate immigration by people from black and white ethnic groups enables some exploration of whether these have similar or different effects on social quality. Immigration has a significant effect on seven of the eleven social quality indicators; trusting parliament, trusting the local council, trusting the police, feeling safe, new business formation, local trust and civic participation. The summary effects of black and white immigration for these social quality indicators are shown in Table l.

For almost all of the social quality indicators, black and white immigration have similar effects, or similarly have no effects. The exceptions are voter turnout, where black immigration has no effect and white immigration has a significant negative effect in 2011, and local trust, where black immigration has a significant negative effect and white immigration has no significant effect in 2011.

A further exception is trusting the police, for which white immigration has a negative effect in 2001 and a positive additional effect in 2011, although the overall effect remains negative for 2011 as the size of the additional positive effect is smaller than the size of the 2001 negative effect. Black immigration only has a positive effect, in 2011. The negative effect from white immigration is surprising; it would seem more likely that white immigration would have a positive effect, given that white non UK-born respondents are more likely to trust the police than any other group (as shown in Chart xi on page 229). Clearly, the attitudes towards the police of white or black immigrants are not in themselves causing the effect, which results from the area-level presence of white and black immigrant populations.

Overall, the consistency between the effects of black and white immigration suggest that any significant effects on social quality from immigration are associated with immigration per se, and not with immigration from black ethnic groups, or other ethnic groups which are visibly different from the white ethnic majority.

Table l: Summary of findings: Effects of black and white immigration compared

	Immigration			**Black immigration**			**White immigration**	
	2001	**Add effect 2011**		**2001**	**Add effect 2011**		**2001**	**Add effect 2011**
Social inclusion								
Trusting parliament	ns	Pos**		ns	Pos**		ns	Pos**
Trusting the local council	Neg**	Pos**		Neg**	Pos**		Neg**	Pos**
Trusting the police	ns	Pos*		ns	Pos**		Neg**	Pos**
Social cohesion								
Voter turnout	ns	ns		ns	ns		ns	Neg**
Feeling safe	Neg**	ns		Neg**	ns		Neg**	ns
Reg charities	No data	ns		No data	ns		No data	ns
Empowerment								
Influencing	ns	ns		ns	ns		ns	ns
New bus	Pos**	Pos*		Pos*	ns		Pos**	ns
Social capital								
Local trust	Neg**	Neg*		Neg*	Neg**		Neg**	ns
Civic participation	Neg*	ns		ns	ns		ns	ns
TV watching	ns	ns		ns	No data		ns	No data

Do ethnic diversity and immigration have differing effects on social quality measured at individual and area-level?

Three of the eleven social quality indicators used in this study are derived from data collected at area-level: voter turnout, registered charities and new business formation. The small number of area-level social quality indicators limits the comparisons that can be

made between findings for these and the individual-level indicators. Only two of the social quality dimensions include both individual and area-level indicators; the social cohesion dimension, where voter turnout and registered charities are measured at area-level and feeling safe is measured at individual-level, and the empowerment dimension which includes the area-level variable new business formation alongside the individual-level variable for feeling able to influence decisions about the local area. Table li summarises the effects of ethnic diversity and immigration on the individual and area-level indicators for social cohesion and empowerment.

Within both the social cohesion and empowerment dimensions, the individual and the area-level indicators are showing different things. For social cohesion, the area-level indicators show that ethnic diversity and immigration have no effect while the individual-level indicator shows a positive effect from ethnic diversity in 2001, a negative effect from immigration in 2001, and no additional effects from either ethnic diversity or immigration in 2011. For empowerment, the individual-level indicator shows no effect from either ethnic diversity or immigration while the area-level indicator shows a positive effect from immigration in both years.

Table li: Summary of explanatory variable effects: individual and area-level measures of social quality

	Ethnic diversity					**Immigration**			
	Individual-level		**Area-level**			**Individual-level**		**Area-level**	
	2001	**Add effect 2011**	**2001**	**Add effect 2011**		**2001**	**Add effect 2011**	**2001**	**Add effect 2011**
Social cohesion									
Voter turnout			ns	ns				ns	ns
Feeling safe	Pos**	ns				Neg**	ns		
Reg charities			n/a	ns				n/a	ns
Empowerment									
Influencing	ns	ns				ns	ns		
New bus			ns	ns				Pos**	Pos*

Summary of additional findings of interest

- In the main, the effects of black immigration are the same as the effects of white immigration, suggesting that any effects from immigration on social quality, whether positive or negative, are associated with immigration itself rather than with characteristics associated with ethnic difference.

- When social quality is measured at area-level, ethnic diversity has no effects and immigration has no effects or positive effects.

- Within the dimensions where individual-level and area-level measures of social quality can be compared, there is no clear pattern of effects across the social quality framework dimensions. There are positive, negative and no significant effects in the social cohesion dimensions, and positive and no effects in the empowerment dimension.

8.4 Other explanations for variance in social quality

It should be stressed again that the focus of this study is on the effects of ethnic diversity and immigration on social quality, and not on explaining why social quality outcomes differ between local areas. For this reason, the data analysis has not sought to find the best statistical explanation for variance in the social quality outcomes. In some cases, highlighted in the preceding discussions, the models are a poor fit for the data and are not useful for explaining the social quality outcomes.

That said, it is still helpful for the discussion of ethnic diversity and immigration effects to look at whether factors other than ethnic diversity and immigration account for differences in social quality between LADs. To help explore this, Tables lii and liii show which of the area-level independent variables included in the models has the greatest effect on the social quality outcome variables.

Table lii shows which area-level independent variables have the largest effects in the multi-level models. The relative effect sizes are determined by the standardised coefficients of the independent variables. The coefficients are standardised by multiplying the unstandardized coefficient by one standard deviation in the independent variable. Although this only offers partial standardisation, as it takes no account of the variance in the dependent variable, this approach is recommended for comparing the order of magnitude of the influence of predictors on the dependent variable in logistic regression models (Menard, 2004). For each outcome variable in Table lii the output is for the random intercepts models with all level 1 and level 2 control variables and with either ethnic diversity or immigration as the explanatory variable.

Table liii shows which independent variables have the greatest effect in the area-level models, based on the values of their standardised coefficients (the beta values, as given in SPSS output). As for the multi-level models, the area-level variable which has the greatest effect on each outcome variable is shown for both ethnic diversity and immigration as the explanatory variable.

It should be remembered here that more area-level control variables were significant and therefore retained in the area-level models than in the multi-level models. The area-level control variables in the multi-level models are deprivation, crime rate and higher qualifications. These variables are in all area-level models, along with limiting illness or disability, income, population density, region and area type.

Table lii: Independent variables with greatest effect on social quality: area level variables in multi-level models

	MODELS WITH ETHNIC DIVERSITY		MODELS WITH IMMIGRATION	
	Area-level variable with greatest effect	**Std co-efficient (B*SD)**	**Area-level variable with greatest effect**	**Std co-efficient (B*SD)**
SOCIAL INCLUSION				
Trusting parliament	Ethnic diversity*2011	3.107	Immigration*2011	0.052
Trusting the council	Ethnic diversity	-9.060	Deprivation	-0.141
Trusting the police	Ethnic diversity	2.617	Deprivation	-0.132
SOCIAL COHESION				
Feeling safe	Ethnic diversity	17.063	Higher qualifications	0.268
EMPOWERMENT				
Feeling able to influence	None significant		Deprivation	-0.057
SOCIAL CAPITAL				
Local trust	Ethnic diversity*2011	-26.927	Higher qualifications	0.168
Civic participation	Higher qualifications	0.191	Higher qualifications	0.218
Watching a lot of TV	Deprivation	0.107	Deprivation	0.102

Table liii: Independent variables with greatest effect on social quality: area-level models

	MODELS WITH ETHNIC DIVERSITY		MODELS WITH IMMIGRATION	
	Area-level variable with greatest effect	**Std co-efficient (Beta)**	**Area-level variable with greatest effect**	**Std co-efficient (Beta)**
SOCIAL COHESION				
Voter turnout 2001	Deprivation	-0.461	South East region	-0.466
Voter turnout 2011	Higher qualifications	0.686	Higher qualifications	0.750
Registered charities 2011	Higher qualifications	0.604	Higher qualifications	0.602
EMPOWERMENT				
New business 2001	Deprivation	-0.638	Deprivation	-0.754
New business 2011	Crime rate	0.569	Crime rate	0.524

We have already seen that for the social quality outcome indicators analysed in multi-level models, individual-level variables provide a far greater explanation of outcome variance than area-level factors. This is not unusual in multilevel modelling (Tarling, 2009). It helps to explain why fewer area-level control variables were significant in the multi-level models than in the single, area-level models. For most of the individual-level outcome indicators, the area-level contribution to explaining outcome variance, as indicated by the inter-class correlation, is 5% or less. Only for the local trust outcome variable do area-level variables provide a relatively high level of explanation, accounting for about 11% of the outcome variance. The focus of the following discussion is on which area-level variables play the greatest part in explaining social quality outcome variance, within the small portion which is explained at the area-level rather than by individual characteristics.

Within the social inclusion dimension, ethnic diversity or immigration has a greater effect on trusting parliament than any other area-level variable. Ethnic diversity has the greatest effect on trusting the local council and trusting the police, but when immigration is the explanatory variable, deprivation has the greatest area-level effect on both these outcomes.

Within the social cohesion dimension, ethnic diversity has the greatest effect on feeling safe, but when immigration is the explanatory variable, higher qualifications has the largest effect on feeling safe. For the social cohesion indicators measured at area level, higher qualifications have the greatest effect on the number of registered charities and voter turnout in 2011, with deprivation having the largest effect on voter turnout in 2001 when ethnic diversity is the explanatory variable, and the South East region having the largest effect when immigration is the explanatory variable.

Within the empowerment dimension, no area-level variables have a statistically significant effect when ethnic diversity is the explanatory

variable, and deprivation has some effect when immigration is the explanatory variable. For the area-level social quality outcome in this dimension, deprivation has the greatest effect on new business formation in 2001, where the effect is negative, and crime rate has the greatest effect on new business formation in 2011, where the effect is positive.

In the social capital dimension, ethnic diversity has the greatest effect on local trust when it is the explanatory variable. When immigration is the explanatory variable, higher qualifications have the largest effect on local trust. Higher qualifications have the greatest effect on civic participation, regardless of whether ethnic diversity or immigration is the explanatory variable. Deprivation is the only area-level variable which has a statistically significant effect on watching a lot of TV.

Considered aside from the social quality dimensions, in terms of how many times each independent variable appears as that with the greatest effect on the social quality indicators, for the ethnic diversity models, ethnic diversity is the most frequent. For the eight social quality indicators with multi-level data, ethnic diversity has the largest effect of all area-level factors in five cases; trusting parliament, trusting the council, trusting the police, feeling safe and local trust. When immigration is the explanatory variable, deprivation has the largest area-level effect in four cases, and higher qualifications in three cases.

For the three social quality indicators measured at area-level, ethnic diversity and immigration never have the largest effect. Higher qualifications and deprivation appear to have the greatest effects. The effects of the proportion of the population with higher qualifications are positive (on voter turnout and registered charities) while the effects of deprivation are negative (on voter turnout and new business formation).

When ethnic diversity is the explanatory variable and social quality outcomes are measured at individual level, ethnic diversity makes a larger contribution than other area-level factors to predicting variance of almost all social quality indicators. However, we know from comparing the ICC values (as shown in Table xxxxii, page 277) that adding ethnic diversity to the models does very little to explain variance between LADs in the social quality outcomes, with the exceptions of feeling safe and local trust. So the effects of ethnic diversity on other outcomes can only be considered large relative to the effects of other area-level variables included in the models, and all of these effects play only a very small part in explaining the variance of the social quality outcomes.

When immigration is the explanatory variable, higher qualifications and deprivation have a greater effect on most of the social outcome indicators measured at individual-level. This underlines the finding that ethnic diversity has a greater effect than immigration on the social quality outcomes.

It is interesting to find that higher qualifications appear so often as the strongest predicator of the social quality outcomes. Higher qualifications is a constituent part of the deprivation variable, so its role as an important predictor of these social quality outcomes is additional to the part it is playing within the deprivation variable, a point which is discussed in more detail in Chapter Nine.

The links between higher qualifications and higher positive responses on social quality indicators were highlighted in previous chapters, as were the positive correlations between higher qualifications and immigration (r = .690 in 2001 and .531 in 2011) and to a lesser extent between higher qualifications and ethnic diversity (r = .475 in 2001 and .369 in 2011). It may be that immigration and ethnic diversity contribute to the positive effects of higher qualifications on the social cohesion and social capital outcomes, as a bigger immigrant population and greater ethnic

diversity will contribute to a higher proportion of people with higher-level qualifications. Further modelling was carried out to explore whether higher qualifications offset the negative effects of immigration on feeling safe and local trust. The results of this were inconclusive and are not reported here. This remains an interesting area for future exploration.

Summary of other explanations for social quality variance between local areas

To summarise the findings for which control variables make the largest contribution to explaining variance in social quality:

- The modelling approach adopted for this study has not tried to find the best explanation for social quality outcome variance, so findings concerning alternative or better explanations for social quality are very tentative.

- For indicators of social quality which are measured at individual-level, individual variables make a far greater contribution than area-level variables to explaining variance in social quality.

- For five of the eleven outcome variables, when ethnic diversity is the explanatory variable, the level of ethnic diversity in the local area is the most important area-level variable for explaining why social quality varies between local areas. This is the case for all three indicators in the social inclusion dimension, and for some indicators of social cohesion and social capital.

- When immigration is the explanatory variable, the level of immigration is only the most important area-level variable for explaining why trust in parliament varies between local areas.

- Aside from ethnic diversity, the area-level variables which most frequently have the greatest effect on social quality are the level

of deprivation and the proportion of people with higher-level qualifications.

- It is possible that the correlation between immigration and higher-level qualifications influences variance in social cohesion and social capital, but exactly how this happens is not clear from the modelling approach employed.

8.5 Alternative social quality frameworks considered

Across the social quality framework developed for this study, there is no clear pattern of the effects from the ethnic diversity and immigration explanatory variables. All four dimensions of social quality show positive, negative and no significant effects (this is summarised in Table xxxx, page 272). It may be that this says more about the way the social quality framework is organised than it does about the effects of ethnic diversity and immigration. To consider this, we can look at a series of 'what if' scenarios which explore what the results might look like if a different approach to organising the social quality indicators had been adopted.

What if the social quality indicators are grouped by the effects of ethnic diversity and immigration?

What if the effects of ethnic diversity and immigration reveal a stronger association between the social quality indicators than their current organisation within the four social quality dimensions? It is possible that a more rational way to organise the social quality indicators is suggested by the effects of ethnic diversity and immigration on those indicators. By taking the modelling results themselves and working backwards from the findings, the social quality indicators can be grouped into positive, negative and no effect categories. This arrangement is loosely shown in Table liv (the two

indicators which show both negative and positive effects are placed in the negative group in this Table).

We can then consider whether the social quality indicators within these groupings are more closely aligned with each other than they are within the social quality dimensions which have been used so far. One way of testing this is to examine the bivariate correlations for these groups, which are shown in Table lv.

Table lv (and Tables lvi and lix which follow) show bivariate correlations for 2011 only. These are similar to the correlations for 2001 and it is not necessary for this discussion to present tables for both years. Watching TV is excluded from these tables as there is no 2011 data for this variable. The correlation values are marked ** when they are significant at the 0.01 level (2-tailed) and * when they are significant at the 0.05 level (2-tailed).

The correlations in Table lv do not provide a better rationale for the social quality outcome variables when they are grouped by the effects of ethnic diversity and immigration (as shown in Table liv) than the bivariate correlations for the variables when grouped within the four dimensions of the social quality framework (as shown in Table xiv and xv , page 184). In Table lv the strongest correlation is between registered charities and voter turnout (r = .679) both of which are in the ‘no effects’ group in this scenario, and which are also both in the social cohesion dimension. There is a moderately strong correlation (r = .503) between local trust and feeling safe, which are not in the same social quality dimension but which are grouped together in this scenario as both are negatively affected by immigration (although not by ethnic diversity). But other moderately strong correlations within the social quality dimensions, for example the correlation between trusting the local council and trusting parliament (r = .412) are less well reflected in the group by effects scenario, where one is in the negative effects group and the other in the positive effects group. Overall, organising the outcome variables

by the nature of the effects of ethnic diversity and immigration does not produce a set of social quality groups which offers any clearer way of understanding social quality outcomes than the social quality framework which has been applied throughout this study.

Table liv: Social quality indicators grouped by effects of ethnic diversity and immigration

	Ethnic diversity		Immigration	
	2001	Add effect 2011	2001	Add effect 2011
Negative effects				
Trusting the local council	Neg	Pos	Neg	Pos
Feeling safe	Pos	None	Neg	None
Local trust	Neg	Neg	Neg	Neg
Civic participation	None	None	Neg	None
Positive effects				
Trusting parliament	None	Pos	None	Pos
Trusting the police	None	Pos	None	Pos
New business formation	None	None	Pos	Pos
No effects				
Influencing	None	None	None	None
Voter turnout	None	None	None	None
Registered charities	n/a	None	n/a	None
Watching a lot of TV	None	n/a	None	n/a

Table lv: Bivariate correlations 2011 outcome variables grouped by effects

	Negative effects				Positive effects			No effects		
	Trust counc	Feel safe	Local trust	Civic part	Trust parl	Trust police	New bus	Influ-ence	Vote	Reg chars
Trust counc	1	**.211****	-.023	-.004	.412**	.331**	.249**	.215**	.235**	.143*
Feel safe	**.211****	1	**.503****	**.420****	.038	.269**	.122*	.072	.401**	.360**
Local trust	-.023	**.503****	1	**.406****	-.200**	.301**	-.157**	-.023	.414**	.235**
Civic part	-.004	**.420****	**.406****	1	-.032	**.217****	.040	-.091	.373**	.257**
Trust parl	.412**	.038	-.200**	-.032	1	**.232****	**.316****	.255**	.110	.147*
Trust police	.331**	.269**	.301**	.217**	**.232****	1	.089	.059	.289**	.214**
New bus	.249**	.122*	-.157**	.040	**.316****	.089	1	.161**	.332**	.516**
Influence	.215**	.072	-.023	-.091	.255**	.059	.161**	1	.098	**.116***
Vote	.235**	.401**	.414**	.373**	.110	.289**	.332**	.098	1	**.679****
Reg. chars	.143*	.360**	.235**	.257**	.147*	.214**	.516**	**.116****	**.679****	1

What if the social quality indicators are grouped by the strength of their bivariate correlations?

Another ‘what if’ scenario is to consider what the modelling findings might look like if the social quality indicators were grouped by the strength of their associations with each other, rather than within the social quality dimensions. How this would look in terms of bivariate correlations is shown in Table lvi. Considered like this, the social quality indicators could be organised into two groups. One with voter turnout, registered charities, local trust, feeling safe, new business formation and civic participation. And a second group with the three institutional trust indicators along with feeling able to influence. Leaving aside that some statistically significant correlations fall outside these groups (notably, the moderately strong correlation between trusting parliament and new business formation), we can then consider what the pattern of results from the data modelling might look like when organised within these groups of outcome variables. This is shown in Table lvii.

Organised in this way, the effects of ethnic diversity and immigration on social quality appear no more coherent than when presented within the social quality framework. Both clusters include social quality indicators which are positively, negatively and not affected by ethnic diversity and immigration. It therefore appears that aspects of social quality that are more closely related to each other than to other aspects of social quality, as broadly indicated by their bivariate correlations, do not share the same relationship with area-levels of ethnic diversity and immigration. Whatever factors may link these social quality indicators together, it is not the way in which ethnic diversity and immigration affect them.

Table lvi: Bivariate correlations 2011 outcome variables grouped by associations

	GROUP ONE						GROUP TWO			
	Vote	**Reg chars**	**Local trust**	**Feel safe**	**New bus**	**Civic part**	**Trust counc**	**Trust parl**	**Trust police**	**Influ-ence**
Vote	1	**.679****	**.414****	**.401****	**.332****	**.373****	.235**	.110	.289**	.098
Reg. chars	**.679****	1	**.235****	**.360****	**.516****	**.257****	.143*	.147*	.214**	.116**
Local trust	**.414****	**.235****	1	**.503****	**-.157****	**.406****	-.023	-.200**	.301**	-.023
Feel safe	**.401****	**.360****	**.503****	1	**.122***	**.420****	.211**	.038	.269**	.072
New bus	**.332****	**.516****	**-.157****	**.122***	1	.040	.249**	.316**	.089	.161**
Civic part	**.373****	**.257****	**.406****	**.420****	.040	1	-.004	-.032	.217**	-.091
Trust counc	.235**	.143*	-.023	.211**	.249**	-.004	1	**.412****	**.331****	**.215****
Trust parl	.110	.147*	-.200**	.038	.316**	-.032	**.412****	1	**.232****	**.255****
Trust police	.289**	.214**	.301**	.269**	.089	.217**	**.331****	**.232****	1	.059
Influence	.098	.116*	-.023	.072	.161**	-.091	**.215****	**.255****	.059	1

Table lvii: Ethnic diversity and immigration effects on social quality indicators in correlated groups

	Ethnic diversity		**Immigration**	
	2001	**Add effect 2011**	**2001**	**Add effect 2011**
GROUP ONE				
Voter turnout	None	None	None	None
Registered charities	n/a	None	n/a	None
Local trust	Neg	Neg	Neg	Neg
Civic participation	None	None	Neg	None
Feeling safe	Pos	None	Neg	None
New business formation	None	None	Pos	Pos
GROUP TWO				
Trusting parliament	None	Pos	None	Pos
Trusting the police	None	Pos	None	Pos
Trusting the local council	Neg	Pos	Neg	Pos
Feeling able to influence	None	None	None	None

What if the social quality indicators are grouped by 'attitudes' and 'behaviours'?

Another scenario to consider is whether ethnic diversity and immigration produce different effects for social quality outcomes which indicate attitudes and those which reflect behaviours. Other studies in this field suggest that the effects on social quality of ethnic diversity and immigration may be differentiated in terms of what survey respondents say they think and what they report they do (for example, Fieldhouse and Cutts, 2010). What people think about a range of social questions may be negatively influenced by media coverage of ethnic diversity and immigration, which is likely to affect how people behave (for example, Letki, 2008).

To explore whether there is any clear pattern of effects from ethnic diversity and immigration in this 'what if' scenario, we can organise the social quality indicators into two groups. In the 'attitudes' group we can put the six indicators which are derived from survey responses to questions which ask for an opinion to be expressed. In the 'behaviours' group we can put the three area-level variables (new business formation, registered charities and voter turnout) along with the individual-level indicators which come from survey responses to questions which ask for a report of what people do (civic participation and watching TV). The effects of ethnic diversity and immigration on the social quality indicator groupings organised in this way are shown in Table lviii.

Table lviii shows that attitudes are more likely than behaviours to show an effect from ethnic diversity and immigration. There are some exceptions, notably the lack of any effect on feeling able to influence local decisions, which is included in the attitude group. In the main, there appears a reasonably clear pattern of no significant effects on behaviours and significant effects on attitudes. But this simple pattern is complicated by the direction of the significant effects, which are both positive and negative within each group. When the associations

between the social quality indicators within each group are measured as bivariate correlations, as shown in Table lix, there is no clearer pattern than in the previous 'what if' scenarios. There are moderately strong correlations between some variables within the behaviour group, notably between voter turnout and registered charities, but this group also includes new business formation and civic participation, which are not correlated at all. Similarly, the attitudes group includes some variables with moderately strong correlations, feeling safe and local trust for example, but others with no correlation, feeling safe and trusting parliament for example. This arrangement also puts social quality variables which appear reasonably closely related into separate groups, such as the attitudinal variable for feeling safe and the behavioural variable for civic participation.

Table lviii: Ethnic diversity and immigration effects on social quality indicators grouped by attitudes and behaviours

	Ethnic diversity		**Immigration**	
	2001	**Add effect 2011**	**2001**	**Add effect 2011**
Attitudes				
Trusting parliament	None	Pos	None	Pos
Trusting the police	None	Pos	None	Pos
Trusting the local council	Neg	Pos	Neg	Pos
Feeling safe	Pos	None	Neg	None
Local trust	Neg	Neg	Neg	Neg
Influencing	None	None	None	None
Behaviours				
New business formation	None	None	Pos	Pos
Civic participation	None	None	Neg	None
Voter turnout	None	None	None	None
Registered charities	n/a	None	n/a	None
Watching a lot of TV	None	n/a	None	n/a

Table lix: Bivariate correlations 2011 outcome variables grouped by attitude/behaviour

	Attitudes						Behaviours			
	Trust parl	**Trust police**	**Trust counc**	**Feel safe**	**Local trust**	**Influ-ence**	**New bus**	**Civic part**	**Vote**	**Reg chars**
Trust parl	1	**.232****	**.412****	.038	**-.200****	**.255****	.316**	-.032	.110	.147*
Trust police	**.232****	1	**.331****	**.269****	**.301****	.059	.089	.217**	.289**	.214**
Trust counc	**.412****	**.331****	1	**.211****	-.023	**.215****	.249**	-.004	.235**	.143*
Feel safe	.038	**.269****	**.211****	1	**.503****	.072	.122*	.420**	.401**	.360**
Local trust	**-.200****	**.301****	-.023	**.503****	1	-.023	-.157**	.406**	.414**	.235**
Influence	**.255****	.059	**.215****	.072	-.023	1	.161**	-.091	.098	.116*
New bus	.316**	.089	.249**	.122*	-.157**	.161**	1	.040	**.332****	**.516****
Civic part	-.032	.217**	-.004	.420**	.406**	-.091	.040	1	**.373****	**.257****
Vote	.110	.289**	.235**	.401**	.414**	.098	**.332****	**.373****	1	**.679****
Reg. chars	.147*	.214**	.143*	.360**	.235**	.116**	**.516****	**.257****	**.679****	1

What if the social quality indicators are grouped by their distance from day to day life?

Chapter Three showed how debates about the social effects from ethnic diversity and immigration are strongly focused on local, neighbourhood levels, and how national and local-level impacts may differ. It may be that the differing effects of ethnic diversity and immigration on the social quality indicators in this study would appear more coherent if the social quality indicators were organised by the level at which individuals are likely to perceive these social factors.

Using common sense rather than any theoretical framework, this could mean organising the social quality indicators into three groups to represent national/regional level, local authority level and neighbourhood/household level effects. At the national or regional level we can put trust in parliament and trust in the police; both are national or regional institutions with which most people have little or no daily contact. Also at this level we can put new business formation and registered charities on the grounds that they are remote from daily life for most people, although this point is clearly arguable. At

the local-level we can put trusting the local council, voter turnout (which is a measure of turnout in local council elections) and feeling able to make decisions about the local area; these three indicators are all associated with what happens at the local-level, definitely at the local authority level for two of these and arguably for the feeling able to influence local decisions indicator. In a third group, we can put the indicators which represent how people feel within their immediate neighbourhoods and households; feeling safe, trusting others who live in the area, watching TV. Civic participation is excluded from this arrangement as this variable represents an aggregation of activities which have taken place at neighbourhood, local and national level.

Table lx shows that when the social quality indicators are grouped by the likely perception of what level they operate at, there is a loose pattern of ethnic diversity and immigration effects across these groupings; mainly positive effects at the national or regional level, mainly negative effects at the neighbourhood level, and largely no effects in the intermediate, local authority level. This pattern is complicated by the significant effects from ethnic diversity and immigration on the middle-level indicator of trusting the local council, and the positive effect from ethnic diversity on the near-level indicator of feeling safe.

Tentatively, arranging the social quality indicators by proximity to daily life suggests that ethnic diversity and immigration effects tend to be negative for ‘close’ indicators of social quality, positive for ‘distant’ indicators, and have no effect on those in between. But the pattern of these effects is not clear cut and does not strongly support this line of argument.

Table lx: Ethnic diversity and immigration effects on social quality indicators grouped by level of perceived effects

	Ethnic diversity		Immigration	
	2001	Add effect 2011	2001	Add effect 2011
National or regional level				
Trusting parliament	None	Pos	None	Pos
Trusting the police	None	Pos	None	Pos
New business formation	None	None	Pos	Pos
Registered charities	n/a	None	n/a	None
Local authority level				
Influencing local decisions	None	None	None	None
Voter turnout	None	None	None	None
Trusting the local council	Neg	Pos	Neg	Pos
Neighbourhood or household level				
Feeling safe	Pos	None	Neg	None
Local trust	Neg	Neg	Neg	Neg
Watching a lot of TV	None	n/a	None	n/a

Summary of social quality framework considerations

To summarise key findings concerning the use of the social quality framework and possible alternative models:

- This study uses a framework where four dimensions of social quality are measured by eleven indicators. Ethnic diversity and immigration do not have any clear pattern of effects on the social quality indicators when they are organised across these four social quality dimensions.

- Attitudes are more likely than behaviours to be affected by the levels of ethnic diversity and immigration in local areas. Ethnic diversity has no effect on behaviours.

- The proximity of the social quality indicators to daily life may be a factor in whether ethnic diversity and immigration have any effect.

The study findings suggest, but do not strongly support the idea that increased ethnic diversity and immigration have positive effects on aspects of social quality which are remote from daily life and negative effects on those aspects which are experienced at an immediate, day to day level.

PART THREE: CONCLUSIONS

CHAPTER NINE: CONCLUSIONS FROM THE EMPIRICAL STUDY

9.1 The effects of ethnic diversity and immigration on social quality indicators

This study has found that ethnic diversity and immigration affect some but not all of the indicators of social quality which were investigated. Where there is a statistically significant effect the direction of that effect is varied; some social quality outcomes are positively affected by ethnic diversity and immigration while others are negatively affected.

Ethnic diversity and immigration have positive effects on:

- Whether or not people trust parliament;
- Whether or not people trust the police.

Immigration (but not ethnic diversity) also has a positive effect on the rate of new business formation in local areas.

Ethnic diversity and immigration have negative effects on:

- Whether or not people trust others who live in their local area.

Immigration (but not ethnic diversity) also has a negative effect on civic participation.

Ethnic diversity and immigration have no effect at all on:

- Whether or not people feel they can influence decisions which affect their local area;
- Whether or not people vote in local elections;
- Whether or not people watch a lot of TV.

There are mixed effects from ethnic diversity and immigration on some social quality outcomes:

- Ethnic diversity and immigration have negative effects on trusting the council in 2001 but positive effects in 2011;

- Ethnic diversity has a positive effect on feeling safe in 2001 but immigration has a negative effect on this.

When all possible effects of the six explanatory variables on the 11 social quality outcomes are considered, the most frequent occurrence is that the effect is not statistically significant. This is shown in the summary table of all findings (Table xxxx, page 272). Of 120 possible effects there are 20 positive, 26 negative and 74 non-significant effects. The prevalence of non-significant, or null effects, is in itself an important finding.

Ethnic diversity and immigration have no effect at all on whether people feel they can influence decisions about their local area, nor on whether people spend a lot of time watching TV. They have very little effect on individual likelihood of civic participation or on voter turnout rates in local elections. These findings differ from Putnam's (2007) who identified negative effects from ethnic diversity on all these aspects of social quality (although Putnam's voting measure is voter registration rather than voter turnout). This study also found barely any effects from ethnic diversity and immigration on the number of registered charities in a local area, an indicator used in only one other Putnam study; Coffe and Geys (2006) used a similar measure in their aggregate social capital outcome variable, for which they reported a negative effect from nationality diversity in Belgian municipalities.

When the totality of the statistically significant effects of the six explanatory variables on the 11 social quality outcomes are considered, there are slightly more negative effects than positive effects. This suggests that there may be greater tendency for ethnic diversity and immigration to negatively affect than to positively affect social quality, for the indicators of social quality included within this study.

This study has used a theoretically driven framework to identify the factors which make up the social quality of local areas. When these factors were operationalised into measurable variables upon which the effects of ethnic diversity/immigration in England could be tested, the resulting social quality framework located 11 social quality indicators across four social quality dimensions; social inclusion, social cohesion, empowerment and social capital (as shown in Table v, page 143).

When all the effects of the ethnic diversity and immigration variables are considered across the four dimensions of the social quality framework, there is no discernible pattern relating negative or positive effects to different aspects of social quality; each of the social quality dimensions include positive, negative and null effects.

If only the 2011 statistically significant effects of the ethnic diversity and immigration explanatory variables are considered (leaving aside black and white immigration, rate of increase, null effects and 2001 effects), then a possible pattern across the social quality framework can be asserted. That is, ethnic diversity and immigration have only negative effects on social capital and only positive effects on empowerment and social inclusion. This possible pattern of ethnic diversity and immigration effects across the four dimensions of the social quality framework will now be considered in light of the tendency for other studies in this field to concentrate on just two of these dimensions; social cohesion and social capital (this tendency was discussed in Chapter Four, page 112).

Table lxi shows the results from this study of significant positive and negative effects from ethnic diversity and immigration across the four social quality dimensions (the results are for 2011 only, to illustrate the possible pattern described above). Alongside the results from this study, the table shows which dimensions of social quality are the focus of the 30 Putnam studies which are referenced in this thesis (see Table ii, page 99 for the full list of these studies). As discussed

in Chapter Four (pages 112 to 114) social quality terminology is used fluidly across this field, so social capital, for example, is not always defined and measured in the same way. This makes it difficult to group studies together on the basis of their social quality focus and the groupings shown in Table lxi are tentative.

Table lxi: Social quality outcomes used in this and the Putnam studies

Measures of social quality in this study	**Findings of this study (2011)**		**Putnam studies using similar outcome measures of social quality**
	Ethnic diversity	**Imm**	
Empowerment			**Empowerment**
Influencing local decisions	None	None	0 of 30 studies
New business formation	None	Pos	
Social inclusion			**Social inclusion**
Trusting parliament	Pos	Pos	3 of 30 studies (Alesina & Ferrara, 2000; Pennant, 2005; Flore, 2005)
Trusting local council	Pos	Pos	
Trusting the police	Pos	Pos	
Social cohesion			**Social cohesion**
Voter turnout	None	None	8 of 30 studies (Laurence & Heath, 2008; Andrews, 2009; Twigg et al, 2010; Wickes et al, 2011; Gijsberts et al 2011; Laurence, 2011; Saggar et al, 2012; Sturgis et al, 2014)
Feeling safe	None	None	
Registered charities	None	None	
Social capital			**Social capital**
Local trust	Neg	Neg	19 of 30 studies (Duffy, 2004; Pennant, 2005; Flore, 2005; Leigh, 2006; Anderson & Paskeviciviute, 2006; Coffe & Geys, 2006; Putnam, 2007; Gesthuizen et al, 2008; Letki, 2008; Stolle et al, 2008; Twigg et al, 2010; Fieldhouse & Cutts, 2010; Sturgis, 2010; Wickes et al, 2011; Laurence, 2011; Gijsberts et al, 2012; Pendakur & Mata, 2012; Sturgis et al, 2014; Schmid et al, 2014)
Civic participation	None	Neg	
Watching TV	None	None	

Table lxi shows that a majority of the Putnam studies use outcome measures which can be (cautiously) located in the social capital dimension of the social quality framework. All of these studies use measures of local, neighbourhood, or inter-personal trust as indicators of social capital (there is an exception to this; the Coffe and Geys (2006) study uses social capital as an outcome measure but does not include trust as a component of social capital). The finding from this study is that local trust is more strongly negatively affected by ethnic diversity than any other measure of social quality (see Table xxxxviii, page 287). Unsurprisingly, the negative effect from ethnic diversity on local trust is a key finding from Putnam studies, from both the US and the UK (including those by Putnam, 2007; Letki, 2008; Fieldhouse and Cutts, 2010; Twigg et al, 2010; Uslaner, 2011; Laurence, 2011).

It is apparent, therefore, that the largest number of studies in this field use the outcome measure which is most likely to show negative effects from ethnic diversity. The implications for this field of enquiry from repeatedly investigating the aspect of social quality where ethnic diversity effects are known to be negative are further considered later in this chapter.

Conversely, the two social quality dimensions used in this study where ethnic diversity and immigration have positive effects, empowerment and social inclusion, are very seldom included in the Putnam studies. None of the 30 Putnam studies referenced in this thesis measure empowerment as a social quality outcome, although Putnam's study does include an indicator which is similar to the 'influencing local decisions' measure of empowerment used in this study (he found that ethnic diversity has a negative effect on 'how much impact people like you can have in making your community a better place to live', 2007, p167, but uses this as an indicator of social capital rather than of empowerment). Only three studies (as shown in Table lxi) include the same or similar indicators of social inclusion as those used in this study.

This study found strong negative effects from ethnic diversity and immigration on social capital, and positive effects on empowerment and social inclusion. Moreover, this study found that the effects of ethnic diversity and immigration on social inclusion become increasingly positive over time, while their effects on social capital become increasingly negative. Yet, the majority of studies in this field measure the effects of ethnic diversity or immigration on social capital indicators, where they are likely to have a negative effect. Very few studies in this field have measured ethnic diversity and immigration effects on social inclusion or empowerment, where it is likely that they have a positive effect.

A main conclusion from this study, therefore, is that across this field of enquiry it is usual to investigate aspects of social quality on which ethnic diversity and immigration have negative effects, and unusual to investigate aspects of social quality for which ethnic diversity and immigration have positive effects.

The size of effects

Where there are statistically significant effects from ethnic diversity and immigration on social quality, these vary greatly in size. The ethnic diversity and immigration variables constructed for this study are measured on different scales, but when the explanatory variable coefficients are shown in a comparable format (as in Table xxxxiii, page 278) it is apparent that ethnic diversity effects on social quality are considerably larger than those from immigration.

Although immigration more often has a significant effect than ethnic diversity, the effects from immigration on the individual-level outcomes are relatively small. When the effects of immigration are considered in terms of the predicted probability of the social quality outcome occurring for the reference group, the size of the effect is too small to make any difference when the level of immigration is at

the median level for all LADs. For example, the negative effect of immigration on feeling safe in 2001 does not alter the 91% reference group predicted probability of feeling safe. It is only when the extremely high immigration value of Newham is applied that the negative effect from immigration produces a substantial change, reducing the predicted probability of feeling safe from 91% to 80% (these results are shown in Table xxxxiv, page 280).

Although not directly comparable with results from the individual-level outcomes, there is a large positive effect from immigration on new business formation. When considered for an LAD with the average population size for 2001, the positive effect of immigration equal to one standard deviation in the immigration variable predicts 143 additional new businesses than if there was zero immigration. To give this some context, the mean number of new business registrations across LADs in 2001 was 455. So the predicted effect from immigration is considerable. This finding indicates that the presence of immigration populations leads to new business formation, not that immigrants are themselves responsible for setting up more new businesses, although it is consistent with evidence that entrepreneurship rates are higher than average within immigrant populations (Ram and Jones, 2008).

The effect sizes from ethnic diversity are larger than those from immigration and more complex, as these large effects have both positive and negative effects on different social quality indicators. Ethnic diversity effects are largest for feeling safe, where ethnic diversity has a positive effect, and local trust, where the effect is negative. When the median ethnic diversity value is applied to the predicted probability calculations, the size of the ethnic diversity effect increases the predicted probability of feeling safe in 2001 from 91% to 100%, and reduces the predicted probability of local trust in 2011 from 73% to 0%.

That the effects of ethnic diversity are larger than the effects of immigration may be due to the greater spread of ethnic diversity across more LADs over the study period. The charts in Chapter Six (Chart ii, page 200 and Chart vi, page 206) illustrate the increased ethnic diversity and immigration across LADs from 1991 to 2011. They show, for example, that while the number of LADs with a visible ethnic minority population of more than 5% increased from 78 to 166, an increase of 113%, the number of LADs with immigration of more than 5% increased by only 70%. We also saw in Chapter Six that ethnic diversity increased much more rapidly than immigration (compare Figure vi, page 212 with Figure viii, page 215). The more rapid increase and the wider spread of visible ethnic diversity mean that more people are likely to be aware of this than of the contemporaneous increase and spread in immigration, and this greater awareness may produce the larger effects found in this study.

It is also possible that ethnic diversity has larger effects than immigration on some social quality indicators because there are closer associations with other factors that negatively affect social quality. There is some evidence to support this. Ethnic diversity is more highly correlated with deprivation ($r = .365$ in 2001) than immigration is with deprivation ($r = .186$ in 2001). It is possible that the presence of higher deprivation in areas with greater ethnic diversity contributes to the larger effect from ethnic diversity. Deprivation is controlled for in all the statistical models, so the ethnic diversity and immigration effects are independent of the effects from deprivation, but it would be useful to further explore the interactions between these variables in future studies.

Chapter Eight flagged up the anomalous result of the positive effect of ethnic diversity and negative effect of immigration on feeling safe. Although this has little bearing on effect sizes (other than to note that the ethnic diversity effect is much larger than the immigration effect), this is a useful point to further consider why this anomaly occurred. While it appears inconsistent that more ethnic diversity makes people

feel safe in their local areas while more immigration makes people feel unsafe, it may be that people feel safest in the more densely populated, urban areas where ethnic diversity is highest. This idea is not supported by the data, however, as while ethnic diversity is very highly correlated with population density (r=.779 in 2001), so is immigration (r=.808 in 2001), and ethnic diversity and immigration are similarly concentrated in major urban areas, particularly in London (see Charts iii, iv, vii and viii, pages 201,206 and 207). There may also be a gender association here, as men are far more likely than women to report feeling safe in their local area. Perhaps men and women are differently influenced by the presence of ethnic diversity, so that the largely positive attitude of men towards feeling safe is enhanced by ethnic diversity. There is no available information about attitudes towards ethnic diversity, although we know from the British Social Attitudes Survey that men are slightly more likely than women to describe themselves as racially prejudiced (32% of men compared with 29% of women in 2013, NatCen Social Research, 2014), suggesting this line of speculation is unlikely to be substantiated. The underlying cause of the opposing direction of the ethnic diversity and immigration effects remains unknown.

In considering why effect sizes are much larger for ethnic diversity than for immigration, it is worth noting that in modelling which was carried out for this study without applying the individual weighting, ethnic diversity and immigration effects were of similar size. The weights in the Citizenship Survey enable the data to be adjusted to account for the over-representation of ethnic minority respondents. When modelled without applying the weights, the data gives too much weight to the responses of the over-sampled population. If the unweighted data analysis shows that any significant effects are very small and the correctly weighted data shows that these effects are much greater, then it appears that ethnic diversity has far smaller effects for the over-sampled, ethnic minority population than for the general population. This points to a central issue in the examination of ethnic diversity effects on social quality; that is, whose social

quality is being measured? Although this study elected not to examine how ethnic diversity affects social quality for different social groups, including different ethnic groups, this now looks like a compelling area for future investigation.

This study's investigation of effect sizes highlights the importance of considering the size as well as the statistical significance of modelling results. The American Statistical Association recently warned of the dangers of over-reliance on statistical significance alone to draw conclusions from quantitative data analysis (Wasserstein and Lazar, 2016). Relying only on the binary of statistical significance may mean that too much importance is attached to 'yes' results. When conclusions are drawn only on the basis of statistically significant results, without any consideration of what those results mean in terms of size and impacts, it is possible that those conclusions may be over-inflated, or even misleading. For this study, the critical finding from considering effect sizes is that ethnic diversity has a substantially larger effect than immigration, with the possible exception of the effect of immigration on new business formation for which effect sizes are not comparable with those for other social quality outcomes.

Area-level and individual-level effects

For indicators of social quality that are measured at individual-level, area-level factors are not of great importance in explaining variance in the social quality outcome between LADs. This was demonstrated by comparing the intra-class correlations before and after the explanatory variables were added to the models, as summarised in Table xxxxii (page 277). The exception is local trust, for which area-level variables account for a substantial proportion of the variance. Area-level ethnic diversity and immigration both have a statistically significant, negative effect on local trust. When ethnic diversity is the explanatory variable of interest, it plays the greatest part of all the area-level predictor variables in explaining the area-level variance in

local trust. But when immigration is the explanatory variable of interest, the proportion of people with higher level qualifications does more to explain variance in local trust (see Table lii, page 297). However, neither ethnic diversity nor immigration together with the other area-level variables included in this study fully explain the variance in local trust. There must be other characteristics of local areas, not included in this study, which explain different levels of local trust. There are no clues from other Putnam studies as to what these missing characteristics might be.

When considered within the two social quality dimensions where there are individual-level and area-level indicators, social cohesion and empowerment (illustrated in Table li, page 294) it is apparent that outcomes measured at individual-level show mixed effects from area-level ethnic diversity and immigration (negative, positive and no effects), while those measured at area-level show only positive or null-effects. This finding points to the importance of the level at which social quality is measured within studies seeking to identify causal explanations for social quality variance.

The social quality framework

This study identified indicators of social quality by working through the framework developed by Berman and Phillips to provide a comprehensive set of social quality dimensions and domains. The intention was to address the lack of any frame of reference within the Putnam studies for understanding the relative importance of individual social quality outcomes.

The conclusion from this study is that there is no clear pattern of findings across the social quality framework. Tentatively, it can be suggested that ethnic diversity and immigration have positive effects on empowerment and social inclusion and negative effects on social capital (as illustrated in Table lxi, page 318). However, as some

results have been set aside to draw this pattern of effects, this suggestion cannot be offered as conclusive.

The ‘what if’ scenarios in Chapter Eight considered a series of rearranged social quality frameworks. Of these, the framework which organises social quality in terms of ‘perceived distance of effects’ offers a neat way to explain how ethnic diversity and immigration affect social quality (in Table lx, page 311). Within this framework, ethnic diversity and immigration have a positive effect on aspects of social quality which are most distant from day to day life (like trusting parliament). They have no effect on aspects of social quality which are less remote but not immediately bound up with day to day life (like voting in local elections and feeling able to influence local decision making), and they have negative effects on the most immediate, day to day elements of social quality (like trusting people in the local area). This way of organising the social quality indicators, and the consequent results for positive, negative and null-effects of ethnic diversity and immigration, would support the argument that immigration brings positive benefits at national-level but negative effects at local-level (Keith, 2009).

However, the social quality framework used in this study is flawed in many respects. Although the conjectured ‘perceived distance of effects’ conclusion provides interesting food for thought, it rests on a framework which is too shaky to firmly support this assertion. The shortcomings of the social quality framework, and ways in which it might be improved, are considered here.

The first problem is that the Berman and Phillips social quality framework was only partially operationalised in this study. The selection of variables as indicators for each social quality dimension in the framework was constrained by my imposition of two fundamental criteria; that the variable should be measurable at LAD level and available in comparable form for 2001 and 2011. This

meant that the following domains from Berman and Phillips social quality framework were excluded from the study:

- Social status inclusion;
- Social status cohesion;
- Social and cultural empowerment;
- Political empowerment;
- Social psychological empowerment.

Therefore, the framework used in this study only represents some aspects of social quality. Moreover, there is a common theme in those elements of social quality excluded from the study, most of which were conceived by Berman and Philips to incorporate measures of discrimination. This is also the case for domains which were included, like inclusion in education system and services, but where the discrimination element stated by Berman and Philips was omitted from the operationalised outcome variables. The reason for these omissions was lack of available data. The consequences for this, and other Putnam studies, are significant.

Excluding racial discrimination as a social quality outcome precludes important areas for investigation. We saw in Chapter Six that social quality varies between ethnic groups, and speculated that racial discrimination may play a role in this, particularly for social quality indicators which measure feelings of safeness and security. Including racial discrimination as a social quality outcome would contribute useful evidence here. On the one hand, we might find that there is a negative relationship between racial discrimination as an outcome variable and levels of ethnic diversity; a greater number of ethnic minority people in the population will mean that more people may potentially experience racial discrimination, so the incidence may be higher. On the other hand, racial discrimination may be lower in ethnically diverse areas; discriminatory behaviour may happen less often in areas where more people are comfortable with ethnic diversity. Either way, the absence of these dimensions from the adjusted social quality framework excluded an important sphere of

investigation about whose social quality is reflected in the indicators commonly used in the Putnam studies.

A second issue with the social quality framework is that no social capital dimension was included in the original Berman and Phillips framework. I added this dimension for two reasons; to locate the most commonly used variable from the Putnam studies (local trust) somewhere in the framework, and to use civic engagement as an indicator of social capital, as it is in Putnam's and other studies, rather than as an indicator of social cohesion, as it is in the Berman and Phillips framework. Social capital is not featured by Berman and Phillips, either as a broad dimension or as a more specific domain. Nor is 'local trust' included anywhere in the Berman and Phillips framework. Arguably, local trust could belong within the 'social psychological empowerment' domain in the 'empowerment' dimension, but I think this would be stretching the intended meaning of this domain. The absence of local trust from the original social quality framework is important to remember when considering the importance which is attached to this indicator by the Putnam studies. This omission might be considered a shortcoming of the Berman and Phillips framework. Yet it also demonstrates that it is possible to conceive of a comprehensive, multi-dimensional scheme for social quality in which social capital and local trust have no part.

Thirdly, and this point will be addressed in more detail later on, the socio-economic security dimension of Berman and Phillips framework was removed altogether. In common with other Putnam studies, I used the socio-economic indicators as control variables and, consequently, excluded these as outcome variables. Together with the addition of social capital measures and absence of various inclusion, cohesion and empowerment dimensions, the omission of socio-economic domains resulted in a social quality framework which was markedly different from Berman and Philips original construction. These important differences meant that the social quality framework used in this study only partially succeeded in enlarging the measures

of social quality beyond the narrow parameters of the Putnam studies. In particular, the framework used in this study failed to provide any consideration of social quality in terms of socio-economic security, social status or racial discrimination, and may have over-emphasised the importance of local trust.

Finally, I want to consider whether a social quality framework, in any configuration, provides a useful way of understanding the effects of ethnic diversity and immigration on social quality. The use of a social quality framework for this study was intended to enlarge the measure of social quality outcomes and to give these a frame of reference that would provide a means of understanding the relative importance of different aspects of social quality. This was to address the weight accorded to social capital by the Putnam studies which, in the absence of any wider frame of reference, imply that social capital represents the totality, or a great part of social quality.

Despite its shortcomings, the social quality framework is a useful way to demonstrate that social quality operates across multiple dimensions. The findings of positive, negative and no-effects from ethnic diversity and immigration across these dimensions underlines the complexity of social quality. Locating each social quality indicator within a wider framework highlights that there is no single, consistent effect from ethnic diversity and immigration. Looked at this way, there is no single story of ethnic diversity or immigration effects.

However, while a social quality framework can help determine how many slices there are in the social quality cake, it cannot tell us the size of the cake, or how large each of the social quality slices should be. Although using a social quality framework enables social capital, as a measure of social quality, to be situated alongside other dimensions and not taken to mean all of social quality, we still have no way of assessing whether social capital is a small or large slice of the overall cake (although we know that Berman and Philips did not give social capital any slice at all). We don't know if social quality can

even be finite, or whether this metaphorical cake is limitless and beyond any meaningful form of measurement.

Some of these are things which should be investigated further, with the aim of building better models for measuring social quality. It is likely that social quality will look different for different social groups, including for ethnic groups, as we saw in Chapter Six. It is important that measures of social quality should reflect these different perceptions or experiences. In this light, the omission of any racial discrimination measure from the social quality framework is a serious shortcoming of this study. It also seems likely that perceptions of social quality will change over time, depending on age or life circumstances; that the weighting which a young, single adult will give to different social quality domains will change as they grow older, taking on financial responsibilities and dependents. A measurable social quality framework should, therefore, include a temporal dimension which factors in how the value of social quality changes over time.

Further exploration of how social quality is defined and measured at individual-level and at area-level, and of the interplay between these levels of measurement and analysis, would also be useful. This study has demonstrated that area-level ethnic diversity and immigration do not have the same effects on area-level social quality measures as they do on individual-level social quality measures, an important finding when we recall that almost all Putnam studies use individual-level social quality measures. How then, for the future, should social quality frameworks incorporate both subjective, individual and objective, collective experiences of social quality, an issue which others have considered (Deiner and Suh, 1997) and, for empirical research studies, how should the adoption of one type of social quality indicator as a dependent variable be acknowledged and weighted as just one of many indicators of social quality, not all of which will show the same effects from any independent variables, such as ethnic diversity?

9.2 The temporal effects of ethnic diversity and immigration on social quality

Comparing the effects on social quality indicators from levels of ethnic diversity and immigration in 2001 and 2011 shows a clear pattern of change over time. Broadly, the effects from ethnic diversity and immigration levels move in a positive direction for indicators of social inclusion and a negative direction for indicators of social capital (illustrated in Table xxxxv, page 284).

The rate of increase in ethnic diversity and immigration levels in LADs provides a measure of how neighbourhoods are changing. This is a central theme of immigration and ethnic diversity debates but an absent measure from all Putnam studies. This study demonstrates that rates of increase in ethnic diversity and immigration have an effect on some indicators of social quality. Where the rate of increase in immigration has a statistically significant effect, these effects are always negative. However, statistically significant effects from the ethnic diversity rate of increase are as likely to be positive as negative (see Table xxxxvi, page 285).

The direction of statistically significant effects from levels and rates of increase are sometimes in opposite directions. Interestingly, this is the case for local trust, where the level of ethnic diversity has a large negative effect, but the rate of increase in ethnic diversity in 2011 has a statistically significant positive effect.

The opposite effect on local trust from ethnic diversity level and rate of increase may be related to the negative correlation between these variables (as discussed in Chapter Six, pages 211 to 214). Rates of increase in ethnic diversity are highest in LADs where levels are lowest. This is the result of historic patterns of migrant settlement and consequent ethnic diversity, combined with the rapid increase in both between 1991 and 2011, so that LADs with limited histories of ethnic diversity prior to 1991 have seen far greater rates of growth, although

the traditional, urban locations for settlement have seen greater increases in actual numbers.

While the negative effect on local trust from the level of ethnic diversity confirms the Putnam study findings, and is therefore simple to explain, the positive effect from ethnic diversity rates of increase requires more imaginative thinking to interpret, possibly along the lines that rapid increases in ethnic diversity are better absorbed within stable, high-trust populations. Because ethnic diversity rates of increase are highest in areas where ethnic diversity levels are lowest, it is possible that it is the absence of ethnic diversity rather than the presence of high ethnic diversity rate of increase which is causing the effect. This interpretation is supported by output from models which include both ethnic diversity level and rate of increase (see Table il, page 289), where the larger effects from the level of ethnic diversity cancel out the opposing effects from the rate of increase.

The modelling carried out for this study offers no clear explanations for the sometimes opposite effects of levels and rates of increase of ethnic diversity and immigration on some indicators of social quality. It is possible that the positive effects of rates of increase on some social quality indicators are linked to other features of LADs which have no previous history of immigrant settlement or ethnic diversity but which are not fully accounted for by the control variables included in this study. The findings point to a greater complexity in the relationship between ethnic diversity or immigration and social quality than is identified when only the levels of these are measured in studies, or if only rates of increase were measured, suggesting that both should be included in future studies in this field.

Immigration and ethnic diversity as sequential effects

The inclusion of both immigration and ethnic diversity within this study was intended to enable examination of whether these effects differ and, if they do, what this may indicate about how social quality

changes as new immigrant populations become settled ethnic minority communities.

The main finding from this study is that ethnic diversity and immigration have similarly positive, negative or no effects on much the same social quality indicators, but that any significant effects from ethnic diversity are substantially larger than the effects from immigration.

This finding counters Putnam's discovery that immigration has a greater negative effect than ethnic diversity (Putnam, 2007). Putnam's finding allows for a scenario to be posited that the negative effects from immigration dissipate as migrants become absorbed within and help to create ethnically diverse populations. Interpreted in a similar way, the opposite finding would suggest that any negative effects from immigration worsen as immigrants settle and increase the ethnic diversity of local populations. Yet, it should also be recalled that this study found that the effects of ethnic diversity can be positive for social quality outcomes where the effects of immigration are negative (feeling safe in 2001, for example), and that both ethnic diversity and immigration effects are moving in a positive direction over time on some indicators (see Table xxxxv, page 284). This complicates any attempt to draw conclusions from the sequence of immigration and ethnic diversity effects. In this study, the small effects from immigration are usually matched by large effects from ethnic diversity, although not in any consistent direction. It appears possible from the study findings that immigration effects on social quality become magnified as immigrant populations create ethnic diversity, but this conjecture is not strongly supported.

As a measure intended to distinguish between the sequential effects of immigration and ethnic diversity, the immigration variable constructed for this study was inadequate. The immigration measure simply counts the proportion of the LAD population born outside the UK. This measure fails to incorporate the main factor which is critical

to any conceptualisation of immigration as a measure of ‘newness’; the length of time someone has lived in the UK. The ‘born outside the UK’ measure also fails to reflect other possible indicators of ‘newness’ such as English language proficiency or citizenship acquisition. Any future study seeking to investigate ethnic diversity and immigration effects in their temporal order (i.e. ethnic diversity as a consequence of immigration) should employ a measure of immigration which more accurately captures the features of immigration which are sequentially prior to the features of ethnic diversity.

One useful finding from this study’s consideration of immigration and ethnic diversity is that there is no difference in the effects on social quality of immigration from visible (i.e. black) and invisible (i.e. white) ethnic groups. This suggests that it is immigration rather than ethnic difference that is responsible for any immigration effects. This finding underlines the importance of improving the measure of immigration to more accurately identify what it is about immigration that has an effect on social quality.

The methodological challenges of measuring change over time

There have been numerous methodological challenges in developing the temporal dimension of this study.

First and foremost has been the lack of comparable data for the selected time points. Actually, the lack of comparable data defined the time points, as only one data source, the Citizenship Survey, provided data which met other criteria for the study, and this set the time points at 2001 and 2011, when the first and last Citizenship Surveys were conducted. It has been highly frustrating that even within the Citizenship Survey, a national survey designed expressly to track community cohesion, very few questions and response categories were consistently maintained, so not much data is comparable over time. As already discussed, the limited availability

of comparable data over the time period strongly influenced the selection of social quality outcome indicators included in this study.

Secondly, in the absence of any suitable longitudinal survey data, this study has relied on comparing cross-sectional data at two time points. This analytical approach is arguably as strong as using longitudinal data (Martin, 2013), although some research points to inconsistent results when cross-sectional and longitudinal findings are compared (Hilton and Patrick, 1969). The chief difficulty of comparing cross-sectional data has been the challenges of applying the temporal variable to the interactions between the explanatory and the outcome variables, and interpreting the ensuing results. The complexity of interpreting the temporal findings influenced decisions to simplify other areas of the statistical modelling; specifically, the decision to use a single, fractionalisation measure for ethnic diversity, and to collapse the four category, ordinal responses on some outcome indicators into binary variables. So, the inclusion of the temporal dimension came at the expense of more detailed measures in other variables which may have led to more nuanced understandings of their effects. A longitudinal dataset would overcome some of these methodological challenges. The more recently available Understanding Society survey is longitudinal, includes ethnicity, immigration and social quality data, and may offer a useful future source of data for exploring these relationships temporally.

9.3 Other explanations for variance in social quality

This study did not seek to explain why social quality varies between local areas, only to identify if ethnic diversity and immigration play any part in this. The study was not designed to identify which variables best explain social quality variance, particularly in the statistical modelling approach where the same control variables were used in every case, resulting in poor fitting models for some outcome variables. Rather than conclusions, therefore, this section tentatively

raises some issues concerning better explanations for social quality which emerge from the study findings.

Individual characteristics have a bigger effect than area-level characteristics on individual-level measures of social quality. The area-level part of the multi-level models accounts for between one per cent (for feeling able to influence local decisions) and eleven per cent (for local trust) of the variance in the social quality outcomes (as shown in Table xxxxii, page 277). This is not surprising; it is common in multi-level modelling to find that area-level variables have only a small part in explaining outcome variance (Tarling, 2009). Area-level variables play a substantial role for only one of the individual-level social quality outcome indicators, local trust, which we will examine more closely later in this chapter. The main point here is that variance in indicators of social quality which are derived from individual-level responses to surveys is largely determined by the personal characteristics of the survey respondents, and not by any characteristics of the areas in which those respondents live. The individual characteristics which most strongly explain variance in reported social quality are ethnic origin, gender and, above all, the level of educational qualifications attained. The most consistent finding across the social quality indicators is that people with degree or higher-level qualifications report higher levels of social quality.

Within the area-level portion of the explanation for social quality variance, ethnic diversity is often the most important, while immigration is very seldom the most important variable. For models where immigration is the explanatory variable, higher qualifications and deprivation are more likely than immigration to affect the social quality of local areas.

When social quality is measured at area-level, neither ethnic diversity nor immigration are the most important area-level predictors of variance in social quality. For these models, higher qualifications

appeared most frequently as the variable with the largest effect on social quality.

The finding that higher-level qualifications is the strongest area-level explanatory variable for some outcomes (civic participation, voter turnout and registered charities) is interesting and merits further consideration. A common finding of the UK Putnam studies is that area-level deprivation accounts for variance in social quality, and that any effects from ethnic diversity are greatly reduced when deprivation is controlled for (Letki, 2008; Twigg et al, 2010). These studies employ the same deprivation variable used in this study and do not additionally include a variable for educational qualifications. My study finding that higher-level qualifications provides a stronger explanation for variance than deprivation on some outcomes suggests that it is the education element of the composite deprivation variable which is most important. This conjecture is supported by my study's inclusion of income as a separate, area-level control variable, income being another of the seven domains which make up the deprivation measure. Area-level income was not a statistically significant explanatory variable for any of the social quality dependent variables and so was dropped from the final models. Future studies in this field might consider further unpacking the deprivation measure to isolate which different indicators within deprivation are having what effect on social quality measures.

There are clear relationships between higher-level qualifications and immigrant populations, between higher-level qualifications and social quality outcomes, and between immigrant populations and social quality outcomes. It is less clear how these relationships interplay and beyond the scope of this study to explore this further. However, it is interesting to note the role of these factors in the current Brexit discussions. The post-referendum debate has included a strong narrative of 'broken trust'; that the leave-vote reflects a loss of trust in the British government from large parts of the electorate. The leave campaign explicitly linked this broken trust to immigration,

highlighting the government's failure to meet its own immigration reduction targets, and warning that promises to curb immigration could not be trusted. Because much of the leave-campaign centred on immigration, it is unsurprising that the leave-vote has been widely interpreted as a vote against immigration.

Seeking to understand the links between the leave-vote and immigration, some analysts have shown that the leave-vote was highest in local area where immigration numbers are actually lowest (Travis, 2016). Others have found that the leave-vote was highest in areas where the rate of increase in immigration is highest (The Economist, 2016). Using the datasets constructed for this study, and the percentage of leave-voters in each LAD, my own analysis shows a reasonably strong correlation between voting to leave the EU and levels of immigration in 2011, r = .616. There is a much lower correlation between voting to leave and the immigration rate of change in 2011, r = .344. However, the strongest correlation by far is between voting to remain and levels of higher education in 2001, r = .901. The vote-remain map of England is almost identical to the 2001 map of higher-level qualifications (shown in Figure ix, page 224); the higher the proportion of degree educated residents within a local authority area, the higher the vote to remain in the EU.

Higher education, not immigration, is most closely associated with how people voted in the EU referendum. The immigration and Brexit theme will be examined further in my final chapter, where I return to the idea of ethnicity as ideological cover for other power struggles.

9.4 Local trust

This study has found that the largest effect on any social quality outcome is that from ethnic diversity on local trust, where the negative effect worsens over time. In 2001, people living in areas of higher ethnic diversity and immigration were less likely to trust others who lived in the local area, by 2011 they were even less likely to trust

others. Putnam studies using this indicator also find that ethnic diversity has a negative effect on local trust (including Pennant, 2005; Flore, 2005; Anderson and Paskeviciute, 2006; Putnam, 2007; Stolle et al, 2008; Twigg et al, 2010; Sturgis et al, 2010; Laurence, 2011; Pendakur and Mata, 2012; Schmid et al, 2014). The consistency of this finding merits further examination.

The negative effect of ethnic diversity on local trust fits well with the dominant theoretical and narrative frameworks in this field. Trust is a core element of social capital; it is integral to Putnam's definition of social capital as meaning *'social networks and the associated norms of reciprocity and trustworthiness*' (2007, p137). Trust is considered essential for societies to succeed; higher-trust societies are more economically prosperous (Fukuyama, 1995) have less corruption and crime, are more supportive of equal rights and more likely to provide for the poor and vulnerable (Social Integration Commission, 2014b). Trust and social capital are believed to be in decline in Western societies (Fukuyama, 1995; Putnam, 2000); increased immigration and ethnic diversity are partly responsible for this (Putnam, 2007). In summary, the literature and research show that local trust is a critically important attribute which is holding society together but threatened by the challenges of ethnic difference brought by immigration.

Following the Putnam study convention, this study used local trust as an indicator of social capital. The other indicators used for social capital (civic participation and TV watching) had no relationship at all with ethnic diversity (there was a weak negative effect from immigration on civic participation in 2001 only). In this study, local trust is the indicator where area-level explanatory variables are most important and where ethnic diversity effects are strongest. There is clearly something about the behaviour or the measurement or the conceptualisation of local trust which sets this apart from alternative indicators of social capital used in this study.

What exactly is ‘local trust’? The local trust variable in this study, and in several UK Putnam studies (e.g. Pennant, 2005; Flore, 2005; Fieldhouse and Cutts, 2010), is derived from a question in the Citizenship Survey which asks ‘*Would you say that many/some/a few/none of the people in your neighbourhood can be trusted?’*. This looks straightforward enough. The response is interpreted, in this and other studies, as indicating high or low levels of trust which, in turn, indicate high or low levels of social capital. However, the question assumes a common but unexplained understanding of its meaning. What does the question actually mean? Can people in your neighbourhood be trusted to do what? Brush their teeth? Drive your car? Ring the plumber? Report a crime? The more you consider the infinite list of things which you might trust someone else with, the less sense this question makes. Yet the question has a high response rate (100% in 2001, 96% in 2011) and must therefore be answerable on a common sense basis. Intrinsic to that common sense basis is a shared understanding of what the question and response options actually mean. The question itself requires a homogeneity in understanding and perception; it seems likely that people from diverse backgrounds will respond to this question in different ways. Perhaps this is why local trust as an indicator is so susceptible to effects from heterogeneity.

This is the contention raised by Hero (2003); that social capital is a construct of homogeneity so will of course be negatively affected by heterogeneity. If local trust is operationalised into a variable which is constructed on a homogeneous basis, then this study and all the Putnam studies are asking the wrong question. The question should not be ‘*Does difference affect local trust*?’ but ‘*Is local trust a construct of sameness*? Asking the latter question would necessitate a closer examination of what we really mean by ‘local trust’, whether it means the same thing to everyone, and how to construct improved measures of local trust.

It was shown earlier that a great number of the Putnam studies include local trust as their main indicator of social quality (see Table ii, page 99 for a list of the outcomes variables used in these studies and Table lxi, page 318 to see how the studies cluster in selecting local trust as their outcome measure). Repeatedly focusing on local trust as an indicator of social quality is producing a body of evidence which is skewed towards supporting a particular theoretical position; that local trust (an essential attribute for successful societies) is in decline, in part due to increasing social heterogeneity resulting from immigration and ethnic diversity. Putnam's study supports this theory as do, albeit among other findings, a majority of the post-Putnam UK studies. However, the applicability of this theoretical perspective to the UK is questionable; we have already seen that local trust increased between 2001 and 2011, although repeated UK commissions and inquiries persist in framing local trust as in decline (Cantle, 2001; Social Integration Commission, 2014a and 2014b). Nevertheless, local trust continues to be used as an outcome indicator in studies of ethnic diversity effects on social quality, including in this study.

9.5 How variable selection affects the findings

Several findings from this study underline the importance of variable selection. They point to ways in which the selection process shapes the results and consequent conclusions from studies like this. Three findings from this study shed particular light on this:

- Social quality indicators which reflect attitudes (e.g. local trust) are more likely to be affected by ethnic diversity and immigration than social quality indicators which reflect behaviours (e.g. watching TV);

- Social quality indicators which are likely to be perceived as immediate to daily life (e.g. local trust) are negatively affected by ethnic diversity and immigration while social quality indicators

which are probably perceived as remote from daily life (e.g. trusting parliament) are positively affected by ethnic diversity and immigration;

- Social quality indicators which are measured at individual-level (e.g. local trust) are more likely to be affected by ethnic diversity and immigration than social quality indicators which are measured at area-level (e.g. voter turnout).

Together, these findings indicate that ethnic diversity and immigration will have far greater negative effects on some social quality outcomes than on others. If the selected dependent variable is measured at individual-level and measures an attitude about something which is perceived to be immediate or day to day, then it is far more likely that a negative effect from ethnic diversity and immigration will be found. This, though, is the common approach in this field. Only one of the Putnam studies (Coffe and Geys, 2006) uses area-level measures of social quality, some use attitude and behaviour measures (e.g. Fieldhouse and Cutts, 2010), others use near and distant measures (e.g. Pennant, 2005). But the most commonly used social quality outcome indicators (local trust and, or as a part of, social capital) are measures which are individual-level, attitudinal and proximate.

In the absence of any wider frame of reference for the selection of social quality outcome variables, such as the social quality framework used in this study, there is no clear, strong or consistent rationale for the selection of local trust and social capital as indicators of social quality. Yet, the repeated choice of these individual-level, attitudinal and proximate indicators is producing a mounting pile of evidence that ethnic diversity and immigration have damaging effects. If more studies selected area-level, behavioural indicators of social quality, like voter turnout, we would have more evidence that ethnic diversity and immigration have no effects on social quality. Similarly, more frequent selection of area-level indicators, like new

business formation, would evidence the positive benefits of immigration for social quality.

The selection of indicators is constrained in large degree by the availability of data; a particular problem for this study due to the temporal dimension. Aside from the temporal challenge, it is impossible to find data which are comparable between LADs to indicate social quality on measures where ethnic diversity might be more likely to have positive effects. I would have liked to have included area-level, behavioural social quality outcome measures for the following: number of street parties, carnivals and fetes; number of people shopping in ethnic-minority owned shops or food outlets; participation in free arts or sports activities; taking active part in social movements for justice or equality. There are no data available for these.

I have already explained how socio-economic indicators were not used as outcome variables in this study, in common with all Putnam studies. The absence of socio-economic social quality outcomes from the Putnam studies, mine included, influences the findings in this field in two, profound respects; it removes the possibility that the studies will find ethnic inequalities, and diverts the research focus away from components of social quality which are fundamental for all humans in favour of social quality indicators which suit a particular theoretical perspective on the decline of social capital in Western societies.

The removal or absence of socio-economic variables effectively precludes a major line of enquiry within the Putnam studies. Focusing on any dimension of social quality other than the socio-economic means that the studies are not looking at precisely where the relationships between ethnic diversity and social quality are known to be, so they by-pass the socio-economic inequalities experienced by ethnic minority populations. Several UK post-Putnam studies have tried to redress this with the inclusion of socio-economic

control variables, finding that deprivation has stronger negative effects on social quality than ethnic diversity (Letki, 2008 and Saggar et al, 2012, for example). However, this approach still considers socio-economic indicators as part of the explanation, and as attendant to ethnic diversity, rather than part of the social quality outcome.

Any attempt to build a comprehensive framework for social quality, like Berman and Philips', will always include a socio-economic dimension. Socio-economic factors appear in the foundation layers of Maslow's and other hierarchies of human needs, as they are unarguably more fundamental to social quality than social capital, social cohesion or any other social dimension. If we accept that attempts to measure what affects social quality outcomes (whether this is ethnic diversity, immigration or some other variable within local populations) should take place within some frame of reference, any framework of value must include socio-economic outcomes.

9.6 Answering the research questions

This study addressed two core research questions:

1. Do ethnic diversity and immigration have any effects on a range of indicators of social quality in local areas of England?
2. Do any effects from ethnic diversity and immigration change over time?

The study findings do not offer simple answers to either question. They point to some conclusions but do not strongly confirm these. The study indicates that:

- Ethnic diversity and immigration affect some, but not all, indicators of social quality, sometimes positively and sometimes negatively. It is not clear why some aspects of social quality are positively affected and some negatively, although the selection

and construction of the social quality variables may be the principle reason.

- There is no clear pattern of ethnic diversity and immigration effects across the social quality framework. The findings point to ethnic diversity and immigration having positive effects on social inclusion and empowerment, no effects on social cohesion and negative effects on social capital, but there are exceptions in all dimensions.

- Where both have statistically significant effects, the effects of ethnic diversity are substantially larger than the effects of immigration. Relatively large effects from ethnic diversity can be both positive and negative.

- The effects of ethnic diversity and immigration change over time; broadly, becoming more positive for indicators of social cohesion and more negative for indicators of social capital. The trajectories of these changing relationships are not known, so they have no predictive value.

It is frustrating not to produce more strongly conclusive answers to the research questions. It can also be worrying, as it may reflect a poor research design or some other failing on the part of the researcher. To pre-empt such a critique, I will explain why I think the research study provided limited answers to the research questions, despite being well designed.

This study sought to address two core questions which, on the face of it, are complementary but when operationalised into measurable variables the data requirements for the two questions were not the same. This resulted in a dataset which could not address either question comprehensively nor answer them conclusively. Exploring both questions within a single study meant that neither could be addressed in sufficient depth to provide a clear answer. If the study

had only looked at the effect of ethnic diversity and immigration on social quality at one point in time, say 2011, then a far greater number of social quality indicators would have been available. A study focused on 2011 could have selected at least one indicator for most of the Berman and Phillips social quality domains, and more than one indicator for some domains. This would have enabled a more thorough operationalisation of the social quality framework, providing more insight into the varying effects of ethnic diversity and immigration across the framework. We would have learned more about whether ethnic diversity and immigration positively or negatively affect different dimensions of social quality.

Alternatively, if this study had looked only at the temporal dimension of ethnic diversity and immigration effects, if could have focused on one social quality indicator for which a greater number of time point measurements were available, local trust for example. Using response data on local trust from all the Citizenship Survey datasets from 2001 to 2011, and ethnic diversity measures based on ONS projections for the corresponding years, I could have created a dataset with a series of seven time points, rather than the two used in this study. Or, I could have used a social quality question from the British Social Attitudes survey, which has been running since 1983, to look at ethnic diversity and immigration effects on one social quality indicator from 1991 (the first year for which the ethnic diversity data is available) to the present time. A greater number of time points would have enabled more exploration of the trajectories of change in ethnic diversity and immigration effects, adding to the predictive value of the modelling approach.

Where should this study have focused? On ethnic diversity and immigration effects within a comprehensive social quality framework at one point in time, or on ethnic diversity and immigration effects on one indicator of social quality over a series of time points? There was strong justification to combine both into a single study; both were major gaps in the Putnam studies. However, it is clear from this study

that future research would benefit from tackling each of these questions separately, using the findings in one area to develop the methodology for the other.

I suggest that the sequence for future research should be, firstly, to develop the social quality framework. Berman and Philips's framework is a good starting point but further work is needed to operationalise this into measurable variables. Without the limitation of finding variables which are comparable over time, this process could be done more comprehensively and with greater respect for the intention of the Berman and Philips social quality dimensions. The resulting set of social quality variables should be widely tested with varied communities to identify how they reflect different perceptions of social quality. This testing process would help to develop a weighting of social quality indicators within the overall framework, giving greater value to some measures depending on identified factors such as the age or gender of individuals, or their geographic locations. The aim would be to develop a robust framework for measuring social quality which recognises that this is constructed from multiple indices and may mean different things to different groups of people depending on their socio-economic position, life-stage, or other factors. The resulting benefits would be multiple, including:

- Moving towards a more consistent use of social quality indicators in quantitative studies, allowing for greater comparability of findings and for building up more robust conclusions through meta-analysis;

- Moving away from the use of single, 'free floating' measures of social quality which have no wider frame of reference and which may therefore, whether by design or by implication, attribute greater importance to one aspect of social quality than is warranted;

- Ensuring that social quality indicators are relevant to all social groups, or weighted in some way that reflects their relative value to different social groups, thereby moving away from a conceptualisation of social quality as a social phenomenon which equally applies to all social groups in the same way at the same time.

Any further exploration of how ethnic diversity and immigration affect social quality over time should come after a more robust social quality framework has been developed. Key elements to consider for an improved temporal methodology are the use of a longitudinal dataset and an improved immigration measure. The use of longitudinal data should allow for a more sophisticated analytical approach as fewer data 'trade offs' would have to be made to incorporate the temporal dimension. A better distinction between 'immigration' as a measure of 'newness' and 'ethnic diversity' as a measure of population diversity should enable an improved analysis of any differing, sequential effects of these variables on social quality.

Was Putnam right?

Although not an explicit research question, this study was motivated by a consideration of whether Putnam's 2007 finding was correct; does ethnic diversity negatively affect social capital? There are several answers here.

Firstly, it would be useful to see Putnam's study re-run, using the same data but correcting the methodological errors highlighted by Dawkins (2008). Until this is done, Putnam's findings cannot be considered correct with any high degree of confidence.

Secondly, assuming that Putnam's findings are correct, and for indicators which are comparable, my statistical findings differ from Putnam's in some respects. My study found that ethnic diversity has no effects on civic participation nor on watching TV in contrast to

Putnam's findings that ethnic diversity leads to more time spent watching TV and lower likelihoods of voluntary or community work. On other indicators, my findings concur with Putnam's that ethnic diversity has some negative effects. In particular, and in common with Putnam, my study found that ethnic diversity has a significant, negative effect on local trust. However, my study has also demonstrated that decisions taken at each stage of the research process favour the likelihood of this finding. While this does not counter the validity of the finding, the limitations that this suggests for the wider relevance of this finding should be more clearly and more loudly expressed whenever Putnam is cited in evidence of ethnic diversity's negative effects.

The limitations of this key finding are further underlined in my research by contextualising local trust and other social capital measures within a wider framework of social quality. Locating local trust within a wider framework raises questions about its relative importance as a component of social quality in local areas, whilst highlighting the tendency across this research field to focus on this one element. This study confirms Putnam's finding that ethnic diversity has a negative effect on local trust, but challenges the significance which Putnam attaches to this finding by asserting that within a broader conceptualisation of social quality, local trust may not play a particularly large part.

CHAPTER TEN: REFLECTIONS

10.1 How racial considerations influenced this research process

Part One of this thesis looked at the 'idea of race' and how this has been used and misused in the pursuit of social knowledge. There are powerful arguments for not using 'race' at all in social research, particularly as a causal explanation and especially in statistical analysis. In their arguments for a 'de-racialisation' of social research, Zuberi and Bonilla-Silva (2008) call on researchers to examine how racial considerations, from conceptualisation to analysis, influence the research process and findings. Knowles (2010) similarly urges that we should say how we are producing race, what part does each of us play in sustaining hierarchies of racialised difference? This chapter considers how my own research study was 'racialised'; that is, the process through which race or ethnicity were accorded a meaningful, leading role in explaining social quality.

The starting point for this research was Robert Putnam's finding that ethnic diversity has a negative effect on social capital. I wanted to disprove this. To do so, I adopted Putnam's epistemological position; positivist, empiricist, deductive. From this standpoint, knowledge of the social world comes through empirical study which proves or disproves a theory about that world. By taking on this epistemology I committed my study to a viewpoint in which 'social facts' can be discovered through investigation. Specifically, that there is a 'truth' about the effects of ethnic diversity on social quality which can be 'proved' with the right methodology and data. Already, at this conceptual stage, my study was committed to a philosophical positioning of ethnic diversity and social quality as discoverable social facts.

The next conceptual step in my research was to accept that 'ethnicity' is real. This is the critical point in the racialisation of this

research study. It makes no difference what ‘real’ means; whether ethnicity is biologically, culturally or socially constructed is irrelevant. I accepted that ethnic difference is conceptually real. From there, ethnic difference became a measurable entity which could be represented numerically. By using a measure of ethnic difference, my study confirmed the reality of that difference.

Next, my research questions framed ethnic difference as causal. They positioned ethnic difference as potentially responsible for social quality. This framing had two primary racialising effects on this study. Firstly, it determined the logic sequence of any relationship between ethnic difference and social quality; ethnic difference may cause social quality, and not, social quality may cause ethnic difference. Secondly, it puts ethnic difference and only ethnic difference in the frame for explaining social quality; any other explanations are subordinate to ethnic difference. My research questions invested ‘ethnicity’ with causal responsibility for social quality. This is ‘race as ideological cover’ in action, where focusing on the causality of ethnicity distracts attention from other causes of variance in social quality.

Moving on, my study used statistical analysis of quantitative data. This compounded the racialised logic of treating ethnicity as real. In preparing the data for analysis, I transformed the ethnicity data from census categories into a single numerical observation for each local authority area. This process took ethnic difference, already demarcated into ten categories (for the 1991 census), and further reduced this to one number. Anything interesting or useful about specific ethnic groups in relation to social quality was lost in this process. The histories, experiences and cultures of diverse communities were reduced to a single figure. Most of the data analysis was carried out using logistic regression, in which the outcomes are binary; that is, the analysis generates only yes/no answers. This polarises the results, in my study into positive or negative effects, and gives no ‘in between’ answers. The statistical

analysis itself pushes findings into black and white, with no shades of grey. My study attempted to fill in some shading by looking at effect sizes. But I am not certain that this overcomes the effect of polarised positive and negative results, and the contribution of this to confirming the causality of ethnicity, even when the causal effect is very small.

Another step to consider in the progress of my study is construction of the social quality framework. Two key aspects of this process contributed to the racialisation of the study; the exclusion of socio-economic indicators of social quality, and the failure to operationalise any of the social quality indicators to incorporate measures of racism or discrimination. Using socio-economic indicators as control rather than outcome variables guided the study away from considering ethnic inequalities. The main reason for this was that the relationships between ethnicity and these socio-economic variables are already known. But when reflecting on the racialisation of the research process, this is probably a reason for retaining rather than removing socio-economic outcomes; ethnic inequalities should be central to any ethnicity research, not parked to one side. Furthermore, removing discrimination indicators from the Berman and Philips social quality framework (not by choice, it is fair to say, but through lack of available data) also guided my study away from examining social quality experiences which would reveal ethnic inequalities.

Finally, my study assumed the validity of the selected social quality variables. This is a major issue which goes beyond the scope of the current consideration. What this means for the racialisation of my study is that the variables were accepted as reasonable, realistic measures of social quality, on which ethnic diversity might have an effect. But when I later unpacked one of these variables, local trust, I found that the variable itself was constructed from assumed, shared understandings of the meaning of ‘trust’. I conjectured that because

the ‘local trust’ variable is a construct of ‘sameness’ it is strongly influenced by measures of ‘difference’.

10.2 The contribution of this research study

It became clear to me part way through this research process that if you adopt the same epistemological and methodological approaches you will get much the same results. In this sense I consider that the ambition of my research study, to disprove Putnam’s finding that ethnic diversity has negative effects on social quality, has not been achieved. I now think this was an impossible task. Challenging Putnam’s findings from a different epistemological, theoretical or methodological position would not produce any real challenge but, rather, a different type of study. Challenging Putnam’s findings by using the same approach, I came to learn, is no real challenge either, because the logic of the approach will produce similar results. This is where other post-Putnam researchers have ended up, clearly reluctantly; with statistical findings that confirm Putnam’s, albeit alongside other findings of positive effects from ethnic diversity.

On the positive side, I consider that my study makes the following useful contributions to social research:

- By anchoring social quality measures within a theoretically-grounded framework for social quality, this study recognises that social capital is only one small part of what we might consider to contribute to overall social quality. This study demonstrates that social capital is the dimension of social quality which shows the strongest negative effects from ethnic diversity. It is also the dimension where most of the empirical studies in this field are focused.

- This study has confirmed the common finding that ethnic diversity has negative effects on social capital. But it has also found that ethnic diversity and immigration have positive effects on other

dimensions of social quality, particularly on empowerment and social inclusion.

- The study has shown that the selection and construction of social quality outcome variables strongly influences the findings of their relationship with ethnic diversity and immigration. Social quality outcomes measured at area-level and measuring behaviours, are far less likely to show any significant relationship with ethnic diversity and immigration than social quality outcomes measured at individual-level and measuring attitudes. The tendency for studies in this field to select social quality outcome indicators which are individual-level, attitudinal and proximate, like local trust, is skewing the evidence towards finding negative effects from ethnic diversity. There is no agreed rationale for using these indicators more commonly than area-level, behavioural, distal measures which, if employed, would evidence no effects or positive effects from ethnic diversity.

- The study has shown that immigration and ethnic diversity have broadly similar effects on the same aspects of social quality, but that the effects from ethnic diversity are much larger.

- This study has identified that any positive or negative effects on social quality from immigration result from some aspect of immigration other than ethnic difference, as the effects of white immigration and black immigration are much the same as each other.

- By introducing a temporal dimension, this study shows that any effects from ethnic diversity change over time. Broadly, between 2001 and 2011, ethnic diversity and immigration have increasingly positive effects on social inclusion and increasingly negative effects on social capital.

- The study findings suggest that the percentage of local populations possessing higher-level qualifications is an important explanatory variable for difference in social quality outcomes. Higher-level qualifications have a positive effect on social quality and may well be the factor of greatest influence within composite measures of ‘deprivation’ which are commonly used as the only area-level control variable within studies of this type.

On the negative side, this study is guilty of several charges from the anti- or beyond-race theorists:

- By using ethnicity as an explanatory variable rather than ethnic inequality as an outcome variable, as Zuberi accuses, this study has perpetuated the notion that ethnic difference is a cause of social problems while failing to investigate the actual social problems resulting from the historical hierarchisation of racial difference.

- By adopting Brubaker’s ‘groupist’ approach, this study has reified race into a real, measurable entity.

- Using race to explain social difference has obscured other explanations of social quality. This, as Arendt, Miles and Malik would assert, is ethnicity as ‘ideological cover’ which not just overlooks but actively perpetuates relations of power and inequality.

In the light of the recent EU referendum, this employment of ‘race as ideological cover’ is a timely accusation. My study focused on the pro-leave campaign’s defining issue, immigration, at the expense of investigating other factors which shape local-area social quality. The role of higher-level qualifications, for example, which appears to have played a far stronger part in the referendum vote than the levels of immigration in local areas. Within the complex relationships of age, housing and employment opportunities which influence where people

with higher-level qualifications live, it is likely that immigration is an important factor, but not the cause. It may also be that feeling comfortable with ethnic diversity is an outcome of higher-level education; again, ethnic diversity is not the cause.

10.3 My dilemma resolved

My final conclusion is that ethnic diversity should not be used as an explanatory variable in quantitative studies. This is the resolution of my philosophical dilemma. The process of carrying out this research has shown me that using ethnicity in this way legitimises a deeply engrained belief that ethnic difference is a meaningful form of categorisation, and perpetuates a long tradition of pinning the blame for social ills on this form of difference.

If we no longer use ethnic diversity as an explanatory variable, how do we answer questions about its effects? Simply, we stop asking the questions. Any question which relies on a racialised quantification of human difference to provide an answer, is not one which is useful to ask.

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ANNEX ONE: MODEL OUTPUT FOR MULTI-LEVEL MODELS

	B	SE	Z	SIG	ICC
SOCIAL INCLUSION: TRUSTING PARLIAMENT					
VARIANCE COMPONENTS MODEL					
Cons	-0.539	0.026	-20.518	**	
Level 2	0.134	0.019	7.011	**	0.039
CONTROL VARIABLES ONLY					
Cons	-0.465	0.051	-9.115	**	
Female (ref = male)	-0.190	0.029	-6.644	**	
A level or GCSE qualification (ref = degree)	-0.302	0.038	-7.974	**	
No qualifications (ref = degree)	-0.304	0.060	-5.048	**	
Unemployed (ref = employed)	0.035	0.075	0.472	ns	
Economically inactive (ref = employed)	0.209	0.034	6.114	**	
White non UK born (ref = white UK born)	0.653	0.073	8.991	**	
BME UK born (ref = white UK born)	0.169	0.061	2.755	**	
BME non UK born (ref = white UK born)	1.072	0.054	19.959	**	
DEPRIVATION	-0.003	0.002	-1.364	ns	
CRIME RATE	0.001	0.001	0.943	ns	
HIGHER QUALIFICATIONS	0.005	0.003	1.781	ns	
2011 (ref = 2001)	-0.046	0.053	-0.864	ns	
Level 2	0.031	0.008	4.060	**	0.009
ETHNIC DIVERSITY					
Cons	-0.411	0.057	-7.199	**	
Female (ref = male)	-0.190	0.029	-6.628	**	
A level or GCSE qualification (ref = degree)	-0.300	0.038	-7.881	**	
No qualifications (ref = degree)	-0.306	0.060	-5.083	**	
Unemployed (ref = employed)	0.039	0.075	0.517	ns	
Economically inactive (ref = employed)	0.206	0.034	6.108	**	
White non UK born (ref = white UK born)	0.657	0.072	9.068	**	
BME UK born (ref = white UK born)	0.158	0.065	2.424	*	
BME non UK born (ref = white UK born)	1.065	0.059	17.947	**	
DEPRIVATION	-0.002	0.002	-1.018	ns	
CRIME RATE	0.001	0.001	0.832	ns	
HIGHER QUALIFICATIONS	0.006	0.003	1.916	ns	
2011 (ref = 2001)	-0.160	0.065	-2.448	*	
ETHNICDIVERSITY	-0.165	0.151	-1.090	ns	
ETHNICDIVERSITY*2011	0.330	0.148	2.226	*	
Level 2	0.031	0.007	4.151	**	0.009
IMMIGRATION					
Cons	-0.428	0.062	-6.942	**	
Female (ref = male)	-0.188	0.028	-6.617	**	
A level or GCSE qualification (ref = degree)	-0.300	0.038	-7.913	**	
No qualifications (ref = degree)	-0.307	0.060	-5.115	**	
Unemployed (ref = employed)	0.039	0.075	0.527	ns	
Economically inactive (ref = employed)	0.205	0.034	6.092	**	

	B	SE	Z	SIG	ICC
White non UK born (ref = white UK born)	0.645	0.072	8.914	**	
BME UK born (ref = white UK born)	0.153	0.065	2.344	*	
BME non UK born (ref = white UK born)	1.060	0.059	17.836	**	
DEPRIVATION	-0.003	0.002	-1.232	ns	
CRIME RATE	0.000	0.001	0.608	ns	
HIGHER QUALIFICATIONS	0.004	0.003	1.192	ns	
2011 (ref = 2001)	-0.182	0.063	-2.878	**	
IMMIGRATION	-0.002	0.003	-0.619	ns	
IMMIGRATION*2011	0.007	0.003	2.853	*	
Level 2	0.030	0.007	4.085	**	0.009
BLACK IMMIGRATION					
Cons	-0.423	0.055	-7.729	**	
Female (ref = male)	-0.188	0.029	-6.608	**	
A level or GCSE qualification (ref = degree)	-0.300	0.038	-7.903	**	
No qualifications (ref = degree)	-0.307	0.060	-5.115	**	
Unemployed (ref = employed)	0.038	0.075	0.515	ns	
Economically inactive (ref = employed)	0.205	0.034	6.086	**	
White non UK born (ref = white UK born)	0.646	0.073	8.891	**	
BME UK born (ref = white UK born)	0.149	0.065	2.307	*	
BME non UK born (ref = white UK born)	1.057	0.059	17.961	**	
DEPRIVATION	-0.002	0.002	-1.108	ns	
CRIME RATE	0.000	0.001	0.556	ns	
HIGHER QUALIFICATIONS	0.005	0.003	1.602	ns	
2011 (ref = 2001)	-0.181	0.060	-3.026	**	
BLACK IMMIGRATION	-0.003	0.003	-0.788	ns	
BLACK IMMIGRATION*2011	0.011	0.003	3.309	**	
Level 2	0.029	0.007	3.989	**	0.009
WHITE IMMIGRATION					
Cons	-0.417	0.064	-6.533	**	
Female (ref = male)	-0.189	0.028	-6.627	**	
A level or GCSE qualification (ref = degree)	-0.301	0.038	-7.940	**	
No qualifications (ref = degree)	-0.306	0.060	-5.091	**	
Unemployed (ref = employed)	0.039	0.075	0.526	ns	
Economically inactive (ref = employed)	0.207	0.034	6.105	**	
White non UK born (ref = white UK born)	0.648	0.072	9.002	**	
BME UK born (ref = white UK born)	0.165	0.063	2.614	**	
BME non UK born (ref = white UK born)	1.070	0.056	19.200	**	
DEPRIVATION	-0.003	0.002	-1.290	ns	
CRIME RATE	0.001	0.001	0.832	ns	
HIGHER QUALIFICATIONS	0.005	0.004	1.375	ns	
2011 (ref = 2001)	-0.160	0.064	-2.480	*	
WHITE IMMIGRATION	-0.009	0.008	-1.069	ns	
WHITE IMMIGRATION*2011	0.018	0.007	2.531	*	
Level 2	0.030	0.007	4.156	**	0.009
ETHNIC DIVERSITY RATE OF INCREASE					

	B	SE	Z	SIG	ICC
Cons	-0.468	0.072	-6.515	**	
Female (ref = male)	-0.189	0.029	-6.614	**	
A level or GCSE qualification (ref = degree)	-0.302	0.038	-7.985	**	
No qualifications (ref = degree)	-0.306	0.060	-5.092	**	
Unemployed (ref = employed)	0.037	0.075	0.489	ns	
Economically inactive (ref = employed)	0.207	0.034	6.101	**	
White non UK born (ref = white UK born)	0.653	0.073	8.995	**	
BME UK born (ref = white UK born)	0.163	0.061	2.661	**	
BME non UK born (ref = white UK born)	1.069	0.055	19.611	**	
DEPRIVATION	-0.003	0.002	-1.434	ns	
CRIME RATE	0.001	0.001	0.954	ns	
HIGHER QUALIFICATIONS	0.004	0.003	1.508	ns	
2011 (ref = 2001)	0.018	0.090	0.203	ns	
ED increase	0.000	0.001	0.106	ns	
ED increase*2011	-0.001	0.001	-0.976	ns	
Level 2	0.030	0.007	4.050	**	0.009
IMMIGRATION RATE OF INCREASE					
Cons	-0.415	0.064	-6.518	**	
Female (ref = male)	-0.189	0.029	-6.606	**	
A level or GCSE qualification (ref = degree)	-0.303	0.038	-8.019	**	
No qualifications (ref = degree)	-0.306	0.060	-5.087	**	
Unemployed (ref = employed)	0.037	0.075	0.495	ns	
Economically inactive (ref = employed)	0.207	0.034	6.077	**	
White non UK born (ref = white UK born)	0.655	0.073	9.003	**	
BME UK born (ref = white UK born)	0.165	0.061	2.718	**	
BME non UK born (ref = white UK born)	1.072	0.054	20.026	**	
DEPRIVATION	-0.003	0.002	-1.446	ns	
CRIME RATE	0.001	0.001	1.559	ns	
HIGHER QUALIFICATIONS	0.001	0.003	0.329	ns	
2011 (ref = 2001)	0.082	0.088	0.927	ns	
IMM increase	-0.001	0.001	-1.788	ns	
IMM increase*2011	-0.002	0.001	-1.452	ns	
Level 2	0.028	0.007	3.945	**	0.009
SOCIAL INCLUSION: TRUSTING THE LOCAL COUNCIL					
VARIANCE COMPONENTS MODEL					
Cons	0.427	0.023	18.553	**	
Level 2	0.091	0.015	6.061	**	0.027
CONTROL VARIABLES ONLY					
Cons	-0.024	0.049	-0.490	ns	
Female (ref = male)	-0.008	0.030	-0.284	ns	
A level or GCSE qualification (ref = degree)	-0.161	0.034	-4.704	**	
No qualifications (ref = degree)	-0.124	0.053	-2.344	*	
Unemployed (ref = employed)	0.074	0.065	1.132	ns	
Economically inactive (ref = employed)	0.233	0.035	6.668	**	
White non UK born (ref = white UK born)	0.476	0.089	5.374	**	

	B	SE	Z	SIG	ICC
BME UK born (ref = white UK born)	0.281	0.059	4.729	**	
BME non UK born (ref = white UK born)	0.862	0.049	17.432	**	
DEPRIVATION	-0.014	0.003	-5.300	**	
CRIME RATE	-0.001	0.001	-1.613	ns	
HIGHER QUALIFICATIONS	0.002	0.003	0.711	ns	
2011 (ref = 2001)	0.384	0.051	7.548	**	
Level 2	0.042	0.009	4.710	**	0.013
ETHNIC DIVERSITY					
Cons	0.130	0.065	2.020	**	
Female (ref = male)	-0.009	0.030	-0.307	ns	
A level or GCSE qualification (ref = degree)	-0.160	0.035	-4.623	**	
No qualifications (ref = degree)	-0.127	0.053	-2.405	*	
Unemployed (ref = employed)	0.081	0.066	1.232	ns	
Economically inactive (ref = employed)	0.231	0.035	6.656	**	
White non UK born (ref = white UK born)	0.477	0.089	5.360	**	
BME UK born (ref = white UK born)	0.299	0.063	4.758	**	
BME non UK born (ref = white UK born)	0.889	0.051	17.368	**	
DEPRIVATION	-0.011	0.003	-3.713	**	
CRIME RATE	-0.001	0.001	-1.543	ns	
HIGHER QUALIFICATIONS	0.007	0.003	2.209	*	
2011 (ref = 2001)	0.236	0.061	3.862	**	
ETHNIC DIVERSITY	-0.583	0.173	-3.376	**	
ETHNIC DIVERSITY*2011	0.498	0.123	4.046	**	
Level 2	0.040	0.010	4.191	**	0.012
IMMIGRATION					
Cons	0.127	0.073	1.740	ns	
Female (ref = male)	-0.007	0.030	-0.222	ns	
A level or GCSE qualification (ref = degree)	-0.159	0.034	-4.598	**	
No qualifications (ref = degree)	-0.127	0.053	-2.400	*	
Unemployed (ref = employed)	0.079	0.066	1.200	ns	
Economically inactive (ref = employed)	0.229	0.035	6.612	**	
White non UK born (ref = white UK born)	0.476	0.088	5.380	**	
BME UK born (ref = white UK born)	0.289	0.061	4.714	**	
BME non UK born (ref = white UK born)	0.880	0.050	17.652	**	
DEPRIVATION	-0.012	0.003	-4.031	**	
CRIME RATE	-0.001	0.001	-1.389	ns	
HIGHER QUALIFICATIONS	0.008	0.004	1.932	ns	
2011 (ref = 2001)	0.218	0.066	3.295	**	
IMMIGRATION	-0.011	0.004	-2.595	**	
IMMIGRATION*2011	0.010	0.003	3.871	**	
Level 2	0.041	0.009	4.377	**	0.012
BLACK IMMIGRATION					
Cons	0.100	0.063	1.586	ns	
Female (ref = male)	-0.007	0.030	-0.226	ns	
A level or GCSE qualification (ref = degree)	-0.159	0.034	-4.608	**	

	B	SE	Z	SIG	ICC
No qualifications (ref = degree)	-0.127	0.053	-2.397	*	
Unemployed (ref = employed)	0.078	0.066	1.186	ns	
Economically inactive (ref = employed)	0.228	0.035	6.594	**	
White non UK born (ref = white UK born)	0.476	0.089	5.375	**	
BME UK born (ref = white UK born)	0.292	0.062	4.729	**	
BME non UK born (ref = white UK born)	0.884	0.050	17.578	**	
DEPRIVATION	-0.011	0.003	-4.025	**	
CRIME RATE	-0.001	0.001	-1.635	ns	
HIGHER QUALIFICATIONS	0.007	0.003	1.961	ns	
2011 (ref = 2001)	0.243	0.061	4.015	**	
BLACK IMMIGRATION	-0.013	0.005	-2.523	**	
BLACK IMMIGRATION*2011	0.013	0.003	3.949	**	
Level 2	0.041	0.009	4.332	**	0.012
WHITE IMMIGRATION					
Cons	0.158	0.079	2.016	*	
Female (ref = male)	-0.007	0.030	-0.232	ns	
A level or GCSE qualification (ref = degree)	-0.158	0.035	-4.587	**	
No qualifications (ref = degree)	-0.127	0.053	-2.413	*	
Unemployed (ref = employed)	0.080	0.066	1.213	ns	
Economically inactive (ref = employed)	0.231	0.035	6.658	**	
White non UK born (ref = white UK born)	0.475	0.088	5.373	**	
BME UK born (ref = white UK born)	0.284	0.060	4.735	**	
BME non UK born (ref = white UK born)	0.871	0.049	17.742	**	
DEPRIVATION	-0.013	0.003	-4.679	**	
CRIME RATE	-0.001	0.001	-1.060	ns	
HIGHER QUALIFICATIONS	0.009	0.004	2.156	*	
2011 (ref = 2001)	0.203	0.074	2.754	**	
WHITE IMMIGRATION	-0.033	0.012	-2.797	**	
WHITE IMMIGRATION*2011	0.030	0.009	3.388	**	
Level 2	0.039	0.009	4.313	**	0.012
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	-0.085	0.066	-1.278	ns	
Female (ref = male)	-0.007	0.030	-0.233	ns	
A level or GCSE qualification (ref = degree)	-0.161	0.034	-4.666	**	
No qualifications (ref = degree)	-0.126	0.053	-2.384	*	
Unemployed (ref = employed)	0.076	0.065	1.164	ns	
Economically inactive (ref = employed)	0.231	0.035	6.625	**	
White non UK born (ref = white UK born)	0.475	0.088	5.367	**	
BME UK born (ref = white UK born)	0.278	0.060	4.633	**	
BME non UK born (ref = white UK born)	0.865	0.050	17.433	**	
DEPRIVATION	-0.014	0.003	-4.829	**	
CRIME RATE	-0.001	0.001	-1.729	ns	
HIGHER QUALIFICATIONS	0.003	0.003	0.962	ns	
2011 (ref = 2001)	0.495	0.076	6.489	**	
ED increase	0.001	0.001	1.445	ns	

	B	SE	Z	SIG	ICC
ED increase*2011	-0.002	0.001	-2.227	*	
Level 2	0.042	0.009	4.661	**	0.013
IMMIGRATION RATE OF INCREASE					
Cons	-0.038	0.063	-0.604	ns	
Female (ref = male)	-0.008	0.030	-0.254	ns	
A level or GCSE qualification (ref = degree)	-0.161	0.034	-4.686	**	
No qualifications (ref = degree)	-0.125	0.053	-2.374	**	
Unemployed (ref = employed)	0.076	0.065	1.169	ns	
Economically inactive (ref = employed)	0.232	0.035	6.640	**	
White non UK born (ref = white UK born)	0.479	0.089	5.397	**	
BME UK born (ref = white UK born)	0.280	0.059	4.751	**	
BME non UK born (ref = white UK born)	0.865	0.049	17.706	**	
DEPRIVATION	-0.014	0.003	-5.241	**	
CRIME RATE	-0.001	0.001	-1.493	ns	
HIGHER QUALIFICATIONS	0.000	0.003	0.136	ns	
2011 (ref = 2001)	0.517	0.080	6.466	**	
IMM increase	0.000	0.001	0.151	ns	
IMM increase*2011	-0.002	0.001	-2.026	*	
Level 2	0.042	0.009	4.647	**	0.013
SOCIAL INCLUSION: TRUSTING THE POLICE					
VARIANCE COMPONENTS MODEL					
Cons	1.483	0.025	59.084	**	
Level 2	0.090	0.014	6.384	**	0.026
CONTROL VARIABLES ONLY					
Cons	1.499	0.048	31.511	**	
Female (ref = male)	0.214	0.035	6.070	**	
A level or GCSE qualification (ref = degree)	-0.269	0.039	-6.903	**	
No qualifications (ref = degree)	-0.340	0.058	-5.897	**	
Unemployed (ref = employed)	-0.319	0.069	-4.592	**	
Economically inactive (ref = employed)	0.020	0.036	0.564	ns	
White non UK born (ref = white UK born)	0.230	0.101	2.270	*	
BME UK born (ref = white UK born)	-0.744	0.062	-12.069	**	
BME non UK born (ref = white UK born)	-0.074	0.051	-1.466	ns	
DEPRIVATION	-0.012	0.002	-5.764	**	
CRIME RATE	-0.001	0.001	-0.989	ns	
HIGHER QUALIFICATIONS	0.002	0.003	0.707	ns	
2011 (ref = 2001)	0.245	0.054	4.550	**	
Level 2	0.035	0.010	3.656	**	0.011
ETHNIC DIVERSITY					
Cons	1.554	0.062	25.146	**	
Female (ref = male)	0.216	0.036	6.088	**	
A level or GCSE qualification (ref = degree)	-0.266	0.039	-6.814	**	
No qualifications (ref = degree)	-0.341	0.058	-5.930	**	
Unemployed (ref = employed)	-0.318	0.070	-4.575	**	

	B	SE	Z	SIG	ICC
Economically inactive (ref = employed)	0.019	0.036	0.519	ns	
White non UK born (ref = white UK born)	0.242	0.103	2.359	*	
BME UK born (ref = white UK born)	-0.749	0.064	-11.666	**	
BME non UK born (ref = white UK born)	-0.074	0.054	-1.365	ns	
DEPRIVATION	-0.011	0.002	-4.882	**	
CRIME RATE	-0.001	0.001	-1.112	ns	
HIGHER QUALIFICATIONS	0.003	0.003	0.914	ns	
2011 (ref = 2001)	0.130	0.074	1.755	ns	
ETHNIC DIVERSITY	-0.178	0.150	-1.187	ns	
ETHNIC DIVERSITY*2011	0.317	0.132	2.397	*	
Level 2	0.035	0.010	3.586	**	0.010
IMMIGRATION					
Cons	1.572	0.067	23.428	**	
Female (ref = male)	0.216	0.035	6.094	**	
A level or GCSE qualification (ref = degree)	-0.267	0.039	-6.851	**	
No qualifications (ref = degree)	-0.341	0.057	-5.947	**	
Unemployed (ref = employed)	-0.317	0.070	-4.554	**	
Economically inactive (ref = employed)	0.018	0.036	0.487	ns	
White non UK born (ref = white UK born)	0.231	0.102	2.276	*	
BME UK born (ref = white UK born)	-0.740	0.065	-11.433	**	
BME non UK born (ref = white UK born)	-0.066	0.054	-1.221	ns	
DEPRIVATION	-0.011	0.002	-4.647	**	
CRIME RATE	-0.001	0.001	-0.997	ns	
HIGHER QUALIFICATIONS	0.004	0.004	1.057	ns	
2011 (ref = 2001)	0.136	0.072	1.897	ns	
IMMIGRATION	-0.005	0.003	-1.443	ns	
IMMIGRATION*2011	0.006	0.002	2.463	*	
Level 2	0.036	0.010	3.649	**	0.011
BLACK IMMIGRATION					
Cons	1.552	0.060	26.075	**	
Female (ref = male)	0.215	0.035	6.093	**	
A level or GCSE qualification (ref = degree)	-0.267	0.039	-6.860	**	
No qualifications (ref = degree)	-0.341	0.057	-5.944	**	
Unemployed (ref = employed)	-0.317	0.070	-4.562	**	
Economically inactive (ref = employed)	0.018	0.036	0.484	ns	
White non UK born (ref = white UK born)	0.230	0.101	2.266	*	
BME UK born (ref = white UK born)	-0.744	0.064	-11.572	**	
BME non UK born (ref = white UK born)	-0.070	0.054	-1.309	ns	
DEPRIVATION	-0.011	0.002	-4.643	**	
CRIME RATE	-0.001	0.001	-1.148	ns	
HIGHER QUALIFICATIONS	0.003	0.003	0.972	ns	
2011 (ref = 2001)	0.147	0.071	2.082	*	
BLACK IMMIGRATION	-0.005	0.004	-1.257	ns	
BLACK IMMIGRATION*2011	0.008	0.003	2.398	*	
Level 2	0.035	0.010	3.631	**	0.011

	B	SE	Z	SIG	ICC
WHITE IMMIGRATION					
Cons	1.648	0.070	23.513	**	
Female (ref = male)	0.216	0.035	6.091	**	
A level or GCSE qualification (ref = degree)	-0.267	0.039	-6.840	**	
No qualifications (ref = degree)	-0.342	0.057	-5.952	**	
Unemployed (ref = employed)	-0.317	0.069	-4.561	**	
Economically inactive (ref = employed)	0.019	0.036	0.514	ns	
White non UK born (ref = white UK born)	0.237	0.102	2.333	*	
BME UK born (ref = white UK born)	-0.734	0.063	-11.672	**	
BME non UK born (ref = white UK born)	-0.060	0.053	-1.143	ns	
DEPRIVATION	-0.011	0.002	-4.895	**	
CRIME RATE	0.000	0.001	-0.514	ns	
HIGHER QUALIFICATIONS	0.009	0.004	2.005	*	
2011 (ref = 2001)	0.118	0.069	1.700	ns	
WHITE IMMIGRATION	-0.027	0.009	-2.938	**	
WHITE IMMIGRATION*2011	0.020	0.007	2.972	**	
Level 2	0.033	0.009	3.613	**	0.010
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	1.475	0.073	20.172	**	
Female (ref = male)	0.214	0.035	6.078	**	
A level or GCSE qualification (ref = degree)	-0.269	0.039	-6.910	**	
No qualifications (ref = degree)	-0.339	0.057	-5.922	**	
Unemployed (ref = employed)	-0.319	0.069	-4.590	**	
Economically inactive (ref = employed)	0.020	0.036	0.563	ns	
White non UK born (ref = white UK born)	0.231	0.101	2.283	*	
BME UK born (ref = white UK born)	-0.739	0.062	-11.872	**	
BME non UK born (ref = white UK born)	-0.070	0.052	-1.355	ns	
DEPRIVATION	-0.012	0.002	-5.062	**	
CRIME RATE	-0.001	0.001	-1.045	ns	
HIGHER QUALIFICATIONS	0.003	0.003	0.888	ns	
2011 (ref = 2001)	0.241	0.074	3.239	**	
ED increase	0.001	0.001	0.403	ns	
ED increase*2011	0.000	0.001	-0.025	ns	
Level 2	0.035	0.010	3.658	**	0.011
IMMIGRATION RATE OF INCREASE					
Cons	1.598	0.064	24.883	**	
Female (ref = male)	0.215	0.035	6.075	**	
A level or GCSE qualification (ref = degree)	-0.272	0.039	-6.976	**	
No qualifications (ref = degree)	-0.341	0.057	-5.943	**	
Unemployed (ref = employed)	-0.318	0.069	-4.599	**	
Economically inactive (ref = employed)	0.020	0.036	0.539	ns	
White non UK born (ref = white UK born)	0.229	0.101	2.271	*	
BME UK born (ref = white UK born)	-0.751	0.061	-12.244	**	
BME non UK born (ref = white UK born)	-0.081	0.050	-1.608	ns	
DEPRIVATION	-0.013	0.002	-6.380	**	

	B	SE	Z	SIG	ICC
CRIME RATE	0.000	0.001	0.031	ns	
HIGHER QUALIFICATIONS	-0.003	0.003	-1.083	ns	
2011 (ref = 2001)	0.323	0.083	3.874	**	
IMM increase	-0.002	0.001	-2.573	*	
IMM increase*2011	0.000	0.001	-0.257	ns	
Level 2	0.031	0.009	3.401	**	0.009
SOCIAL COHESION: FEELING SAFE					
VARIANCE COMPONENTS MODEL					
Cons	1.028	0.029	35.014	**	
Level 2	0.173	0.017	10.472	**	0.050
CONTROL VARIABLES ONLY					
Cons	2.071	0.071	29.347	**	
Female (ref = male)	-1.038	0.035	-29.922	**	
A level or GCSE qualification (ref = degree)	-0.201	0.048	-4.200	**	
No qualifications (ref = degree)	-0.548	0.054	-10.061	**	
Unemployed (ref = employed)	-0.370	0.069	-5.348	**	
Economically inactive (ref = employed)	-0.540	0.040	-13.567	**	
White non UK born (ref = white UK born)	0.009	0.087	0.102	ns	
BME UK born (ref = white UK born)	0.004	0.052	0.080	ns	
BME non UK born (ref = white UK born)	0.048	0.053	0.913	ns	
DEPRIVATION	-0.016	0.003	-4.886	**	
CRIME RATE	-0.003	0.001	-3.311	**	
HIGHER QUALIFICATIONS	0.006	0.003	1.959	*	
2011 (ref = 2001)	0.081	0.063	1.271	ns	
Level 2	0.096	0.014	6.992	**	0.028
ETHNIC DIVERSITY					
Cons	1.199	0.169	7.082	**	
Female (ref = male)	-1.039	0.035	-30.098	**	
A level or GCSE qualification (ref = degree)	-0.205	0.047	-4.349	**	
No qualifications (ref = degree)	-0.546	0.054	-10.091	**	
Unemployed (ref = employed)	-0.373	0.069	-5.381	**	
Economically inactive (ref = employed)	-0.539	0.040	-13.540	**	
White non UK born (ref = white UK born)	0.057	0.089	0.637	ns	
BME UK born (ref = white UK born)	0.098	0.056	1.745	ns	
BME non UK born (ref = white UK born)	0.140	0.058	2.431	*	
DEPRIVATION	-0.008	0.003	-2.316	*	
CRIME RATE	-0.002	0.001	-2.819	**	
HIGHER QUALIFICATIONS	0.021	0.003	6.005	**	
2011 (ref = 2001)	-0.022	0.153	-0.144	ns	
ETHNIC DIVERSITY	1.098	0.208	5.274	**	
ETHNIC DIVERSITY*2011	0.278	0.192	1.447	ns	
Level 2	0.071	0.012	5.834	**	0.021
IMMIGRATION					

	B	SE	Z	SIG	ICC
Cons	2.397	0.088	27.304	**	
Female (ref = male)	-1.040	0.034	-30.400	**	
A level or GCSE qualification (ref = degree)	-0.204	0.047	-4.300	**	
No qualifications (ref = degree)	-0.546	0.054	-10.087	**	
Unemployed (ref = employed)	-0.374	0.069	-5.399	**	
Economically inactive (ref = employed)	-0.539	0.040	-13.584	**	
White non UK born (ref = white UK born)	0.043	0.089	0.488	ns	
BME UK born (ref = white UK born)	0.074	0.054	1.359	ns	
BME non UK born (ref = white UK born)	0.120	0.056	2.148	*	
DEPRIVATION	-0.010	0.003	-2.982	**	
CRIME RATE	-0.002	0.001	-2.299	**	
HIGHER QUALIFICATIONS	0.029	0.004	6.521	**	
2011 (ref = 2001)	0.151	0.068	2.238	*	
IMMIGRATION	-0.026	0.004	-5.910	**	
IMMIGRATION*2011	0.000	0.003	0.069	ns	
Level 2	0.083	0.013	6.140	**	0.024
BLACK IMMIGRATION					
Cons	2.242	0.084	26.589	**	
Female (ref = male)	-1.040	0.034	-30.365	**	
A level or GCSE qualification (ref = degree)	-0.205	0.047	-4.348	**	
No qualifications (ref = degree)	-0.547	0.054	-10.117	**	
Unemployed (ref = employed)	-0.373	0.069	-5.370	**	
Economically inactive (ref = employed)	-0.538	0.040	-13.569	**	
White non UK born (ref = white UK born)	0.035	0.088	0.397	ns	
BME UK born (ref = white UK born)	0.076	0.055	1.371	ns	
BME non UK born (ref = white UK born)	0.120	0.057	2.097	*	
DEPRIVATION	-0.011	0.003	-3.251	**	
CRIME RATE	-0.002	0.001	-2.643	**	
HIGHER QUALIFICATIONS	0.020	0.004	5.321	**	
2011 (ref = 2001)	0.221	0.070	3.166	**	
BLACK IMMIGRATION	-0.025	0.005	-4.655	**	
BLACK IMMIGRATION*2011	-0.008	0.004	-1.845	ns	
Level 2	0.079	0.013	6.035	**	0.024
WHITE IMMIGRATION					
Cons	2.428	0.106	22.820	**	
Female (ref = male)	-1.040	0.034	-30.294	**	
A level or GCSE qualification (ref = degree)	-0.201	0.048	-4.205	**	
No qualifications (ref = degree)	-0.547	0.054	-10.116	**	
Unemployed (ref = employed)	-0.373	0.069	-5.387	**	
Economically inactive (ref = employed)	-0.540	0.040	-13.627	**	
White non UK born (ref = white UK born)	0.036	0.088	0.407	ns	
BME UK born (ref = white UK born)	0.034	0.052	0.646	ns	
BME non UK born (ref = white UK born)	0.079	0.052	1.529	ns	
DEPRIVATION	-0.012	0.003	-4.019	**	
CRIME RATE	-0.002	0.001	-2.432	*	

	B	SE	Z	SIG	ICC
HIGHER QUALIFICATIONS	0.028	0.006	4.737	**	
2011 (ref = 2001)	0.047	0.073	0.641	ns	
WHITE IMMIGRATION	-0.064	0.015	-4.167	**	
WHITE IMMIGRATION*2011	0.008	0.008	0.982	ns	
Level 2	0.094	0.014	6.721	**	0.028
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	2.141	0.097	22.022	**	
Female (ref = male)	-1.040	0.035	-30.119	**	
A level or GCSE qualification (ref = degree)	-0.202	0.048	-4.252	**	
No qualifications (ref = degree)	-0.546	0.054	-10.028	**	
Unemployed (ref = employed)	-0.372	0.069	-5.364	**	
Economically inactive (ref = employed)	-0.538	0.040	-13.496	**	
White non UK born (ref = white UK born)	0.010	0.088	0.110	ns	
BME UK born (ref = white UK born)	0.004	0.052	0.077	ns	
BME non UK born (ref = white UK born)	0.044	0.053	0.830	ns	
DEPRIVATION	-0.017	0.003	-5.383	**	
CRIME RATE	-0.003	0.001	-3.247	**	
HIGHER QUALIFICATIONS	0.005	0.004	1.383	ns	
2011 (ref = 2001)	-0.039	0.099	-0.390	ns	
ED increase	-0.002	0.001	-1.371	ns	
ED increase*2011	0.003	0.001	2.088	*	
Level 2	0.096	0.014	7.014	**	0.028
IMMIGRATION RATE OF INCREASE					
Cons	2.124	0.086	24.784	**	
Female (ref = male)	-1.038	0.035	-29.948	**	
A level or GCSE qualification (ref = degree)	-0.201	0.048	-4.205	**	
No qualifications (ref = degree)	-0.549	0.054	-10.110	**	
Unemployed (ref = employed)	-0.369	0.069	-5.337	**	
Economically inactive (ref = employed)	-0.542	0.040	-13.646	**	
White non UK born (ref = white UK born)	0.011	0.087	0.121	ns	
BME UK born (ref = white UK born)	0.001	0.052	0.019	ns	
BME non UK born (ref = white UK born)	0.048	0.052	0.916	ns	
DEPRIVATION	-0.016	0.003	-4.977	**	
CRIME RATE	-0.003	0.001	-2.854	**	
HIGHER QUALIFICATIONS	0.002	0.004	0.524	ns	
2011 (ref = 2001)	0.238	0.097	2.442	*	
IMM increase	-0.001	0.001	-1.255	ns	
IMM increase*2011	-0.002	0.001	-1.683	ns	
Level 2	0.092	0.014	6.773	**	0.027
EMPOWERMENT: FEELING ABLE TO INFLUENCE LOCAL DECISIONS					
VARIANCE COMPONENTS MODEL					
Cons	-0.349	0.019	-18.172	**	
Level 2	0.048	0.008	5.931	**	0.014
CONTROL VARIABLES ONLY					
Cons	0.156	0.045	3.447	**	

	B	SE	Z	SIG	ICC
Female (ref = male)	0.035	0.026	1.322	ns	
A level or GCSE qualification (ref = degree)	-0.391	0.033	-11.982	**	
No qualifications (ref = degree)	-0.778	0.052	-15.014	**	
Unemployed (ref = employed)	0.066	0.059	1.110	ns	
Economically inactive (ref = employed)	-0.119	0.031	-3.829	**	
White non UK born (ref = white UK born)	0.189	0.068	2.783	**	
BME UK born (ref = white UK born)	0.280	0.053	5.246	**	
BME non UK born (ref = white UK born)	0.250	0.045	5.615	**	
DEPRIVATION	-0.004	0.002	-1.863	ns	
CRIME RATE	0.000	0.001	0.437	ns	
HIGHER QUALIFICATIONS	0.006	0.003	2.166	*	
2011 (ref = 2001)	-0.272	0.055	-4.908	**	
Level 2	0.026	0.007	3.616	**	0.008
ETHNIC DIVERSITY					
Cons	0.145	0.057	2.531	*	
Female (ref = male)	0.034	0.026	1.298	ns	
A level or GCSE qualification (ref = degree)	-0.387	0.032	-11.934	**	
No qualifications (ref = degree)	-0.779	0.052	-14.963	**	
Unemployed (ref = employed)	0.067	0.059	1.143	ns	
Economically inactive (ref = employed)	-0.119	0.031	-3.846	**	
White non UK born (ref = white UK born)	0.185	0.069	2.694	**	
BME UK born (ref = white UK born)	0.267	0.059	4.525	**	
BME non UK born (ref = white UK born)	0.238	0.049	4.821	**	
DEPRIVATION	-0.005	0.002	-1.904	ns	
CRIME RATE	0.000	0.001	0.355	ns	
HIGHER QUALIFICATIONS	0.005	0.003	1.599	ns	
2011 (ref = 2001)	-0.301	0.064	-4.687	**	
ETHNIC DIVERSITY	0.056	0.174	0.324	ns	
ETHNIC DIVERSITY*2011	0.068	0.170	0.402	ns	
Level 2	0.026	0.007	3.598	**	0.008
IMMIGRATION					
Cons	0.128	0.061	2.086	*	
Female (ref = male)	0.035	0.026	1.334	ns	
A level or GCSE qualification (ref = degree)	-0.390	0.033	-11.983	**	
No qualifications (ref = degree)	-0.779	0.052	-15.023	**	
Unemployed (ref = employed)	0.066	0.059	1.117	ns	
Economically inactive (ref = employed)	-0.119	0.031	-3.832	**	
White non UK born (ref = white UK born)	0.184	0.069	2.688	**	
BME UK born (ref = white UK born)	0.269	0.057	4.715	**	
BME non UK born (ref = white UK born)	0.238	0.047	5.031	**	
DEPRIVATION	-0.005	0.002	-1.968	*	
CRIME RATE	0.000	0.001	0.272	ns	
HIGHER QUALIFICATIONS	0.004	0.004	1.022	ns	
2011 (ref = 2001)	-0.283	0.065	-4.317	**	
IMMIGRATION	0.002	0.003	0.671	ns	

	B	SE	Z	SIG	ICC
IMMIGRATION*2011	0.000	0.003	0.086	ns	
Level 2	0.026	0.007	3.567	**	0.008
BLACK IMMIGRATION					
Cons	0.136	0.054	2.501	*	
Female (ref = male)	0.035	0.026	1.343	ns	
A level or GCSE qualification (ref = degree)	-0.390	0.033	-11.982	**	
No qualifications (ref = degree)	-0.779	0.052	-15.021	**	
Unemployed (ref = employed)	0.066	0.059	1.120	ns	
Economically inactive (ref = employed)	-0.119	0.031	-3.846	**	
White non UK born (ref = white UK born)	0.182	0.068	2.667	**	
BME UK born (ref = white UK born)	0.261	0.057	4.549	**	
BME non UK born (ref = white UK born)	0.230	0.049	4.715	**	
DEPRIVATION	-0.005	0.002	-2.046	*	
CRIME RATE	0.000	0.001	0.235	ns	
HIGHER QUALIFICATIONS	0.004	0.003	1.257	ns	
2011 (ref = 2001)	-0.306	0.064	-4.798	**	
BLACK IMMIGRATION	0.003	0.004	0.766	ns	
BLACK IMMIGRATION*2011	0.003	0.005	0.543	ns	
Level 2	0.026	0.007	3.532	**	0.008
WHITE IMMIGRATION					
Cons	0.112	0.066	1.713	ns	
Female (ref = male)	0.035	0.026	1.311	ns	
A level or GCSE qualification (ref = degree)	-0.391	0.033	-11.996	**	
No qualifications (ref = degree)	-0.778	0.052	-15.050	**	
Unemployed (ref = employed)	0.064	0.059	1.092	ns	
Economically inactive (ref = employed)	-0.118	0.031	-3.810	**	
White non UK born (ref = white UK born)	0.189	0.069	2.741	**	
BME UK born (ref = white UK born)	0.278	0.055	5.058	**	
BME non UK born (ref = white UK born)	0.247	0.044	5.632	**	
DEPRIVATION	-0.005	0.002	-1.941	ns	
CRIME RATE	0.000	0.001	0.324	ns	
HIGHER QUALIFICATIONS	0.004	0.004	1.046	ns	
2011 (ref = 2001)	-0.228	0.066	-3.461	**	
WHITE IMMIGRATION	0.008	0.009	0.884	ns	
WHITE IMMIGRATION*2011	-0.007	0.008	-0.941	ns	
Level 2	0.026	0.007	3.651	**	0.008
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	0.181	0.063	2.854	**	
Female (ref = male)	0.036	0.026	1.357	ns	
A level or GCSE qualification (ref = degree)	-0.391	0.033	-11.996	**	
No qualifications (ref = degree)	-0.780	0.052	-15.022	**	
Unemployed (ref = employed)	0.066	0.059	1.121	ns	
Economically inactive (ref = employed)	-0.119	0.031	-3.854	**	
White non UK born (ref = white UK born)	0.188	0.068	2.768	**	
BME UK born (ref = white UK born)	0.273	0.054	5.048	**	

	B	SE	Z	SIG	ICC
BME non UK born (ref = white UK born)	0.244	0.045	5.457	**	
DEPRIVATION	-0.005	0.002	-2.040	*	
CRIME RATE	0.000	0.001	0.508	ns	
HIGHER QUALIFICATIONS	0.005	0.003	1.605	ns	
2011 (ref = 2001)	-0.239	0.087	-2.734	**	
ED increase	0.000	0.001	-0.529	ns	
ED increase*2011	-0.001	0.001	-0.449	ns	
Level 2	0.026	0.007	3.567	**	0.008
IMMIGRATION RATE OF INCREASE					
Cons	0.227	0.051	4.463	**	
Female (ref = male)	0.035	0.026	1.326	ns	
A level or GCSE qualification (ref = degree)	-0.392	0.033	-12.039	**	
No qualifications (ref = degree)	-0.779	0.052	-15.051	**	
Unemployed (ref = employed)	0.065	0.059	1.097	ns	
Economically inactive (ref = employed)	-0.119	0.031	-3.835	**	
White non UK born (ref = white UK born)	0.188	0.068	2.767	**	
BME UK born (ref = white UK born)	0.276	0.053	5.172	**	
BME non UK born (ref = white UK born)	0.245	0.045	5.477	**	
DEPRIVATION	-0.004	0.002	-2.120	*	
CRIME RATE	0.001	0.001	0.905	ns	
HIGHER QUALIFICATIONS	0.003	0.003	1.127	ns	
2011 (ref = 2001)	-0.288	0.086	-3.355	**	
IMM increase	-0.002	0.001	-1.815	ns	
IMM increase*2011	0.001	0.001	0.840	ns	
Level 2	0.025	0.007	3.526	**	0.008
SOCIAL CAPITAL: LOCAL TRUST					
VARIANCE COMPONENTS MODEL					
Cons	1.465	0.043	34.181	**	
Level 2	0.424	0.035	12.045	**	0.114
CONTROL VARIABLES ONLY					
Cons	1.737	0.061	28.588	**	
Female (ref = male)	-0.156	0.027	-5.808	**	
A level or GCSE qualification (ref = degree)	-0.397	0.046	-8.676	**	
No qualifications (ref = degree)	-0.587	0.056	-10.523	**	
Unemployed (ref = employed)	-0.330	0.064	-5.191	**	
Economically inactive (ref = employed)	0.029	0.036	0.796	ns	
White non UK born (ref = white UK born)	-0.051	0.083	-0.613	ns	
BME UK born (ref = white UK born)	-0.648	0.053	-12.183	**	
BME non UK born (ref = white UK born)	-0.563	0.060	-9.456	**	
DEPRIVATION	-0.015	0.004	-3.493	**	
CRIME RATE	-0.004	0.001	-2.722	**	
HIGHER QUALIFICATIONS	-0.001	0.004	-0.236	ns	
2011 (ref = 2001)	0.217	0.083	2.607	**	
Level 2	0.132	0.019	6.823	**	0.039
ETHNIC DIVERSITY					

	B	SE	Z	SIG	ICC
Cons	1.853	0.092	20.078	**	
Female (ref = male)	-0.154	0.026	-5.907	**	
A level or GCSE qualification (ref = degree)	-0.405	0.046	-8.762	**	
No qualifications (ref = degree)	-0.587	0.056	-10.535	**	
Unemployed (ref = employed)	-0.327	0.063	-5.185	**	
Economically inactive (ref = employed)	0.035	0.036	0.968	ns	
White non UK born (ref = white UK born)	-0.011	0.084	-0.136	ns	
BME UK born (ref = white UK born)	-0.574	0.054	-10.545	**	
BME non UK born (ref = white UK born)	-0.495	0.059	-8.352	**	
DEPRIVATION	-0.009	0.004	-2.118	*	
CRIME RATE	-0.003	0.001	-2.481	*	
HIGHER QUALIFICATIONS	0.010	0.005	2.065	*	
2011 (ref = 2001)	0.563	0.102	5.550	**	
ETHNIC DIVERSITY	-0.763	0.234	-3.261	**	
ETHNIC DIVERSITY*2011	-0.667	0.214	-3.116	**	
Level 2	0.109	0.017	6.280	**	0.032
IMMIGRATION					
Cons	1.955	0.102	19.204	**	
Female (ref = male)	-0.159	0.026	-6.029	**	
A level or GCSE qualification (ref = degree)	-0.404	0.046	-8.786	**	
No qualifications (ref = degree)	-0.584	0.055	-10.523	**	
Unemployed (ref = employed)	-0.336	0.063	-5.309	**	
Economically inactive (ref = employed)	0.035	0.036	0.971	ns	
White non UK born (ref = white UK born)	-0.020	0.085	-0.242	ns	
BME UK born (ref = white UK born)	-0.590	0.054	-10.922	**	
BME non UK born (ref = white UK born)	-0.508	0.058	-8.707	**	
DEPRIVATION	-0.010	0.004	-2.499	*	
CRIME RATE	-0.003	0.001	-2.119	*	
HIGHER QUALIFICATIONS	0.018	0.005	3.442	**	
2011 (ref = 2001)	0.496	0.100	4.943	**	
IMMIGRATION	-0.020	0.006	-3.579	**	
IMMIGRATION*2011	-0.009	0.004	-2.179	*	
Level 2	0.109	0.016	6.697	**	0.032
BLACK IMMIGRATION					
Cons	1.796	0.088	20.356	**	
Female (ref = male)	-0.159	0.026	-6.019	**	
A level or GCSE qualification (ref = degree)	-0.405	0.046	-8.732	**	
No qualifications (ref = degree)	-0.585	0.056	-10.510	**	
Unemployed (ref = employed)	-0.334	0.064	-5.247	**	
Economically inactive (ref = employed)	0.036	0.036	1.008	ns	
White non UK born (ref = white UK born)	-0.030	0.085	-0.358	ns	
BME UK born (ref = white UK born)	-0.594	0.054	-11.006	**	
BME non UK born (ref = white UK born)	-0.515	0.059	-8.702	**	
DEPRIVATION	-0.013	0.004	-2.993	**	
CRIME RATE	-0.003	0.001	-2.268	*	

	B	SE	Z	SIG	ICC
HIGHER QUALIFICATIONS	0.008	0.005	1.595	ns	
2011 (ref = 2001)	0.538	0.095	5.683	**	
BLACK IMMIGRATION	-0.016	0.006	-2.447	*	
BLACK IMMIGRATION*2011	-0.019	0.005	-3.984	**	
Level 2	0.114	0.017	6.641	**	0.034
WHITE IMMIGRATION					
Cons	2.045	0.111	18.374	**	
Female (ref = male)	-0.158	0.027	-5.958	**	
A level or GCSE qualification (ref = degree)	-0.401	0.045	-8.820	**	
No qualifications (ref = degree)	-0.585	0.055	-10.569	**	
Unemployed (ref = employed)	-0.339	0.063	-5.363	**	
Economically inactive (ref = employed)	0.033	0.036	0.915	ns	
White non UK born (ref = white UK born)	-0.022	0.084	-0.263	ns	
BME UK born (ref = white UK born)	-0.623	0.053	-11.791	**	
BME non UK born (ref = white UK born)	-0.538	0.059	-9.100	**	
DEPRIVATION	-0.011	0.004	-2.797	**	
CRIME RATE	-0.003	0.001	-2.185	*	
HIGHER QUALIFICATIONS	0.022	0.006	3.850	**	
2011 (ref = 2001)	0.366	0.102	3.609	**	
WHITE IMMIGRATION	-0.057	0.018	-3.143	**	
WHITE IMMIGRATION*2011	-0.016	0.013	-1.287	ns	
Level 2	0.112	0.017	6.704	**	0.033
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	1.871	0.089	21.122	**	
Female (ref = male)	-0.159	0.026	-6.012	**	
A level or GCSE qualification (ref = degree)	-0.401	0.046	-8.770	**	
No qualifications (ref = degree)	-0.583	0.056	-10.479	**	
Unemployed (ref = employed)	-0.336	0.063	-5.323	**	
Economically inactive (ref = employed)	0.034	0.036	0.948	ns	
White non UK born (ref = white UK born)	-0.053	0.084	-0.630	ns	
BME UK born (ref = white UK born)	-0.652	0.053	-12.221	**	
BME non UK born (ref = white UK born)	-0.576	0.059	-9.686	**	
DEPRIVATION	-0.018	0.004	-4.213	**	
CRIME RATE	-0.003	0.001	-2.671	**	
HIGHER QUALIFICATIONS	-0.004	0.004	-0.897	ns	
2011 (ref = 2001)	-0.035	0.114	-0.311	ns	
ED increase	-0.003	0.002	-2.207	*	
ED increase*2011	0.007	0.002	3.396	**	
Level 2	0.128	0.019	6.737	**	0.038
IMMIGRATION RATE OF INCREASE					
Cons	1.882	0.089	21.172	**	
Female (ref = male)	-0.157	0.027	-5.870	**	
A level or GCSE qualification (ref = degree)	-0.399	0.046	-8.724	**	
No qualifications (ref = degree)	-0.586	0.056	-10.498	**	
Unemployed (ref = employed)	-0.334	0.063	-5.276	**	

	B	SE	Z	SIG	ICC
Economically inactive (ref = employed)	0.029	0.036	0.813	ns	
White non UK born (ref = white UK born)	-0.056	0.083	-0.676	ns	
BME UK born (ref = white UK born)	-0.656	0.053	-12.405	**	
BME non UK born (ref = white UK born)	-0.575	0.059	-9.688	**	
DEPRIVATION	-0.016	0.004	-3.970	**	
CRIME RATE	-0.003	0.001	-2.433	*	
HIGHER QUALIFICATIONS	-0.005	0.005	-1.044	ns	
2011 (ref = 2001)	0.090	0.134	0.671	ns	
IMM increase	-0.003	0.002	-2.047	*	
IMM increase*2011	0.004	0.002	1.827	ns	
Level 2	0.128	0.019	6.851	**	0.037
SOCIAL CAPITAL: CIVIC PARTICIPATION					
VARIANCE COMPONENTS MODEL					
Cons	-0.638	0.023	-27.719	**	
Level 2	0.091	0.012	7.432	**	0.027
CONTROL VARIABLES ONLY					
Cons	0.280	0.048	5.825	**	
Female (ref = male)	-0.017	0.033	-0.517	ns	
A level or GCSE qualification (ref = degree)	-0.463	0.036	-12.951	**	
No qualifications (ref = degree)	-0.969	0.049	-19.967	**	
Unemployed (ref = employed)	-0.130	0.062	-2.107	*	
Economically inactive (ref = employed)	-0.026	0.033	-0.780	ns	
White non UK born (ref = white UK born)	-0.383	0.080	-4.801	**	
BME UK born (ref = white UK born)	-0.420	0.050	-8.402	**	
BME non UK born (ref = white UK born)	-0.668	0.044	-15.146	**	
DEPRIVATION	0.004	0.002	1.925	ns	
CRIME RATE	-0.001	0.001	-2.518	*	
HIGHER QUALIFICATIONS	0.017	0.002	7.162	**	
2011 (ref = 2001)	-0.397	0.049	-8.088	**	
Level 2	0.039	0.007	5.476	**	0.012
ETHNIC DIVERSITY					
Cons	0.352	0.060	5.856	**	
Female (ref = male)	-0.018	0.033	-0.526	ns	
A level or GCSE qualification (ref = degree)	-0.462	0.036	-12.808	**	
No qualifications (ref = degree)	-0.971	0.049	-19.953	**	
Unemployed (ref = employed)	-0.129	0.062	-2.082	*	
Economically inactive (ref = employed)	-0.028	0.033	-0.836	ns	
White non UK born (ref = white UK born)	-0.376	0.080	-4.700	**	
BME UK born (ref = white UK born)	-0.400	0.054	-7.431	**	
BME non UK born (ref = white UK born)	-0.644	0.046	-14.141	**	
DEPRIVATION	0.006	0.003	2.459	*	
CRIME RATE	-0.001	0.001	-2.259	*	
HIGHER QUALIFICATIONS	0.021	0.003	7.309	**	
2011 (ref = 2001)	-0.415	0.064	-6.524	**	
ETHNIC DIVERSITY	-0.301	0.190	-1.579	ns	

	B	SE	Z	SIG	ICC
ETHNIC DIVERSITY*2011	0.096	0.150	0.642	ns	
Level 2	0.039	0.007	5.468	**	0.012
IMMIGRATION					
Cons	0.385	0.064	6.061	**	
Female (ref = male)	-0.017	0.033	-0.511	ns	
A level or GCSE qualification (ref = degree)	-0.463	0.036	-12.846	**	
No qualifications (ref = degree)	-0.969	0.049	-19.957	**	
Unemployed (ref = employed)	-0.130	0.062	-2.098	*	
Economically inactive (ref = employed)	-0.027	0.033	-0.802	ns	
White non UK born (ref = white UK born)	-0.372	0.079	-4.677	**	
BME UK born (ref = white UK born)	-0.394	0.053	-7.459	**	
BME non UK born (ref = white UK born)	-0.639	0.045	-14.073	**	
DEPRIVATION	0.006	0.002	2.621	**	
CRIME RATE	-0.001	0.001	-1.960	*	
HIGHER QUALIFICATIONS	0.023	0.003	7.024	**	
2011 (ref = 2001)	-0.421	0.065	-6.482	**	
IMMIGRATION	-0.008	0.004	-2.096	*	
IMMIGRATION*2011	0.002	0.003	0.722	ns	
Level 2	0.037	0.007	5.422	**	0.011
BLACK IMMIGRATION					
Cons	0.351	0.054	6.484	**	
Female (ref = male)	-0.017	0.033	-0.508	ns	
A level or GCSE qualification (ref = degree)	-0.463	0.036	-12.839	**	
No qualifications (ref = degree)	-0.970	0.049	-19.942	**	
Unemployed (ref = employed)	-0.130	0.062	-2.091	*	
Economically inactive (ref = employed)	-0.027	0.033	-0.819	ns	
White non UK born (ref = white UK born)	-0.375	0.079	-4.721	**	
BME UK born (ref = white UK born)	-0.396	0.054	-7.359	**	
BME non UK born (ref = white UK born)	-0.641	0.046	-14.051	**	
DEPRIVATION	0.006	0.002	2.610	**	
CRIME RATE	-0.001	0.000	-2.390	**	
HIGHER QUALIFICATIONS	0.021	0.003	7.617	**	
2011 (ref = 2001)	-0.422	0.060	-6.979	**	
BLACK IMMIGRATION	-0.009	0.005	-1.904	ns	
BLACK IMMIGRATION*2011	0.003	0.004	0.657	ns	
Level 2	0.037	0.007	5.409	**	0.011
WHITE IMMIGRATION					
Cons	0.350	0.069	5.101	**	
Female (ref = male)	-0.017	0.033	-0.522	ns	
A level or GCSE qualification (ref = degree)	-0.463	0.036	-12.904	**	
No qualifications (ref = degree)	-0.969	0.048	-19.998	**	
Unemployed (ref = employed)	-0.132	0.062	-2.119	*	
Economically inactive (ref = employed)	-0.026	0.033	-0.769	ns	
White non UK born (ref = white UK born)	-0.375	0.079	-4.747	**	
BME UK born (ref = white UK born)	-0.411	0.051	-8.062	**	

	B	SE	Z	SIG	ICC
BME non UK born (ref = white UK born)	-0.658	0.044	-14.826	**	
DEPRIVATION	0.005	0.002	2.232	*	
CRIME RATE	-0.001	0.001	-1.850	ns	
HIGHER QUALIFICATIONS	0.022	0.004	6.187	**	
2011 (ref = 2001)	-0.394	0.065	-6.050	**	
WHITE IMMIGRATION	-0.013	0.010	-1.257	ns	
WHITE IMMIGRATION*2011	0.000	0.008	-0.004	ns	
Level 2	0.039	0.007	5.469	**	0.012
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	0.280	0.070	3.968	**	
Female (ref = male)	-0.017	0.033	-0.519	ns	
A level or GCSE qualification (ref = degree)	-0.463	0.036	-12.916	**	
No qualifications (ref = degree)	-0.969	0.049	-19.955	**	
Unemployed (ref = employed)	-0.131	0.062	-2.108	*	
Economically inactive (ref = employed)	-0.026	0.033	-0.777	ns	
White non UK born (ref = white UK born)	-0.382	0.080	-4.802	**	
BME UK born (ref = white UK born)	-0.419	0.050	-8.330	**	
BME non UK born (ref = white UK born)	-0.668	0.044	-15.120	**	
DEPRIVATION	0.004	0.002	1.872	ns	
CRIME RATE	-0.001	0.001	-2.537	**	
HIGHER QUALIFICATIONS	0.017	0.003	6.774	**	
2011 (ref = 2001)	-0.404	0.076	-5.299	**	
ED increase	0.000	0.001	0.005	ns	
ED increase*2011	0.000	0.001	0.121	ns	
Level 2	0.039	0.007	5.476	**	0.012
IMMIGRATION RATE OF INCREASE					
Cons	0.276	0.061	4.555	**	
Female (ref = male)	-0.016	0.033	-0.490	ns	
A level or GCSE qualification (ref = degree)	-0.464	0.036	-12.969	**	
No qualifications (ref = degree)	-0.971	0.049	-19.979	**	
Unemployed (ref = employed)	-0.128	0.062	-2.064	*	
Economically inactive (ref = employed)	-0.027	0.033	-0.810	ns	
White non UK born (ref = white UK born)	-0.381	0.080	-4.772	**	
BME UK born (ref = white UK born)	-0.421	0.050	-8.387	**	
BME non UK born (ref = white UK born)	-0.665	0.044	-15.059	**	
DEPRIVATION	0.004	0.002	1.941	ns	
CRIME RATE	-0.001	0.001	-2.254	*	
HIGHER QUALIFICATIONS	0.015	0.003	5.525	**	
2011 (ref = 2001)	-0.259	0.076	-3.384	**	
IMM increase	0.000	0.001	-0.158	ns	
IMM increase*2011	-0.002	0.001	-2.214	*	
Level 2	0.039	0.007	5.384	**	0.012
SOCIAL CAPITAL: WATCHING TV					
VARIANCE COMPONENTS MODEL					
Cons	-0.160	0.027	-5.995	**	

	B	SE	Z	SIG	ICC
Level 2	0.080	0.014	5.867	**	0.024
CONTROL VARIABLES ONLY					
Cons	-0.702	0.061	-11.423	**	
Female (ref = male)	-0.115	0.038	-3.016	**	
A level or GCSE qualification (ref = degree)	0.534	0.055	9.775	**	
No qualifications (ref = degree)	0.748	0.075	9.977	**	
Unemployed (ref = employed)	0.556	0.085	6.563	**	
Economically inactive (ref = employed)	0.334	0.046	7.227	**	
White non UK born (ref = white UK born)	-0.324	0.108	-2.997	**	
BME UK born (ref = white UK born)	0.179	0.076	2.366	*	
BME non UK born (ref = white UK born)	-0.209	0.065	-3.237	**	
DEPRIVATION	0.009	0.002	4.036	**	
CRIME RATE	0.000	0.001	0.459	ns	
HIGHER QUALIFICATIONS	-0.006	0.003	-1.881	ns	
Level 2	0.036	0.009	4.068	**	0.011
ETHNIC DIVERSITY					
Cons	-0.699	0.072	-9.757	**	
Female (ref = male)	-0.115	0.038	-3.019	**	
A level or GCSE qualification (ref = degree)	0.534	0.055	9.775	**	
No qualifications (ref = degree)	0.748	0.075	9.977	**	
Unemployed (ref = employed)	0.556	0.085	6.557	**	
Economically inactive (ref = employed)	0.334	0.046	7.191	**	
White non UK born (ref = white UK born)	-0.323	0.108	-2.997	**	
BME UK born (ref = white UK born)	0.181	0.086	2.103	*	
BME non UK born (ref = white UK born)	-0.207	0.074	-2.810	**	
DEPRIVATION	0.009	0.002	3.892	**	
CRIME RATE	0.000	0.001	0.464	ns	
HIGHER QUALIFICATIONS	-0.006	0.004	-1.538	ns	
ETHNIC DIVERSITY	-0.016	0.194	-0.084	ns	
Level 2	0.036	0.009	4.074	**	0.011
IMMIGRATION					
Cons	-0.716	0.075	-9.513	**	
Female (ref = male)	-0.115	0.038	-3.017	**	
A level or GCSE qualification (ref = degree)	0.534	0.055	9.777	**	
No qualifications (ref = degree)	0.748	0.075	9.981	**	
Unemployed (ref = employed)	0.556	0.085	6.561	**	
Economically inactive (ref = employed)	0.334	0.047	7.190	**	
White non UK born (ref = white UK born)	-0.325	0.108	-3.012	**	
BME UK born (ref = white UK born)	0.174	0.083	2.109	*	
BME non UK born (ref = white UK born)	-0.214	0.071	-3.034	**	
DEPRIVATION	0.009	0.002	3.772	**	
CRIME RATE	0.000	0.001	0.426	ns	
HIGHER QUALIFICATIONS	-0.007	0.005	-1.442	ns	
IMMIGRATION	0.001	0.004	0.268	ns	
Level 2	0.036	0.009	4.039	**	0.011

	B	SE	Z	SIG	ICC
BLACK IMMIGRATION					
Cons	-0.706	0.068	-10.328	**	
Female (ref = male)	-0.115	0.038	-3.017	**	
A level or GCSE qualification (ref = degree)	0.534	0.055	9.775	**	
No qualifications (ref = degree)	0.748	0.075	9.977	**	
Unemployed (ref = employed)	0.556	0.085	6.557	**	
Economically inactive (ref = employed)	0.334	0.047	7.178	**	
White non UK born (ref = white UK born)	-0.324	0.108	-3.004	**	
BME UK born (ref = white UK born)	0.177	0.085	2.093	**	
BME non UK born (ref = white UK born)	-0.212	0.072	-2.943	**	
DEPRIVATION	0.009	0.002	3.869	**	
CRIME RATE	0.000	0.001	0.455	ns	
HIGHER QUALIFICATIONS	-0.006	0.004	-1.575	ns	
BLACK IMMIGRATION	0.001	0.005	0.102	ns	
Level 2	0.036	0.009	4.058	**	0.011
WHITE IMMIGRATION					
Cons	-0.756	0.078	-9.633	**	
Female (ref = male)	-0.115	0.038	-3.014	**	
A level or GCSE qualification (ref = degree)	0.534	0.055	9.782	**	
No qualifications (ref = degree)	0.748	0.075	10.003	**	
Unemployed (ref = employed)	0.557	0.085	6.575	**	
Economically inactive (ref = employed)	0.334	0.046	7.221	**	
White non UK born (ref = white UK born)	-0.329	0.108	-3.042	**	
BME UK born (ref = white UK born)	0.172	0.077	2.232	*	
BME non UK born (ref = white UK born)	-0.218	0.066	-3.300	**	
DEPRIVATION	0.008	0.002	3.693	**	
CRIME RATE	0.000	0.001	0.264	ns	
HIGHER QUALIFICATIONS	-0.010	0.005	-1.885	ns	
WHITE IMMIGRATION	0.011	0.010	1.088	ns	
Level 2	0.035	0.009	3.932	**	0.011
ETHNIC DIVERSITY RATE OF INCREASE					
Cons	-0.667	0.082	-8.149	**	
Female (ref = male)	-0.115	0.038	-3.013	**	
A level or GCSE qualification (ref = degree)	0.533	0.055	9.771	**	
No qualifications (ref = degree)	0.747	0.075	9.979	**	
Unemployed (ref = employed)	0.557	0.085	6.574	**	
Economically inactive (ref = employed)	0.335	0.046	7.251	**	
White non UK born (ref = white UK born)	-0.325	0.108	-3.016	**	
BME UK born (ref = white UK born)	0.170	0.078	2.169	*	
BME non UK born (ref = white UK born)	-0.218	0.067	-3.253	**	
DEPRIVATION	0.009	0.002	3.765	**	
CRIME RATE	0.000	0.001	0.214	ns	
HIGHER QUALIFICATIONS	-0.006	0.003	-1.998	*	
ED increase	0.000	0.001	-0.625	ns	
Level 2	0.036	0.009	4.025	**	0.011

	B	SE	Z	SIG	ICC
IMMIGRATION RATE OF INCREASE					
Cons	-0.690	0.073	-9.442	**	
Female (ref = male)	-0.115	0.038	-3.015	**	
A level or GCSE qualification (ref = degree)	0.533	0.055	9.762	**	
No qualifications (ref = degree)	0.747	0.075	9.979	**	
Unemployed (ref = employed)	0.556	0.085	6.560	**	
Economically inactive (ref = employed)	0.334	0.046	7.225	**	
White non UK born (ref = white UK born)	-0.324	0.108	-3.002	**	
BME UK born (ref = white UK born)	0.179	0.076	2.366	*	
BME non UK born (ref = white UK born)	-0.210	0.065	-3.239	**	
DEPRIVATION	0.009	0.002	4.098	**	
CRIME RATE	0.000	0.001	0.449	ns	
HIGHER QUALIFICATIONS	-0.006	0.003	-1.827	ns	
IMM increase	-0.001	0.002	-0.293	ns	
Level 2	0.036	0.009	4.074	**	0.011

ANNEX TWO: MODEL OUTPUT FOR SINGLE-LEVEL MODELS

VOTER TURNOUT 2001

ETHNIC DIVERSITY

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.405	4.177
2	.668[b]	.447	.409	4.161

Anova		Sum of squares	df	Mean square	F	Sig
1	Regression	4043.965	19	212.840	12.201	.000[b]
	Residual	5128.471	294	17.444		
	Total	9172.436	313			
2	Regression	4098.729	20	204.936	11.835	.000[c]
	Residual	5073.707	293	17.316		
	Total	9172.436	313			

Model		**Unstandaridised coefficients B**	**Std Error**	**Standardised coefficients Beta**	**t**	**sig**
1	(Constant)	43.349	4.635		9.353	.000
	LLI	.081	.282	.038	.288	.774
	Crime rate	-.011	.009	-.088	-1.162	.246
	Deprivation	-.142	.064	-.302	-2.209	.028
	Income	-.017	.007	-.196	-2.281	.023
	Degree qualifications	.176	.064	.241	2.754	.006
	Population density	-.001	.000	-.274	-2.385	.018
	Region ref = London					
	South East region	-6.177	1.435	-.471	-4.303	.000
	South West region	-4.348	1.653	-.247	-2.630	.009
	North East region	-3.634	2.018	-.118	-1.801	.073
	North West region	-6.327	1.596	-.377	-3.965	.000
	West Midlands region	-7.990	1.576	-.428	-5.071	.000
	East Midlands region	-6.085	1.651	-.371	-3.686	.000
	Yorks and Humber region	-6.949	1.786	-.321	-3.891	.000
	East region	-6.554	1.520	-.425	-4.313	.000
	Area ref group = major urban					
	Large urban area	1.354	1.020	.083	1.327	.185
	Other urban area	.497	.942	.035	.527	.599
	Significant rural area	2.383	1.023	.166	2.330	.020
	Rural 50 area	2.823	1.125	.178	2.509	.013
	Rural 80 area	4.105	1.128	.282	3.639	.000

Model		Unstandaridised coefficients B	Std Error	Standardised coefficients Beta	t	sig
2	(Constant)	38.424	5.385		7.136	.000
	LLI	.399	.333	.186	1.199	.232
	Crime rate	-.011	.009	-.090	-1.203	.230
	Deprivation	-.216	.076	-.461	-2.828	.005
	Income	-.013	.007	-.156	-1.762	.079
	Degree qualifications	.147	.066	.201	2.232	.026
	Population density	-.001	.000	-.274	-2.391	.017
	South East region	-4.966	1.584	-.378	-3.135	.002
	South West region	-2.923	1.832	-.166	-1.595	.112
	North East region	-1.914	2.231	-.062	-.858	.392
	North West region	-5.152	1.722	-.307	-2.992	.003
	West Midlands region	-6.947	1.676	-.372	-4.144	.000
	East Midlands region	-5.017	1.751	-.306	-2.865	.004
	Yorks and Humber region	-5.506	1.956	-.255	-2.816	.005
	East region	-5.425	1.642	-.352	-3.305	.001
	Large urban area	1.609	1.026	.098	1.567	.118
	Other urban area	.810	.955	.058	.848	.397
	Significant rural area	2.806	1.046	.196	2.682	.008
	Rural 50 area	3.349	1.159	.211	2.889	.004
	Rural 80 area	4.754	1.182	.327	4.023	.000
	ETHNIC DIVERSITY	.063	.035	.182	1.778	.076

IMMIGRATION

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.405	4.177
2	.664[b]	.441	.403	4.184

Anova		Sum of squares	df	Mean square	F	Sig
1	Regression	4043.965	19	212.840	12.201	.000[b]
	Residual	5128.471	294	17.444		
	Total	9172.436	313			
2	Regression	4044.137	20	202.207	11.553	.000[c]
	Residual	5128.299	293	17.503		
	Total	9172.436	313			

Model		Unstandardised coefficients B	Std Error	Standardised coefficients Beta	t	sig
1	(Constant)	43.349	4.635		9.353	.000
	LLI	.081	.282	.038	.288	.774
	Crime rate	-.011	.009	-.088	-1.162	.246
	Deprivation	-.142	.064	-.302	-2.209	.028
	Income	-.017	.007	-.196	-2.281	.023
	Degree qualifications	.176	.064	.241	2.754	.006
	Population density	-.001	.000	-.274	-2.385	.018
	Region ref = London					
	South East region	-6.177	1.435	-.471	-4.303	.000
	South West region	-4.348	1.653	-.247	-2.630	.009
	North East region	-3.634	2.018	-.118	-1.801	.073
	North West region	-6.327	1.596	-.377	-3.965	.000
	West Midlands region	-7.990	1.576	-.428	-5.071	.000
	East Midlands region	-6.085	1.651	-.371	-3.686	.000
	Yorks and Humber region	-6.949	1.786	-.321	-3.891	.000
	East region	-6.554	1.520	-.425	-4.313	.000
	Area ref = major urban					
	Large urban area	1.354	1.020	.083	1.327	.185
	Other urban area	.497	.942	.035	.527	.599
	Significant rural area	2.383	1.023	.166	2.330	.020
	Rural 50 area	2.823	1.125	.178	2.509	.013
	Rural 80 area	4.105	1.128	.282	3.639	.000
2	(Constant)	43.152	5.050		8.546	.000
	LLI	.091	.300	.043	.304	.761
	Crime rate	-.011	.009	-.088	-1.164	.245
	Deprivation	-.144	.068	-.307	-2.114	.035
	Income	-.016	.008	-.194	-2.170	.031
	Degree qualifications	.173	.074	.236	2.347	.020
	Population density	-.001	.000	-.276	-2.363	.019
	South East region	-6.110	1.587	-.466	-3.850	.000
	South West region	-4.261	1.874	-.242	-2.273	.024
	North East region	-3.529	2.280	-.115	-1.548	.123
	North West region	-6.240	1.824	-.372	-3.421	.001
	West Midlands region	-7.908	1.786	-.424	-4.427	.000
	East Midlands region	-6.008	1.830	-.367	-3.283	.001
	Yorks and Humber region	-6.855	2.026	-.317	-3.384	.001
	East region	-6.488	1.659	-.421	-3.911	.000
	Large urban area	1.366	1.029	.083	1.328	.185
	Other urban area	.505	.947	.036	.533	.594
	Significant rural area	2.393	1.029	.167	2.325	.021
	Rural 50 area	2.836	1.134	.179	2.500	.013
	Rural 80 area	4.119	1.138	.283	3.618	.000
	IMMIGRATION	.008	.081	.012	.099	.921

BLACK IMMIGRATION

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.405	4.177
2	.665[b]	.442	.404	4.178

Anova		Sum of squares	df	Mean square	F	Sig
1	Regression	4043.965	19	212.840	12.201	.000[b]
	Residual	5128.471	294	17.444		
	Total	9172.436	313			
2	Regression	4058.302	20	202.915	11.625	.000[c]
	Residual	5114.134	293	17.454		
	Total	9172.436	313			

Model		**Unstandardised coefficients B**	**Std Error**	**Standardised coefficients Beta**	**t**	**sig**
1	LLI	43.349	4.635		9.353	.000
	Crime rate	.081	.282	.038	.288	.774
	Deprivation	-.011	.009	-.088	-1.162	.246
	Income	-.142	.064	-.302	-2.209	.028
	Degree qualifications	-.017	.007	-.196	-2.281	.023
	Population density	.176	.064	.241	2.754	.006
	Region ref = London					
	South East region	-.001	.000	-.274	-2.385	.018
	South West region	-6.177	1.435	-.471	-4.303	.000
	North East region	-4.348	1.653	-.247	-2.630	.009
	North West region	-3.634	2.018	-.118	-1.801	.073
	West Midlands region	-6.327	1.596	-.377	-3.965	.000
	East Midlands region	-7.990	1.576	-.428	-5.071	.000
	Yorks and Humber region	-6.085	1.651	-.371	-3.686	.000
	East region	-6.949	1.786	-.321	-3.891	.000
	Area ref = major urban					
	Large urban area	-6.554	1.520	-.425	-4.313	.000
	Other urban area	1.354	1.020	.083	1.327	.185
	Significant rural area	.497	.942	.035	.527	.599
	Rural 50 area	2.383	1.023	.166	2.330	.020
	Rural 80 area	2.823	1.125	.178	2.509	.013
	LLI	4.105	1.128	.282	3.639	.000
2	(Constant)	41.081	5.268		7.798	.000
	LLI	.214	.318	.100	.673	.501
	Crime rate	-.010	.009	-.086	-1.143	.254
	Deprivation	-.174	.073	-.371	-2.371	.018
	Income	-.015	.008	-.175	-1.968	.050
	Degree qualifications	.158	.067	.215	2.338	.020

	Population density	-.001	.000	-.277	-2.409	.017
	South East region	-5.474	1.632	-.417	-3.355	.001
	South West region	-3.518	1.890	-.200	-1.861	.064
	North East region	-2.673	2.280	-.087	-1.173	.242
	North West region	-5.522	1.827	-.329	-3.023	.003
	West Midlands region	-7.237	1.782	-.388	-4.060	.000
	East Midlands region	-5.372	1.829	-.328	-2.936	.004
	Yorks and Humber region	-6.068	2.034	-.280	-2.984	.003
	East region	-5.831	1.717	-.378	-3.397	.001
	Large urban area	1.416	1.023	.086	1.385	.167
	Other urban area	.580	.947	.041	.612	.541
	Significant rural area	2.487	1.029	.174	2.416	.016
	Rural 50 area	2.962	1.136	.187	2.608	.010
	Rural 80 area	4.290	1.147	.295	3.741	.000
	BLACK IMMIGRATION	.088	.097	.092	.906	.366

WHITE IMMIGRATION

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.405	4.177
2	.666[b]	.443	.405	4.175

Anova		Sum of squares	df	Mean square	F	Sig
1	Regression	4043.965	19	212.840	12.201	.000[b]
	Residual	5128.471	294	17.444		
	Total	9172.436	313			
2	Regression	4066.463	20	203.323	11.667	.000[c]
	Residual	5105.973	293	17.427		
	Total	9172.436	313			

Model		**Unstandardised coefficients B**	**Std Error**	**Standardised coefficients Beta**	**t**	**sig**
1	(Constant)	43.349	4.635		9.353	.000
	LLI	.081	.282	.038	.288	.774
	Crime rate	-.011	.009	-.088	-1.162	.246
	Deprivation	-.142	.064	-.302	-2.209	.028
	Income	-.017	.007	-.196	-2.281	.023
	Degree qualifications	.176	.064	.241	2.754	.006
	Population density	-.001	.000	-.274	-2.385	.018
	Region ref = London					
	South East region	-6.177	1.435	-.471	-4.303	.000
	South West region	-4.348	1.653	-.247	-2.630	.009

	North East region	-3.634	2.018	-.118	-1.801	.073
	North West region	-6.327	1.596	-.377	-3.965	.000
	West Midlands region	-7.990	1.576	-.428	-5.071	.000
	East Midlands region	-6.085	1.651	-.371	-3.686	.000
	Yorks and Humber region	-6.949	1.786	-.321	-3.891	.000
	East region	-6.554	1.520	-.425	-4.313	.000
	Area ref = major urban					
	Large urban area	1.354	1.020	.083	1.327	.185
	Other urban area	.497	.942	.035	.527	.599
	Significant rural area	2.383	1.023	.166	2.330	.020
	Rural 50 area	2.823	1.125	.178	2.509	.013
	Rural 80 area	4.105	1.128	.282	3.639	.000
2	(Constant)	43.971	4.665		9.426	.000
	LLI	.070	.282	.033	.249	.804
	Crime rate	-.009	.009	-.071	-.919	.359
	Deprivation	-.144	.064	-.308	-2.250	.025
	Income	-.018	.007	-.214	-2.449	.015
	Degree qualifications	.215	.072	.294	2.967	.003
	Population density	-.001	.000	-.232	-1.917	.056
	South East region	-6.366	1.444	-.485	-4.408	.000
	South West region	-4.743	1.689	-.269	-2.809	.005
	North East region	-4.182	2.074	-.136	-2.017	.045
	North West region	-6.760	1.640	-.403	-4.123	.000
	West Midlands region	-8.395	1.615	-.450	-5.199	.000
	East Midlands region	-6.453	1.681	-.394	-3.838	.000
	Yorks and Humber region	-7.397	1.828	-.342	-4.046	.000
	East region	-6.657	1.522	-.432	-4.375	.000
	Large urban area	1.208	1.028	.074	1.175	.241
	Other urban area	.458	.942	.033	.486	.628
	Significant rural area	2.382	1.022	.166	2.330	.020
	Rural 50 area	2.811	1.124	.177	2.500	.013
	Rural 80 area	4.154	1.128	.286	3.681	.000
	WHITE IMMIGRATION	-.184	.162	-.110	-1.136	.257

ETHNIC DIVERSITY RATE OF INCREASE

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.405	4.177
2	.664[b]	.441	.403	4.184

Anova		Sum of squares	df	Mean square	F	Sig
1	Regression	4043.965	19	212.840	12.201	.000[b]
	Residual	5128.471	294	17.444		
	Total	9172.436	313			
2	Regression	4043.965	20	202.198	11.552	.000[c]

	Residual	5128.471	293	17.503		
	Total	9172.436	313			

Model		Unstandardised coefficients B	Std Error	Standardised coefficients Beta	t	sig
1	(Constant)	43.349	4.635		9.353	.000
	LLI	.081	.282	.038	.288	.774
	Crime rate	-.011	.009	-.088	-1.162	.246
	Deprivation	-.142	.064	-.302	-2.209	.028
	Income	-.017	.007	-.196	-2.281	.023
	Degree qualifications	.176	.064	.241	2.754	.006
	Population density	-.001	.000	-.274	-2.385	.018
	Region ref = London					
	South East region	-6.177	1.435	-.471	-4.303	.000
	South West region	-4.348	1.653	-.247	-2.630	.009
	North East region	-3.634	2.018	-.118	-1.801	.073
	North West region	-6.327	1.596	-.377	-3.965	.000
	West Midlands region	-7.990	1.576	-.428	-5.071	.000
	East Midlands region	-6.085	1.651	-.371	-3.686	.000
	Yorks and Humber region	-6.949	1.786	-.321	-3.891	.000
	East region	-6.554	1.520	-.425	-4.313	.000
	Area ref = major urban					
	Large urban area	1.354	1.020	.083	1.327	.185
	Other urban area	.497	.942	.035	.527	.599
	Significant rural area	2.383	1.023	.166	2.330	.020
	Rural 50 area	2.823	1.125	.178	2.509	.013
	Rural 80 area	4.105	1.128	.282	3.639	.000
2	(Constant)	43.351	4.664		9.296	.000
	LLI	.081	.304	.038	.265	.791
	Crime rate	-.011	.009	-.087	-1.145	.253
	Deprivation	-.141	.068	-.302	-2.093	.037
	Income	-.017	.007	-.196	-2.264	.024
	Degree qualifications	.176	.064	.241	2.749	.006
	Population density	-.001	.000	-.274	-2.379	.018
	South East region	-6.177	1.441	-.471	-4.287	.000
	South West region	-4.350	1.689	-.247	-2.576	.010
	North East region	-3.634	2.021	-.118	-1.798	.073
	North West region	-6.328	1.601	-.377	-3.952	.000
	West Midlands region	-7.991	1.579	-.428	-5.061	.000
	East Midlands region	-6.086	1.654	-.371	-3.679	.000
	Yorks and Humber region	-6.950	1.794	-.321	-3.875	.000
	East region	-6.554	1.523	-.425	-4.303	.000
	Large urban area	1.354	1.025	.083	1.321	.188
	Other urban area	.496	.945	.035	.525	.600
	Significant rural area	2.383	1.029	.166	2.314	.021
	Rural 50 area	2.821	1.159	.178	2.434	.016

	Rural 80 area	4.103	1.190	.282	3.449	.001
	ED RATE OF INCREASE	3.367E-05	.006	.000	.006	.996

IMMIGRATION RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664[a]	.441	.405	4.177
2	.665[b]	.442	.404	4.180

Anova		Sum of squares	df	Mean square	F	Sig
1	Regression	4043.965	19	212.840	12.201	.000[b]
	Residual	5128.471	294	17.444		
	Total	9172.436	313			
2	Regression	4052.966	20	202.648	11.598	.000[c]
	Residual	5119.470	293	17.473		
	Total	9172.436	313			

Model		**Unstandardised coefficients B**	**Std Error**	**Standardised coefficients Beta**	**t**	**sig**
1	(Constant)	43.349	4.635		9.353	.000
	LLI	.081	.282	.038	.288	.774
	Crime rate	-.011	.009	-.088	-1.162	.246
	Deprivation	-.142	.064	-.302	-2.209	.028
	Income	-.017	.007	-.196	-2.281	.023
	Degree qualifications	.176	.064	.241	2.754	.006
	Population density	-.001	.000	-.274	-2.385	.018
	Region ref = London					
	South East region	-6.177	1.435	-.471	-4.303	.000
	South West region	-4.348	1.653	-.247	-2.630	.009
	North East region	-3.634	2.018	-.118	-1.801	.073
	North West region	-6.327	1.596	-.377	-3.965	.000
	West Midlands region	-7.990	1.576	-.428	-5.071	.000
	East Midlands region	-6.085	1.651	-.371	-3.686	.000
	Yorks and Humber region	-6.949	1.786	-.321	-3.891	.000
	East region	-6.554	1.520	-.425	-4.313	.000
	Area ref = major urban					
	Large urban area	1.354	1.020	.083	1.327	.185
	Other urban area	.497	.942	.035	.527	.599
	Significant rural area	2.383	1.023	.166	2.330	.020
	Rural 50 area	2.823	1.125	.178	2.509	.013
	Rural 80 area	4.105	1.128	.282	3.639	.000
2	(Constant)	43.817	4.684		9.354	.000
	LLI	.072	.283	.033	.254	.800

	Crime rate	-.011	.009	-.090	-1.195	.233
	Deprivation	-.137	.064	-.293	-2.125	.034
	Income	-.017	.007	-.198	-2.301	.022
	Degree qualifications	.183	.065	.250	2.824	.005
	Population density	-.001	.000	-.285	-2.454	.015
	South East region	-6.292	1.445	-.479	-4.353	.000
	South West region	-4.433	1.659	-.252	-2.672	.008
	North East region	-3.543	2.024	-.115	-1.751	.081
	North West region	-6.491	1.613	-.387	-4.024	.000
	West Midlands region	-8.155	1.594	-.437	-5.117	.000
	East Midlands region	-6.201	1.660	-.378	-3.735	.000
	Yorks and Humber region	-7.026	1.791	-.325	-3.924	.000
	East region	-6.610	1.523	-.429	-4.340	.000
	Large urban area	1.374	1.021	.084	1.345	.180
	Other urban area	.440	.946	.031	.465	.642
	Significant rural area	2.284	1.033	.159	2.212	.028
	Rural 50 area	2.709	1.137	.171	2.383	.018
	Rural 80 area	3.947	1.151	.271	3.430	.001
	IMM RATE OF INCREASE	-.015	.021	-.035	-.718	.473

VOTER TURNOUT 2011

ETHNIC DIVERSITY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.673	.650	2.678
2	.823[b]	.677	.653	2.667

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3809.237	18	211.624	29.519	.000[b]
	Residual	1849.621	258	7.169		
	Total	5658.858	276			
2	Regression	3831.445	19	201.655	28.360	.000[c]
	Residual	1827.413	257	7.111		
	Total	5658.858	276			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.173	3.472		8.402	.000
	LLI	.235	.066	.225	3.579	.000
	Crime rate	-.040	.016	-.187	-2.464	.014
	Deprivation	.031	.059	.056	.528	.598
	Income	-.004	.004	-.065	-.924	.356
	Degree qualifications	.508	.046	.715	11.029	.000
	Population density	-.001	.000	-.209	-3.048	.003
	Region ref = London					
	South East region	.412	.687	.030	.600	.549
	South West region	-2.316	1.071	-.096	-2.163	.031
	North East region	-3.503	.718	-.267	-4.877	.000
	North West region	-1.693	.680	-.113	-2.490	.013
	West Midlands region	-1.056	.620	-.081	-1.702	.090
	East Midlands region	-2.594	.770	-.152	-3.367	.001
	Yorks and Humber region	-.468	.558	-.039	-.839	.402
	East region	.338	.676	.025	.500	.618
	Area ref = major urban					
	Large urban area	.659	.640	.057	1.030	.304
	Other urban area	.295	.737	.026	.400	.689
	Significant rural area	-.236	.804	-.019	-.294	.769
	Rural 50 area	-.125	.820	-.011	-.153	.879
2	(Constant)	27.790	3.545		7.839	.000
	LLI	.297	.074	.284	4.003	.000
	Crime rate	-.041	.016	-.189	-2.502	.013
	Deprivation	-.005	.062	-.010	-.089	.929

	Income	-.003	.004	-.052	-.746	.456
	Degree qualifications	.487	.047	.686	10.298	.000
	Population density	-.001	.000	-.224	-3.260	.001
	South East region	.526	.687	.038	.766	.444
	South West region	-1.814	1.104	-.075	-1.644	.101
	North East region	-3.279	.726	-.250	-4.514	.000
	North West region	-1.714	.677	-.114	-2.530	.012
	West Midlands region	-1.066	.618	-.082	-1.726	.086
	East Midlands region	-2.434	.773	-.143	-3.150	.002
	Yorks and Humber region	-.564	.558	-.046	-1.010	.314
	East region	.576	.687	.043	.838	.403
	Large urban area	.928	.656	.081	1.416	.158
	Other urban area	.602	.754	.053	.799	.425
	Significant rural area	.130	.828	.010	.157	.875
	Rural 50 area	.262	.846	.023	.310	.757
	ETHNIC DIVERSITY	.038	.021	.109	1.767	.078

Excluded Variables

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	South East region	.[b]	.	.	.	.000
	ETHNIC DIVERSITY	.109[b]	1.767	.078	.110	.332
2	South East region	.[c]	.	.	.	.000

IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.672	.650	2.675
2	.821[b]	.675	.651	2.671

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3806.327	18	211.463	29.546	.000[b]
	Residual	1853.683	259	7.157		
	Total	5660.010	277			
2	Regression	3819.336	19	201.018	28.176	.000[c]
	Residual	1840.674	258	7.134		
	Total	5660.010	277			

Coefficients

Model		**Unstandardized Coefficients**		**Standardized Coefficients**		
		B	**Std. Error**	**Beta**	**t**	**Sig.**
1	(Constant)	29.119	3.468		8.395	.000

	LLI	.236	.066	.225	3.584	.000
	Crime rate	-.041	.016	-.190	-2.499	.013
	Deprivation	.034	.058	.062	.591	.555
	Income	-.004	.004	-.062	-.895	.371
	Degree qualifications	.508	.046	.716	11.034	.000
	Population density	-.001	.000	-.211	-3.082	.002
	Region ref = London					
	South West region	.411	.686	.029	.599	.550
	North East region	-2.370	1.068	-.098	-2.220	.027
	North West region	-3.596	.707	-.277	-5.088	.000
	West Midlands region	-1.708	.679	-.114	-2.515	.013
	East Midlands region	-1.062	.620	-.082	-1.713	.088
	Yorks & Humber region	-2.619	.769	-.153	-3.406	.001
	East region	-.478	.557	-.039	-.857	.392
	Area ref = major urban					
	Large urban area	.326	.676	.024	.483	.630
	Other urban area	.644	.639	.056	1.007	.315
	Significant rural area	.278	.736	.025	.377	.706
	Rural 50 area	-.310	.798	-.025	-.388	.698
	Rural 80 area	-.145	.819	-.013	-.177	.860
2	(Constant)	30.439	3.598		8.459	.000
	LLI	.195	.072	.187	2.703	.007
	Crime rate	-.036	.017	-.167	-2.144	.033
	Deprivation	.049	.059	.089	.831	.407
	Income	-.005	.005	-.086	-1.198	.232
	Degree qualifications	.532	.049	.750	10.790	.000
	Population density	-.001	.000	-.198	-2.867	.004
	South West region	.207	.701	.015	.296	.768
	North East region	-2.884	1.132	-.119	-2.548	.011
	North West region	-3.989	.763	-.307	-5.226	.000
	West Midlands region	-1.963	.704	-.131	-2.789	.006
	East Midlands region	-1.223	.630	-.094	-1.940	.053
	Yorks & Humber region	-2.942	.804	-.172	-3.658	.000
	East region	-.446	.557	-.037	-.801	.424
	Large urban area	.161	.686	.012	.235	.814
	Other urban area	.513	.646	.045	.794	.428
	Significant rural area	.117	.744	.010	.157	.875
	Rural 50 area	-.498	.809	-.040	-.615	.539
	Rural 80 area	-.288	.825	-.025	-.349	.727
	IMMIGRATION	-.072	.053	-.088	-1.350	.178

BLACK IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.672	.650	2.675
2	.821[b]	.674	.650	2.675

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3806.327	18	211.463	29.546	.000[b]
	Residual	1853.683	259	7.157		
	Total	5660.010	277			
2	Regression	3813.572	19	200.714	28.046	.000[c]
	Residual	1846.437	258	7.157		
	Total	5660.010	277			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.119	3.468		8.395	.000
	LLI	.236	.066	.225	3.584	.000
	Crime rate	-.041	.016	-.190	-2.499	.013
	Deprivation	.034	.058	.062	.591	.555
	Income	-.004	.004	-.062	-.895	.371
	Degree qualifications	.508	.046	.716	11.034	.000
	Population density	-.001	.000	-.211	-3.082	.002
	Region ref = London					
	South West region	.411	.686	.029	.599	.550
	North East region	-2.370	1.068	-.098	-2.220	.027
	North West region	-3.596	.707	-.277	-5.088	.000
	West Midlands region	-1.708	.679	-.114	-2.515	.013
	East Midlands region	-1.062	.620	-.082	-1.713	.088
	Yorks & Humber region	-2.619	.769	-.153	-3.406	.001
	East region	-.478	.557	-.039	-.857	.392
	Area ref = major urban					
	Large urban area	.326	.676	.024	.483	.630
	Other urban area	.644	.639	.056	1.007	.315
	Significant rural area	.278	.736	.025	.377	.706
	Rural 50 area	-.310	.798	-.025	-.388	.698
	Rural 80 area	-.145	.819	-.013	-.177	.860
2	(Constant)	28.437	3.534		8.047	.000
	LLI	.265	.072	.254	3.680	.000
	Crime rate	-.041	.016	-.193	-2.538	.012
	Deprivation	.018	.060	.033	.303	.762
	Income	-.003	.004	-.054	-.765	.445
	Degree qualifications	.495	.048	.698	10.354	.000
	Population density	-.001	.000	-.225	-3.222	.001
	South West region	.506	.692	.036	.731	.466
	North East region	-2.097	1.102	-.087	-1.903	.058
	North West region	-3.407	.731	-.262	-4.660	.000
	West Midlands region	-1.612	.686	-.108	-2.351	.019
	East Midlands region	-1.005	.622	-.077	-1.614	.108

	Yorks & Humber region	-2.478	.782	-.145	-3.170	.002
	East region	-.465	.557	-.038	-.834	.405
	Large urban area	.420	.682	.031	.615	.539
	Other urban area	.736	.646	.064	1.139	.256
	Significant rural area	.380	.743	.034	.512	.609
	Rural 50 area	-.186	.807	-.015	-.231	.818
	Rural 80 area	-.027	.827	-.002	-.033	.974
	BLACK IMMIGRATION	.069	.068	.059	1.006	.315

WHITE IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.672	.650	2.675
2	.832[b]	.692	.669	2.601

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3806.327	18	211.463	29.546	.000[b]
	Residual	1853.683	259	7.157		
	Total	5660.010	277			
2	Regression	3914.634	19	206.033	30.456	.000[c]
	Residual	1745.376	258	6.765		
	Total	5660.010	277			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.119	3.468		8.395	.000
	LLI	.236	.066	.225	3.584	.000
	Crime rate	-.041	.016	-.190	-2.499	.013
	Deprivation	.034	.058	.062	.591	.555
	Income	-.004	.004	-.062	-.895	.371
	Degree qualifications	.508	.046	.716	11.034	.000
	Population density	-.001	.000	-.211	-3.082	.002
	Region ref = London					
	South West region	.411	.686	.029	.599	.550
	North East region	-2.370	1.068	-.098	-2.220	.027
	North West region	-3.596	.707	-.277	-5.088	.000
	West Midlands region	-1.708	.679	-.114	-2.515	.013
	East Midlands region	-1.062	.620	-.082	-1.713	.088
	Yorks & Humber region	-2.619	.769	-.153	-3.406	.001
	East region	-.478	.557	-.039	-.857	.392
	Area ref = major urban					
	Large urban area	.326	.676	.024	.483	.630

	Other urban area	.644	.639	.056	1.007	.315
	Significant rural area	.278	.736	.025	.377	.706
	Rural 50 area	-.310	.798	-.025	-.388	.698
	Rural 80 area	-.145	.819	-.013	-.177	.860
2	(Constant)	32.914	3.503		9.396	.000
	LLI	.181	.065	.173	2.775	.006
	Crime rate	-.017	.017	-.080	-1.013	.312
	Deprivation	.021	.057	.038	.374	.708
	Income	-.009	.005	-.149	-2.092	.037
	Degree qualifications	.557	.046	.786	12.006	.000
	Population density	-.001	.000	-.221	-3.317	.001
	South West region	-.153	.682	-.011	-.224	.823
	North East region	-3.585	1.081	-.148	-3.315	.001
	North West region	-4.628	.734	-.356	-6.306	.000
	West Midlands region	-2.507	.690	-.167	-3.634	.000
	East Midlands region	-1.575	.616	-.121	-2.556	.011
	Yorks & Humber region	-3.548	.783	-.208	-4.532	.000
	East region	-.209	.546	-.017	-.383	.702
	Large urban area	-.051	.664	-.004	-.076	.939
	Other urban area	.441	.624	.038	.707	.480
	Significant rural area	-.003	.719	.000	-.004	.997
	Rural 50 area	-.621	.780	-.050	-.797	.426
	Rural 80 area	-.243	.797	-.021	-.305	.761
	WHITE IMMIGRATION	-.415	.104	-.208	-4.001	.000

ETHNIC DIVERSITY RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.672	.650	2.675
2	.828[b]	.685	.662	2.628

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3806.327	18	211.463	29.546	.000[b]
	Residual	1853.683	259	7.157		
	Total	5660.010	277			
2	Regression	3878.681	19	204.141	29.567	.000[c]
	Residual	1781.329	258	6.904		
	Total	5660.010	277			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	29.119	3.468		8.395	.000
	LLI	.236	.066	.225	3.584	.000

	Crime rate	-.041	.016	-.190	-2.499	.013
	Deprivation	.034	.058	.062	.591	.555
	Income	-.004	.004	-.062	-.895	.371
	Degree qualifications	.508	.046	.716	11.034	.000
	Population density	-.001	.000	-.211	-3.082	.002
	Region ref = London					
	South West region	.411	.686	.029	.599	.550
	North East region	-2.370	1.068	-.098	-2.220	.027
	North West region	-3.596	.707	-.277	-5.088	.000
	West Midlands region	-1.708	.679	-.114	-2.515	.013
	East Midlands region	-1.062	.620	-.082	-1.713	.088
	Yorks & Humber region	-2.619	.769	-.153	-3.406	.001
	East region	-.478	.557	-.039	-.857	.392
	Area ref = major urban					
	Large urban area	.326	.676	.024	.483	.630
	Other urban area	.644	.639	.056	1.007	.315
	Significant rural area	.278	.736	.025	.377	.706
	Rural 50 area	-.310	.798	-.025	-.388	.698
	Rural 80 area	-.145	.819	-.013	-.177	.860
2	(Constant)	31.372	3.477		9.023	.000
	LLI	.235	.065	.225	3.643	.000
	Crime rate	-.040	.016	-.184	-2.470	.014
	Deprivation	.018	.057	.032	.311	.756
	Income	-.004	.004	-.065	-.955	.340
	Degree qualifications	.493	.045	.695	10.852	.000
	Population density	-.001	.000	-.199	-2.958	.003
	South West region	.177	.678	.013	.261	.794
	North East region	-2.324	1.049	-.096	-2.217	.028
	North West region	-4.151	.715	-.319	-5.805	.000
	West Midlands region	-2.156	.681	-.144	-3.165	.002
	East Midlands region	-1.521	.625	-.117	-2.434	.016
	Yorks & Humber region	-2.477	.757	-.145	-3.274	.001
	East region	-.602	.549	-.050	-1.098	.273
	Large urban area	.376	.664	.028	.566	.572
	Other urban area	.720	.629	.063	1.146	.253
	Significant rural area	.317	.723	.028	.438	.662
	Rural 50 area	-.442	.785	-.036	-.563	.574
	Rural 80 area	-.244	.805	-.021	-.303	.762
	ED RATE OF INCREASE	-.022	.007	-.127	-3.237	.001

IMMIGRATION RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820[a]	.672	.650	2.675
2	.828[b]	.685	.662	2.627

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3806.327	18	211.463	29.546	.000[b]
	Residual	1853.683	259	7.157		
	Total	5660.010	277			
2	Regression	3878.919	19	204.154	29.573	.000[c]
	Residual	1781.091	258	6.903		
	Total	5660.010	277			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	29.119	3.468		8.395	.000
	LLI	.236	.066	.225	3.584	.000
	Crime rate	-.041	.016	-.190	-2.499	.013
	Deprivation	.034	.058	.062	.591	.555
	Income	-.004	.004	-.062	-.895	.371
	Degree qualifications	.508	.046	.716	11.034	.000
	Population density	-.001	.000	-.211	-3.082	.002
	Region ref = London					
	South West region	.411	.686	.029	.599	.550
	North East region	-2.370	1.068	-.098	-2.220	.027
	North West region	-3.596	.707	-.277	-5.088	.000
	West Midlands region	-1.708	.679	-.114	-2.515	.013
	East Midlands region	-1.062	.620	-.082	-1.713	.088
	Yorks & Humber region	-2.619	.769	-.153	-3.406	.001
	East region	-.478	.557	-.039	-.857	.392
	Area ref = major urban					
	Large urban area	.326	.676	.024	.483	.630
	Other urban area	.644	.639	.056	1.007	.315
	Significant rural area	.278	.736	.025	.377	.706
	Rural 50 area	-.310	.798	-.025	-.388	.698
	Rural 80 area	-.145	.819	-.013	-.177	.860
2	(Constant)	31.574	3.490		9.048	.000
	LLI	.213	.065	.204	3.283	.001
	Crime rate	-.027	.017	-.124	-1.609	.109
	Deprivation	.026	.057	.046	.448	.655
	Income	-.006	.004	-.091	-1.315	.190
	Degree qualifications	.479	.046	.675	10.391	.000
	Population density	-.001	.000	-.224	-3.326	.001
	South West region	.319	.674	.023	.473	.636
	North East region	-2.365	1.048	-.098	-2.255	.025
	North West region	-3.750	.696	-.289	-5.390	.000
	West Midlands region	-1.846	.668	-.123	-2.761	.006
	East Midlands region	-.982	.609	-.076	-1.613	.108
	Yorks & Humber region	-2.463	.757	-.144	-3.254	.001
	East region	-.419	.548	-.035	-.766	.444
	Large urban area	.244	.664	.018	.367	.714

	Other urban area	.567	.628	.049	.903	.368
	Significant rural area	.294	.722	.026	.407	.684
	Rural 50 area	-.358	.784	-.029	-.457	.648
	Rural 80 area	-.188	.805	-.016	-.234	.815
	IMM RATE OF INCREASE	-.018	.005	-.140	-3.243	.001

REGISTERED CHARITIES 2011

ETHNIC DIVERSITY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.850[a]	.722	.705	.824
2	.851[b]	.724	.705	.824

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	533.763	19	28.093	41.332	.000[b]
	Residual	205.267	302	.680		
	Total	739.030	321			
2	Regression	534.874	20	26.744	39.430	.000[c]
	Residual	204.156	301	.678		
	Total	739.030	321			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.998	.931		-3.221	.001
	LLI	.096	.017	.291	5.536	.000
	Crime rate	.023	.004	.401	6.442	.000
	Deprivation	-.058	.014	-.321	-4.005	.000
	Income	-.001	.001	-.075	-1.182	.238
	Degree qualifications	.117	.012	.588	9.400	.000
	Population density	5.880E-5	.000	.089	1.098	.273
	Region ref = London					
	South East region	.354	.279	.095	1.269	.205
	South West region	.551	.319	.115	1.726	.085
	North East region	.009	.363	.001	.024	.981
	North West region	.168	.302	.036	.556	.578
	West Midlands region	.175	.304	.034	.575	.566
	East Midlands region	.134	.314	.029	.428	.669
	Yorks and Humber region	.304	.334	.050	.908	.364
	East region	.474	.294	.110	1.616	.107
	Area ref = major urban					
	Large urban area	-.288	.204	-.062	-1.410	.160
	Other urban area	.032	.187	.008	.170	.865
	Significant rural area	.722	.203	.179	3.565	.000
	Rural 50 area	1.246	.217	.290	5.732	.000
	Rural 80 area	2.362	.222	.583	10.619	.000
2	(Constant)	-2.464	1.019		-2.418	.016
	LLI	.083	.020	.251	4.121	.000
	Crime rate	.023	.004	.408	6.541	.000
	Deprivation	-.051	.015	-.285	-3.363	.001
	Income	-.002	.001	-.091	-1.403	.161

	Degree qualifications	.120	.013	.604	9.472	.000
	Population density	5.374E-5	.000	.081	1.001	.317
	South East region	.232	.294	.062	.788	.432
	South West region	.401	.339	.083	1.180	.239
	North East region	-.206	.399	-.026	-.516	.606
	North West region	-.003	.330	-.001	-.008	.993
	West Midlands region	.052	.319	.010	.164	.870
	East Midlands region	.006	.330	.001	.017	.986
	Yorks and Humber region	.137	.359	.022	.382	.703
	East region	.372	.304	.086	1.222	.223
	Large urban area	-.341	.208	-.073	-1.636	.103
	Other urban area	-.038	.195	-.009	-.193	.847
	Significant rural area	.638	.213	.158	2.999	.003
	Rural 50 area	1.152	.229	.268	5.025	.000
	Rural 80 area	2.262	.236	.558	9.598	.000
	ETHNIC DIVERSITY	-.007	.006	-.091	-1.280	.202

IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848[a]	.720	.702	.827
2	.849[b]	.720	.702	.828

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	532.057	19	28.003	40.954	.000[b]
	Residual	207.180	303	.684		
	Total	739.237	322			
2	Regression	532.330	20	26.617	38.849	.000[c]
	Residual	206.907	302	.685		
	Total	739.237	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-3.076	.932		-3.299	.001
	LLI	.097	.017	.293	5.563	.000
	Crime rate	.023	.004	.399	6.390	.000
	Deprivation	-.056	.014	-.312	-3.889	.000
	Income	-.001	.001	-.070	-1.094	.275
	Degree qualifications	.116	.012	.587	9.360	.000

	Population density	5.577E-5	.000	.084	1.039	.300
	Region ref = London					
	South East region	.368	.279	.099	1.316	.189
	South West region	.566	.320	.118	1.771	.078
	North East region	.003	.364	.000	.008	.994
	North West region	.125	.302	.027	.415	.679
	West Midlands region	.184	.305	.035	.601	.548
	East Midlands region	.147	.315	.032	.467	.641
	Yorks and Humber region	.307	.335	.050	.914	.361
	East region	.484	.294	.112	1.645	.101
	Area ref = major urban					
	Large urban area	-.297	.205	-.064	-1.451	.148
	Other urban area	.022	.188	.006	.117	.907
	Significant rural area	.712	.203	.177	3.509	.001
	Rural 50 area	1.203	.216	.283	5.555	.000
	Rural 80 area	2.353	.223	.580	10.548	.000
2	(Constant)	-2.834	1.009		-2.810	.005
	LLI	.092	.019	.279	4.848	.000
	Crime rate	.024	.004	.411	6.296	.000
	Deprivation	-.054	.015	-.303	-3.715	.000
	Income	-.002	.001	-.080	-1.216	.225
	Degree qualifications	.119	.013	.602	8.997	.000
	Population density	5.852E-5	.000	.088	1.085	.279
	South East region	.282	.310	.076	.909	.364
	South West region	.460	.362	.096	1.272	.204
	North East region	-.134	.424	-.017	-.317	.752
	North West region	-.001	.363	.000	-.004	.997
	West Midlands region	.072	.353	.014	.205	.838
	East Midlands region	.046	.354	.010	.130	.896
	Yorks and Humber region	.186	.386	.030	.482	.630
	East region	.405	.320	.094	1.268	.206
	Large urban area	-.318	.208	-.068	-1.531	.127
	Other urban area	.004	.190	.001	.022	.983
	Significant rural area	.692	.206	.172	3.364	.001
	Rural 50 area	1.181	.219	.278	5.381	.000
	Rural 80 area	2.335	.225	.576	10.376	.000
	IMMIGRATION	-.008	.012	-.054	-.632	.528

BLACK IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848[a]	.720	.702	.827
2	.849[b]	.721	.702	.827

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	532.057	19	28.003	40.954	.000[b]
	Residual	207.180	303	.684		
	Total	739.237	322			
2	Regression	532.932	20	26.647	39.007	.000[c]
	Residual	206.305	302	.683		
	Total	739.237	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.076	.932		-3.299	.001
	LLI	.097	.017	.293	5.563	.000
	Crime rate	.023	.004	.399	6.390	.000
	Deprivation	-.056	.014	-.312	-3.889	.000
	Income	-.001	.001	-.070	-1.094	.275
	Degree qualifications	.116	.012	.587	9.360	.000
	Population density	5.577E-5	.000	.084	1.039	.300
	Region ref = London					
	South East region	.368	.279	.099	1.316	.189
	South West region	.566	.320	.118	1.771	.078
	North East region	.003	.364	.000	.008	.994
	North West region	.125	.302	.027	.415	.679
	West Midlands region	.184	.305	.035	.601	.548
	East Midlands region	.147	.315	.032	.467	.641
	Yorks and Humber region	.307	.335	.050	.914	.361
	East region	.484	.294	.112	1.645	.101
	Area ref = major urban					
	Large urban area	-.297	.205	-.064	-1.451	.148
	Other urban area	.022	.188	.006	.117	.907
	Significant rural area	.712	.203	.177	3.509	.001
	Rural 50 area	1.203	.216	.283	5.555	.000
	Rural 80 area	2.353	.223	.580	10.548	.000
2	(Constant)	-2.630	1.012		-2.599	.010
	LLI	.088	.019	.266	4.611	.000
	Crime rate	.023	.004	.409	6.488	.000
	Deprivation	-.053	.015	-.293	-3.571	.000
	Income	-.002	.001	-.086	-1.313	.190

	Degree qualifications	.119	.013	.601	9.406	.000
	Population density	5.180E-5	.000	.078	.963	.336
	South East region	.237	.302	.064	.786	.433
	South West region	.409	.349	.085	1.173	.242
	North East region	-.194	.403	-.024	-.482	.630
	North West region	-.057	.342	-.012	-.166	.868
	West Midlands region	.026	.335	.005	.079	.937
	East Midlands region	-.005	.343	-.001	-.015	.988
	Yorks and Humber region	.128	.371	.021	.344	.731
	East region	.352	.316	.081	1.114	.266
	Large urban area	-.326	.206	-.070	-1.580	.115
	Other urban area	-.018	.191	-.005	-.095	.924
	Significant rural area	.663	.208	.165	3.193	.002
	Rural 50 area	1.150	.221	.270	5.193	.000
	Rural 80 area	2.299	.228	.567	10.085	.000
	BLACK IMMIGRATION	-.017	.015	-.072	-1.132	.258

WHITE IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848[a]	.720	.702	.827
2	.849[b]	.720	.702	.827

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	532.057	19	28.003	40.954	.000[b]
	Residual	207.180	303	.684		
	Total	739.237	322			
2	Regression	532.308	20	26.615	38.843	.000[c]
	Residual	206.929	302	.685		
	Total	739.237	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.076	.932		-3.299	.001
	LLI	.097	.017	.293	5.563	.000
	Crime rate	.023	.004	.399	6.390	.000
	Deprivation	-.056	.014	-.312	-3.889	.000
	Income	-.001	.001	-.070	-1.094	.275
	Degree qualifications	.116	.012	.587	9.360	.000
	Population density	5.577E-5	.000	.084	1.039	.300
	Region ref = London					
	South East region	.368	.279	.099	1.316	.189
	South West region	.566	.320	.118	1.771	.078

	North East region	.003	.364	.000	.008	.994
	North West region	.125	.302	.027	.415	.679
	West Midlands region	.184	.305	.035	.601	.548
	East Midlands region	.147	.315	.032	.467	.641
	Yorks and Humber region	.307	.335	.050	.914	.361
	East region	.484	.294	.112	1.645	.101
	Area ref = major urban					
	Large urban area	-.297	.205	-.064	-1.451	.148
	Other urban area	.022	.188	.006	.117	.907
	Significant rural area	.712	.203	.177	3.509	.001
	Rural 50 area	1.203	.216	.283	5.555	.000
	Rural 80 area	2.353	.223	.580	10.548	.000
2	(Constant)	-3.166	.945		-3.349	.001
	LLI	.099	.018	.297	5.588	.000
	Crime rate	.022	.004	.386	5.847	.000
	Deprivation	-.056	.014	-.312	-3.885	.000
	Income	-.001	.001	-.064	-.983	.327
	Degree qualifications	.114	.013	.575	8.741	.000
	Population density	4.971E-5	.000	.075	.909	.364
	South East region	.410	.288	.110	1.422	.156
	South West region	.624	.334	.130	1.868	.063
	North East region	.083	.388	.010	.213	.831
	North West region	.198	.325	.043	.609	.543
	West Midlands region	.249	.324	.048	.768	.443
	East Midlands region	.199	.327	.043	.609	.543
	Yorks and Humber region	.372	.353	.061	1.055	.292
	East region	.513	.298	.118	1.719	.087
	Large urban area	-.284	.206	-.061	-1.378	.169
	Other urban area	.022	.188	.005	.116	.908
	Significant rural area	.710	.203	.176	3.492	.001
	Rural 50 area	1.200	.217	.282	5.537	.000
	Rural 80 area	2.342	.224	.578	10.460	.000
	WHITE IMMIGRATION	.015	.025	.039	.605	.546

ETHNIC DIVERSITY RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848[a]	.720	.702	.827
2	.851[b]	.725	.706	.821

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	532.057	19	28.003	40.954	.000[b]
	Residual	207.180	303	.684		
	Total	739.237	322			
2	Regression	535.667	20	26.783	39.734	.000[c]
	Residual	203.570	302	.674		
	Total	739.237	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.076	.932		-3.299	.001
	LLI	.097	.017	.293	5.563	.000
	Crime rate	.023	.004	.399	6.390	.000
	Deprivation	-.056	.014	-.312	-3.889	.000
	Income	-.001	.001	-.070	-1.094	.275
	Degree qualifications	.116	.012	.587	9.360	.000
	Population density	5.577E-5	.000	.084	1.039	.300
	Region ref = London					
	South East region	.368	.279	.099	1.316	.189
	South West region	.566	.320	.118	1.771	.078
	North East region	.003	.364	.000	.008	.994
	North West region	.125	.302	.027	.415	.679
	West Midlands region	.184	.305	.035	.601	.548
	East Midlands region	.147	.315	.032	.467	.641
	Yorks and Humber region	.307	.335	.050	.914	.361
	East region	.484	.294	.112	1.645	.101
	Area ref = major urban					
	Large urban area	-.297	.205	-.064	-1.451	.148
	Other urban area	.022	.188	.006	.117	.907
	Significant rural area	.712	.203	.177	3.509	.001
	Rural 50 area	1.203	.216	.283	5.555	.000
	Rural 80 area	2.353	.223	.580	10.548	.000
2	(Constant)	-3.486	.943		-3.698	.000
	LLI	.098	.017	.295	5.648	.000
	Crime rate	.023	.004	.395	6.365	.000
	Deprivation	-.052	.014	-.291	-3.626	.000
	Income	-.001	.001	-.074	-1.166	.245
	Degree qualifications	.122	.013	.616	9.698	.000
	Population density	5.726E-5	.000	.087	1.074	.284
	South East region	.250	.282	.067	.886	.376
	South West region	.485	.319	.101	1.519	.130
	North East region	-.123	.365	-.015	-.336	.737
	North West region	.119	.300	.026	.398	.691
	West Midlands region	.155	.303	.030	.511	.610
	East Midlands region	.127	.313	.027	.406	.685
	Yorks and Humber region	.158	.339	.026	.467	.641
	East region	.395	.295	.091	1.339	.182
	Large urban area	-.305	.204	-.066	-1.500	.135
	Other urban area	.014	.186	.004	.076	.940
	Significant rural area	.721	.202	.179	3.574	.000
	Rural 50 area	1.246	.216	.293	5.776	.000
	Rural 80 area	2.391	.222	.590	10.766	.000
	ED RATE OF INCREASE	.005	.002	.084	2.314	.021

IMMIGRATION RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848[a]	.720	.702	.827
2	.848[b]	.720	.701	.828

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	532.057	19	28.003	40.954	.000[b]
	Residual	207.180	303	.684		
	Total	739.237	322			
2	Regression	532.093	20	26.605	38.787	.000[c]
	Residual	207.144	302	.686		
	Total	739.237	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.076	.932		-3.299	.001
	LLI	.097	.017	.293	5.563	.000
	Crime rate	.023	.004	.399	6.390	.000
	Deprivation	-.056	.014	-.312	-3.889	.000
	Income	-.001	.001	-.070	-1.094	.275
	Degree qualifications	.116	.012	.587	9.360	.000
	Population density	5.577E-5	.000	.084	1.039	.300
	South East region	.368	.279	.099	1.316	.189
	South West region	.566	.320	.118	1.771	.078
	North East region	.003	.364	.000	.008	.994
	North West region	.125	.302	.027	.415	.679
	West Midlands region	.184	.305	.035	.601	.548
	East Midlands region	.147	.315	.032	.467	.641
	Yorks and Humber region	.307	.335	.050	.914	.361
	East region	.484	.294	.112	1.645	.101
	Large urban area	-.297	.205	-.064	-1.451	.148
	Other urban area	.022	.188	.006	.117	.907
	Significant rural area	.712	.203	.177	3.509	.001
	Rural 50 area	1.203	.216	.283	5.555	.000
	Rural 80 area	2.353	.223	.580	10.548	.000
2	(Constant)	-3.133	.967		-3.241	.001
	LLI	.098	.018	.295	5.522	.000
	Crime rate	.023	.004	.396	6.179	.000
	Deprivation	-.056	.014	-.312	-3.881	.000
	Income	-.001	.001	-.069	-1.067	.287
	Degree qualifications	.117	.013	.591	9.133	.000
	Population density	5.688E-5	.000	.086	1.053	.293

	South East region	.369	.280	.100	1.320	.188
	South West region	.569	.321	.118	1.775	.077
	North East region	.005	.365	.001	.013	.989
	North West region	.130	.303	.028	.427	.669
	West Midlands region	.187	.306	.036	.612	.541
	East Midlands region	.146	.316	.031	.463	.644
	Yorks and Humber region	.304	.336	.050	.904	.366
	East region	.484	.295	.112	1.643	.101
	Large urban area	-.296	.205	-.064	-1.440	.151
	Other urban area	.023	.188	.006	.121	.904
	Significant rural area	.712	.203	.177	3.503	.001
	Rural 50 area	1.205	.217	.283	5.551	.000
	Rural 80 area	2.355	.224	.581	10.530	.000
	IMM RATE OF INCREASE	.000	.002	.008	.228	.820

NEW BUSINESS FORMATION 2001

ETHNIC DIVERSITY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.472	1.620
2	.711[b]	.505	.471	1.621

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	784.198	19	41.274	15.736	.000[b]
	Residual	771.136	294	2.623		
	Total	1555.333	313			
2	Regression	785.336	20	39.267	14.942	.000[c]
	Residual	769.998	293	2.628		
	Total	1555.333	313			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-2.036	1.797		-1.133	.258
	LLI	.246	.109	.279	2.247	.025
	Crime rate	.031	.004	.612	8.632	.000
	Deprivation	-.112	.025	-.582	-4.514	.000
	Income	.005	.003	.149	1.833	.068
	Degree qualifications	.077	.025	.257	3.112	.002
	Population density	1.183E-5	.000	.011	.105	.916
	Region ref = London					
	South East region	-.106	.557	-.020	-.190	.850
	South West region	-.380	.641	-.052	-.592	.554
	North East region	-1.516	.782	-.120	-1.937	.054
	North West region	-.442	.619	-.064	-.714	.476
	West Midlands region	-.540	.611	-.070	-.883	.378
	East Midlands region	-1.204	.640	-.178	-1.880	.061
	Yorks and Humber region	-1.282	.693	-.144	-1.851	.065
	East region	-.382	.589	-.060	-.649	.517
	Area ref = major urban					
	Large urban area	-.209	.396	-.031	-.528	.598
	Other urban area	-.436	.365	-.076	-1.195	.233
	Significant rural area	.676	.397	.115	1.704	.089
	Rural 50 area	.994	.436	.152	2.279	.023
	Rural 80 area	1.681	.437	.281	3.842	.000
2	(constant)	-2.746	2.098		-1.309	.192
	LLI	.292	.130	.331	2.247	.025
	Crime rate	.031	.004	.611	8.608	.000
	Deprivation	-.123	.030	-.638	-4.136	.000

	Income	.006	.003	.163	1.938	.054
	Degree qualifications	.073	.026	.243	2.846	.005
	Population density	1.197E-5	.000	.012	.106	.915
	South East region	.069	.617	.013	.112	.911
	South West region	-.174	.714	-.024	-.244	.808
	North East region	-1.268	.869	-.100	-1.459	.146
	North West region	-.272	.671	-.039	-.406	.685
	West Midlands region	-.389	.653	-.051	-.596	.552
	East Midlands region	-1.050	.682	-.156	-1.538	.125
	Yorks and Humber region	-1.074	.762	-.121	-1.410	.160
	East region	-.220	.640	-.035	-.343	.732
	Large urban area	-.172	.400	-.026	-.431	.667
	Other urban area	-.391	.372	-.068	-1.052	.294
	Significant rural area	.737	.408	.125	1.808	.072
	Rural 50 area	1.070	.452	.164	2.369	.018
	Rural 80 area	1.774	.460	.296	3.854	.000
	ETHNIC DIVERSITY	.009	.014	.064	.658	.511

IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.472	1.620
2	.727[b]	.529	.496	1.582

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	784.198	19	41.274	15.736	.000[b]
	Residual	771.136	294	2.623		
	Total	1555.333	313			
2	Regression	822.212	20	41.111	16.430	.000[c]
	Residual	733.121	293	2.502		
	Total	1555.333	313			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-2.036	1.797		-1.133	.258
	LLI	.246	.109	.279	2.247	.025
	Crime rate	.031	.004	.612	8.632	.000
	Deprivation	-.112	.025	-.582	-4.514	.000
	Income	.005	.003	.149	1.833	.068
	Degree qualifications	.077	.025	.257	3.112	.002
	Population density	1.183E-5	.000	.011	.105	.916
	Region ref = London					
	South East region	-.106	.557	-.020	-.190	.850

	South West region	-.380	.641	-.052	-.592	.554
	North East region	-1.516	.782	-.120	-1.937	.054
	North West region	-.442	.619	-.064	-.714	.476
	West Midlands region	-.540	.611	-.070	-.883	.378
	East Midlands region	-1.204	.640	-.178	-1.880	.061
	Yorks and Humber region	-1.282	.693	-.144	-1.851	.065
	East region	-.382	.589	-.060	-.649	.517
	Area ref = major urban					
	Large urban area	-.209	.396	-.031	-.528	.598
	Other urban area	-.436	.365	-.076	-1.195	.233
	Significant rural area	.676	.397	.115	1.704	.089
	Rural 50 area	.994	.436	.152	2.279	.023
	Rural 80 area	1.681	.437	.281	3.842	.000
2	(constant)	-4.963	1.909		-2.599	.010
	LLI	.396	.114	.449	3.490	.001
	Crime rate	.029	.003	.580	8.313	.000
	Deprivation	-.145	.026	-.754	-5.651	.000
	Income	.008	.003	.233	2.840	.005
	Degree qualifications	.024	.028	.080	.865	.388
	Population density	-6.268E-5	.000	-.060	-.561	.575
	South East region	.885	.600	.164	1.474	.141
	South West region	.914	.709	.126	1.289	.198
	North East region	.040	.862	.003	.047	.963
	North West region	.855	.690	.124	1.239	.216
	West Midlands region	.692	.675	.090	1.025	.306
	East Midlands region	-.049	.692	-.007	-.071	.944
	Yorks and Humber region	.119	.766	.013	.155	.877
	East region	.589	.627	.093	.939	.348
	Large urban area	-.032	.389	-.005	-.082	.935
	Other urban area	-.310	.358	-.054	-.865	.388
	Significant rural area	.824	.389	.140	2.118	.035
	Rural 50 area	1.188	.429	.182	2.770	.006
	Rural 80 area	1.882	.430	.314	4.373	.000
	IMMIGRATION	.119	.031	.432	3.898	.000

BLACK IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.472	1.620
2	.715[b]	.511	.477	1.611

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	784.198	19	41.274	15.736	.000[b]
	Residual	771.136	294	2.623		
	Total	1555.333	313			
2	Regression	794.552	20	39.728	15.300	.000[c]
	Residual	760.781	293	2.597		
	Total	1555.333	313			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-2.036	1.797		-1.133	.258
	LLI	.246	.109	.279	2.247	.025
	Crime rate	.031	.004	.612	8.632	.000
	Deprivation	-.112	.025	-.582	-4.514	.000
	Income	.005	.003	.149	1.833	.068
	Degree qualifications	.077	.025	.257	3.112	.002
	Population density	1.183E-5	.000	.011	.105	.916
	Region ref = London					
	South East region	-.106	.557	-.020	-.190	.850
	South West region	-.380	.641	-.052	-.592	.554
	North East region	-1.516	.782	-.120	-1.937	.054
	North West region	-.442	.619	-.064	-.714	.476
	West Midlands region	-.540	.611	-.070	-.883	.378
	East Midlands region	-1.204	.640	-.178	-1.880	.061
	Yorks and Humber region	-1.282	.693	-.144	-1.851	.065
	East region	-.382	.589	-.060	-.649	.517
	Area ref = major urban					
	Large urban area	-.209	.396	-.031	-.528	.598
	Other urban area	-.436	.365	-.076	-1.195	.233
	Significant rural area	.676	.397	.115	1.704	.089
	Rural 50 area	.994	.436	.152	2.279	.023
	Rural 80 area	1.681	.437	.281	3.842	.000
2	(constant)	-3.963	2.032		-1.950	.052
	LLI	.359	.123	.407	2.925	.004
	Crime rate	.031	.004	.615	8.716	.000
	Deprivation	-.139	.028	-.724	-4.937	.000
	Income	.007	.003	.192	2.296	.022
	Degree qualifications	.061	.026	.203	2.358	.019
	Population density	5.529E-6	.000	.005	.049	.961
	South East region	.491	.629	.091	.781	.436
	South West region	.326	.729	.045	.447	.656
	North East region	-.700	.879	-.055	-.796	.427
	North West region	.243	.705	.035	.344	.731
	West Midlands region	.101	.687	.013	.147	.883
	East Midlands region	-.597	.706	-.089	-.846	.398
	Yorks and Humber region	-.533	.784	-.060	-.680	.497
	East region	.232	.662	.037	.350	.726
	Large urban area	-.156	.394	-.023	-.396	.693
	Other urban area	-.366	.365	-.063	-1.002	.317
	Significant rural area	.765	.397	.130	1.926	.055
	Rural 50 area	1.113	.438	.170	2.540	.012
	Rural 80 area	1.838	.442	.307	4.155	.000
	BLACK IMMIGRATION	.075	.037	.190	1.997	.047

WHITE IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.472	1.620
2	.722[b]	.521	.488	1.594

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	784.198	19	41.274	15.736	.000[b]
	Residual	771.136	294	2.623		
	Total	1555.333	313			
2	Regression	810.478	20	40.524	15.941	.000[c]
	Residual	744.856	293	2.542		
	Total	1555.333	313			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(constant)	-2.036	1.797		-1.133	.258
	LLI	.246	.109	.279	2.247	.025
	Crime rate	.031	.004	.612	8.632	.000
	Deprivation	-.112	.025	-.582	-4.514	.000
	Income	.005	.003	.149	1.833	.068
	Degree qualifications	.077	.025	.257	3.112	.002
	Population density	1.183E-5	.000	.011	.105	.916
	Region ref = London					
	South East region	-.106	.557	-.020	-.190	.850
	South West region	-.380	.641	-.052	-.592	.554
	North East region	-1.516	.782	-.120	-1.937	.054
	North West region	-.442	.619	-.064	-.714	.476
	West Midlands region	-.540	.611	-.070	-.883	.378
	East Midlands region	-1.204	.640	-.178	-1.880	.061
	Yorks and Humber region	-1.282	.693	-.144	-1.851	.065
	East region	-.382	.589	-.060	-.649	.517
	Area ref = major urban					
	Large urban area	-.209	.396	-.031	-.528	.598
	Other urban area	-.436	.365	-.076	-1.195	.233
	Significant rural area	.676	.397	.115	1.704	.089
	Rural 50 area	.994	.436	.152	2.279	.023
	Rural 80 area	1.681	.437	.281	3.842	.000
2	(constant)	-2.709	1.782		-1.520	.130
	LLI	.258	.108	.292	2.391	.017
	Crime rate	.028	.004	.568	7.973	.000
	Deprivation	-.109	.024	-.567	-4.464	.000
	Income	.007	.003	.195	2.410	.017

	Degree qualifications	.036	.028	.118	1.289	.198
	Population density	.000	.000	-.100	-.895	.371
	South East region	.099	.552	.018	.179	.858
	South West region	.047	.645	.006	.073	.942
	North East region	-.923	.792	-.073	-1.166	.245
	North West region	.026	.626	.004	.042	.967
	West Midlands region	-.102	.617	-.013	-.166	.869
	East Midlands region	-.806	.642	-.119	-1.255	.210
	Yorks and Humber region	-.799	.698	-.090	-1.144	.254
	East region	-.270	.581	-.043	-.465	.642
	Large urban area	-.051	.393	-.008	-.130	.897
	Other urban area	-.394	.360	-.068	-1.096	.274
	Significant rural area	.677	.390	.115	1.735	.084
	Rural 50 area	1.007	.429	.154	2.344	.020
	Rural 80 area	1.628	.431	.272	3.778	.000
	WHITE IMMIGRATION	.199	.062	.289	3.215	.001

ETHNIC DIVERSITY RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.472	1.620
2	.713[b]	.508	.474	1.616

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	784.198	19	41.274	15.736	.000[b]
	Residual	771.136	294	2.623		
	Total	1555.333	313			
2	Regression	790.184	20	39.509	15.129	.000[c]
	Residual	765.150	293	2.611		
	Total	1555.333	313			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-2.036	1.797		-1.133	.258
	LLI	.246	.109	.279	2.247	.025
	Crime rate	.031	.004	.612	8.632	.000
	Deprivation	-.112	.025	-.582	-4.514	.000
	Income	.005	.003	.149	1.833	.068
	Degree qualifications	.077	.025	.257	3.112	.002
	Population density	1.183E-5	.000	.011	.105	.916
	Region ref = London					
	South East region	-.106	.557	-.020	-.190	.850
	South West region	-.380	.641	-.052	-.592	.554

	North East region	-1.516	.782	-.120	-1.937	.054
	North West region	-.442	.619	-.064	-.714	.476
	West Midlands region	-.540	.611	-.070	-.883	.378
	East Midlands region	-1.204	.640	-.178	-1.880	.061
	Yorks and Humber region	-1.282	.693	-.144	-1.851	.065
	East region	-.382	.589	-.060	-.649	.517
	Area ref = major urban					
	Large urban area	-.209	.396	-.031	-.528	.598
	Other urban area	-.436	.365	-.076	-1.195	.233
	Significant rural area	.676	.397	.115	1.704	.089
	Rural 50 area	.994	.436	.152	2.279	.023
	Rural 80 area	1.681	.437	.281	3.842	.000
2	(constant)	-1.779	1.801		-.987	.324
	LLI	.181	.117	.205	1.541	.124
	Crime rate	.032	.004	.630	8.782	.000
	Deprivation	-.100	.026	-.518	-3.825	.000
	Income	.005	.003	.135	1.665	.097
	Degree qualifications	.077	.025	.256	3.115	.002
	Population density	4.666E-6	.000	.004	.041	.967
	South East region	-.162	.557	-.030	-.290	.772
	South West region	-.572	.652	-.079	-.877	.381
	North East region	-1.519	.781	-.120	-1.946	.053
	North West region	-.497	.618	-.072	-.804	.422
	West Midlands region	-.554	.610	-.072	-.909	.364
	East Midlands region	-1.220	.639	-.181	-1.910	.057
	Yorks and Humber region	-1.358	.693	-.152	-1.959	.051
	East region	-.413	.588	-.065	-.703	.483
	Large urban area	-.254	.396	-.038	-.641	.522
	Other urban area	-.466	.365	-.081	-1.278	.202
	Significant rural area	.616	.398	.105	1.550	.122
	Rural 50 area	.835	.448	.128	1.866	.063
	Rural 80 area	1.463	.460	.244	3.184	.002
	ED RATE OF INCREASE	.004	.002	.093	1.514	.131

IMMIGRATION RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.710[a]	.504	.472	1.620
2	.713[b]	.508	.474	1.616

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	784.198	19	41.274	15.736	.000[b]
	Residual	771.136	294	2.623		
	Total	1555.333	313			
2	Regression	789.803	20	39.490	15.114	.000[c]
	Residual	765.531	293	2.613		
	Total	1555.333	313			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-2.036	1.797		-1.133	.258
	LLI	.246	.109	.279	2.247	.025
	Crime rate	.031	.004	.612	8.632	.000
	Deprivation	-.112	.025	-.582	-4.514	.000
	Income	.005	.003	.149	1.833	.068
	Degree qualifications	.077	.025	.257	3.112	.002
	Population density	1.183E-5	.000	.011	.105	.916
	Region ref = London					
	South East region	-.106	.557	-.020	-.190	.850
	South West region	-.380	.641	-.052	-.592	.554
	North East region	-1.516	.782	-.120	-1.937	.054
	North West region	-.442	.619	-.064	-.714	.476
	West Midlands region	-.540	.611	-.070	-.883	.378
	East Midlands region	-1.204	.640	-.178	-1.880	.061
	Yorks and Humber region	-1.282	.693	-.144	-1.851	.065
	East region	-.382	.589	-.060	-.649	.517
	Area ref = major urban					
	Large urban area	-.209	.396	-.031	-.528	.598
	Other urban area	-.436	.365	-.076	-1.195	.233
	Significant rural area	.676	.397	.115	1.704	.089
	Rural 50 area	.994	.436	.152	2.279	.023
	Rural 80 area	1.681	.437	.281	3.842	.000
2	(constant)	-1.667	1.811		-.920	.358
	LLI	.238	.109	.270	2.180	.030
	Crime rate	.030	.004	.607	8.567	.000
	Deprivation	-.109	.025	-.563	-4.356	.000
	Income	.005	.003	.145	1.787	.075
	Degree qualifications	.082	.025	.273	3.289	.001
	Population density	-8.882E-6	.000	-.009	-.078	.938
	South East region	-.196	.559	-.036	-.351	.726
	South West region	-.446	.642	-.061	-.695	.487
	North East region	-1.444	.782	-.114	-1.845	.066
	North West region	-.570	.624	-.083	-.914	.361
	West Midlands region	-.669	.616	-.087	-1.086	.278
	East Midlands region	-1.294	.642	-.192	-2.017	.045
	Yorks and Humber region	-1.343	.692	-.151	-1.939	.053
	East region	-.427	.589	-.067	-.724	.469
	Large urban area	-.193	.395	-.029	-.490	.625
	Other urban area	-.481	.366	-.083	-1.314	.190
	Significant rural area	.598	.399	.101	1.497	.135
	Rural 50 area	.905	.440	.138	2.058	.040
	Rural 80 area	1.556	.445	.260	3.497	.001
	IMM RATE OF INCREASE	-.012	.008	-.066	-1.465	.144

NEW BUSINESS FORMATION 2011

ETHNIC DIVERSITY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764[a]	.584	.558	2.103
2	.766[b]	.587	.559	2.101

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1879.179	19	98.904	22.356	.000[b]
	Residual	1336.091	302	4.424		
	Total	3215.270	321			
2	Regression	1886.220	20	94.311	21.359	.000[c]
	Residual	1329.051	301	4.415		
	Total	3215.270	321			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-7.102	2.375		-2.991	.003
	LLI	.146	.044	.211	3.277	.001
	Crime rate	.069	.009	.578	7.590	.000
	Deprivation	-.161	.037	-.430	-4.384	.000
	Income	.015	.003	.377	4.835	.000
	Degree qualifications	.057	.032	.138	1.800	.073
	Population density	.000	.000	.104	1.052	.293
	Region ref = London					
	South East region	-.277	.711	-.036	-.389	.698
	South West region	-.638	.814	-.064	-.783	.434
	North East region	-.680	.926	-.041	-.735	.463
	North West region	-.196	.771	-.020	-.254	.800
	West Midlands region	-.371	.777	-.034	-.478	.633
	East Midlands region	-.621	.802	-.064	-.775	.439
	Yorks and Humber region	-.308	.853	-.024	-.361	.718
	East region	-.378	.749	-.042	-.505	.614
	Area ref = major urban					
	Large urban area	-.820	.522	-.085	-1.572	.117
	Other urban area	-.855	.478	-.103	-1.789	.075
	Significant rural area	.303	.517	.036	.586	.558
	Rural 50 area	.274	.555	.031	.493	.622
	Rural 80 area	1.087	.568	.128	1.915	.056
2	(constant)	-8.445	2.600		-3.248	.001
	LLI	.179	.052	.258	3.466	.001
	Crime rate	.068	.009	.569	7.443	.000

	Deprivation	-.177	.039	-.473	-4.559	.000
	Income	.016	.003	.396	4.991	.000
	Degree qualifications	.049	.032	.117	1.503	.134
	Population density	.000	.000	.113	1.144	.254
	South East region	.031	.751	.004	.041	.968
	South West region	-.261	.866	-.026	-.301	.764
	North East region	-.140	1.019	-.008	-.137	.891
	North West region	.234	.842	.024	.278	.781
	West Midlands region	-.062	.814	-.006	-.076	.939
	East Midlands region	-.297	.841	-.031	-.354	.724
	Yorks and Humber region	.112	.915	.009	.122	.903
	East region	-.119	.776	-.013	-.154	.878
	Large urban area	-.688	.531	-.071	-1.295	.196
	Other urban area	-.681	.497	-.082	-1.370	.172
	Significant rural area	.514	.543	.061	.948	.344
	Rural 50 area	.510	.585	.057	.872	.384
	Rural 80 area	1.339	.601	.158	2.227	.027
	ETHNIC DIVERSITY	.018	.015	.110	1.263	.208

IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764[a]	.584	.558	2.101
2	.769[b]	.592	.565	2.084

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1879.798	19	98.937	22.421	.000[b]
	Residual	1337.013	303	4.413		
	Total	3216.811	322			
2	Regression	1904.756	20	95.238	21.921	.000[c]
	Residual	1312.056	302	4.345		
	Total	3216.811	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-7.048	2.369		-2.976	.003
	LLI	.145	.044	.210	3.271	.001
	Crime rate	.069	.009	.579	7.610	.000
	Deprivation	-.162	.037	-.433	-4.431	.000
	Income	.015	.003	.375	4.824	.000
	Degree qualifications	.057	.032	.138	1.806	.072
	Population density	.000	.000	.106	1.070	.286
	Region ref = London					

	South East region	-.286	.710	-.037	-.403	.687
	South West region	-.649	.813	-.065	-.798	.425
	North East region	-.676	.925	-.041	-.731	.465
	North West region	-.166	.767	-.017	-.217	.829
	West Midlands region	-.377	.776	-.035	-.486	.627
	East Midlands region	-.630	.801	-.065	-.787	.432
	Yorks and Humber region	-.310	.852	-.024	-.364	.716
	East region	-.385	.748	-.043	-.515	.607
	Area ref = major urban					
	Large urban area	-.814	.521	-.084	-1.563	.119
	Other urban area	-.848	.477	-.102	-1.778	.076
	Significant rural area	.309	.516	.037	.600	.549
	Rural 50 area	.304	.550	.034	.552	.581
	Rural 80 area	1.093	.567	.129	1.929	.055
2	(constant)	-9.356	2.540		-3.684	.000
	LLI	.191	.048	.276	3.978	.000
	Crime rate	.063	.009	.524	6.658	.000
	Deprivation	-.178	.037	-.474	-4.815	.000
	Income	.017	.003	.423	5.305	.000
	Degree qualifications	.030	.033	.071	.885	.377
	Population density	.000	.000	.087	.881	.379
	South East region	.528	.782	.068	.676	.500
	South West region	.368	.911	.037	.404	.687
	North East region	.633	1.068	.038	.593	.554
	North West region	1.043	.913	.108	1.143	.254
	West Midlands region	.686	.888	.063	.772	.441
	East Midlands region	.336	.891	.035	.377	.707
	Yorks and Humber region	.841	.972	.066	.865	.388
	East region	.367	.805	.041	.455	.649
	Large urban area	-.616	.523	-.064	-1.177	.240
	Other urban area	-.678	.479	-.082	-1.416	.158
	Significant rural area	.503	.518	.060	.971	.332
	Rural 50 area	.512	.553	.058	.926	.355
	Rural 80 area	1.263	.567	.149	2.228	.027
	IMMIGRATION	.075	.031	.246	2.397	.017

BLACK IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764[a]	.584	.558	2.101
2	.767[b]	.589	.561	2.094

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1879.798	19	98.937	22.421	.000[b]
	Residual	1337.013	303	4.413		
	Total	3216.811	322			
2	Regression	1893.207	20	94.660	21.598	.000[c]
	Residual	1323.604	302	4.383		

	Total	3216.811	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-7.048	2.369		-2.976	.003
	LLI	.145	.044	.210	3.271	.001
	Crime rate	.069	.009	.579	7.610	.000
	Deprivation	-.162	.037	-.433	-4.431	.000
	Income	.015	.003	.375	4.824	.000
	Degree qualifications	.057	.032	.138	1.806	.072
	Population density	.000	.000	.106	1.070	.286
	Region ref = London					
	South East region	-.286	.710	-.037	-.403	.687
	South West region	-.649	.813	-.065	-.798	.425
	North East region	-.676	.925	-.041	-.731	.465
	North West region	-.166	.767	-.017	-.217	.829
	West Midlands region	-.377	.776	-.035	-.486	.627
	East Midlands region	-.630	.801	-.065	-.787	.432
	Yorks and Humber region	-.310	.852	-.024	-.364	.716
	East region	-.385	.748	-.043	-.515	.607
	Area ref = major urban					
	Large urban area	-.814	.521	-.084	-1.563	.119
	Other urban area	-.848	.477	-.102	-1.778	.076
	Significant rural area	.309	.516	.037	.600	.549
	Rural 50 area	.304	.550	.034	.552	.581
	Rural 80 area	1.093	.567	.129	1.929	.055
2	(constant)	-8.792	2.563		-3.431	.001
	LLI	.180	.048	.260	3.711	.000
	Crime rate	.067	.009	.560	7.318	.000
	Deprivation	-.176	.037	-.469	-4.712	.000
	Income	.016	.003	.405	5.103	.000
	Degree qualifications	.046	.032	.112	1.439	.151
	Population density	.000	.000	.117	1.185	.237
	South East region	.224	.765	.029	.293	.770
	South West region	-.032	.883	-.003	-.036	.971
	North East region	.095	1.022	.006	.093	.926
	North West region	.547	.866	.056	.631	.529
	West Midlands region	.238	.849	.022	.280	.780
	East Midlands region	-.034	.868	-.003	-.039	.969
	Yorks and Humber region	.391	.939	.031	.416	.677
	East region	.131	.801	.014	.163	.871
	Large urban area	-.701	.523	-.072	-1.340	.181
	Other urban area	-.691	.484	-.084	-1.429	.154
	Significant rural area	.503	.526	.060	.957	.339
	Rural 50 area	.511	.561	.058	.911	.363
	Rural 80 area	1.304	.577	.154	2.258	.025
	BLACK IMMIGRATION	.065	.037	.135	1.749	.081

WHITE IMMIGRATION

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764[a]	.584	.558	2.101
2	.767[b]	.588	.560	2.095

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1879.798	19	98.937	22.421	.000[b]
	Residual	1337.013	303	4.413		
	Total	3216.811	322			
2	Regression	1890.801	20	94.540	21.532	.000[c]
	Residual	1326.010	302	4.391		
	Total	3216.811	322			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-7.048	2.369		-2.976	.003
	LLI	.145	.044	.210	3.271	.001
	Crime rate	.069	.009	.579	7.610	.000
	Deprivation	-.162	.037	-.433	-4.431	.000
	Income	.015	.003	.375	4.824	.000
	Degree qualifications	.057	.032	.138	1.806	.072
	Population density	.000	.000	.106	1.070	.286
	Region ref = London					
	South East region	-.286	.710	-.037	-.403	.687
	South West region	-.649	.813	-.065	-.798	.425
	North East region	-.676	.925	-.041	-.731	.465
	North West region	-.166	.767	-.017	-.217	.829
	West Midlands region	-.377	.776	-.035	-.486	.627
	East Midlands region	-.630	.801	-.065	-.787	.432
	Yorks and Humber region	-.310	.852	-.024	-.364	.716
	East region	-.385	.748	-.043	-.515	.607
	Area ref = major urban					
	Large urban area	-.814	.521	-.084	-1.563	.119
	Other urban area	-.848	.477	-.102	-1.778	.076
	Significant rural area	.309	.516	.037	.600	.549
	Rural 50 area	.304	.550	.034	.552	.581
	Rural 80 area	1.093	.567	.129	1.929	.055
2	(constant)	-7.646	2.393		-3.196	.002
	LLI	.155	.045	.224	3.466	.001
	Crime rate	.064	.010	.538	6.711	.000
	Deprivation	-.162	.037	-.433	-4.442	.000
	Income	.016	.003	.395	5.026	.000

	Degree qualifications	.041	.033	.100	1.254	.211
	Population density	.000	.000	.077	.764	.445
	South East region	-.006	.730	-.001	-.008	.993
	South West region	-.271	.845	-.027	-.320	.749
	North East region	-.147	.981	-.009	-.149	.881
	North West region	.317	.824	.033	.384	.701
	West Midlands region	.056	.821	.005	.068	.946
	East Midlands region	-.287	.827	-.030	-.347	.729
	Yorks and Humber region	.123	.893	.010	.138	.891
	East region	-.194	.755	-.022	-.257	.797
	Large urban area	-.728	.522	-.075	-1.394	.164
	Other urban area	-.849	.476	-.103	-1.785	.075
	Significant rural area	.292	.515	.035	.567	.571
	Rural 50 area	.288	.549	.032	.525	.600
	Rural 80 area	1.025	.567	.121	1.809	.072
	WHITE IMMIGRATION	.100	.063	.125	1.583	.114

ETHNIC DIVERSITY RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764[a]	.584	.558	2.101
2	.766[b]	.586	.559	2.100

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1879.798	19	98.937	22.421	.000[b]
	Residual	1337.013	303	4.413		
	Total	3216.811	322			
2	Regression	1885.632	20	94.282	21.389	.000[c]
	Residual	1331.179	302	4.408		
	Total	3216.811	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-7.048	2.369		-2.976	.003
	LLI	.145	.044	.210	3.271	.001
	Crime rate	.069	.009	.579	7.610	.000
	Deprivation	-.162	.037	-.433	-4.431	.000
	Income	.015	.003	.375	4.824	.000
	Degree qualifications	.057	.032	.138	1.806	.072
	Population density	.000	.000	.106	1.070	.286
	Region ref = London					
	South East region	-.286	.710	-.037	-.403	.687
	South West region	-.649	.813	-.065	-.798	.425

	North East region	-.676	.925	-.041	-.731	.465
	North West region	-.166	.767	-.017	-.217	.829
	West Midlands region	-.377	.776	-.035	-.486	.627
	East Midlands region	-.630	.801	-.065	-.787	.432
	Yorks and Humber region	-.310	.852	-.024	-.364	.716
	East region	-.385	.748	-.043	-.515	.607
	Area ref = major urban					
	Large urban area	-.814	.521	-.084	-1.563	.119
	Other urban area	-.848	.477	-.102	-1.778	.076
	Significant rural area	.309	.516	.037	.600	.549
	Rural 50 area	.304	.550	.034	.552	.581
	Rural 80 area	1.093	.567	.129	1.929	.055
2	(constant)	-6.527	2.410		-2.708	.007
	LLI	.144	.044	.208	3.249	.001
	Crime rate	.070	.009	.581	7.645	.000
	Deprivation	-.167	.037	-.446	-4.536	.000
	Income	.015	.003	.378	4.856	.000
	Degree qualifications	.050	.032	.120	1.547	.123
	Population density	.000	.000	.104	1.056	.292
	South East region	-.136	.721	-.018	-.189	.850
	South West region	-.546	.817	-.054	-.668	.505
	North East region	-.517	.934	-.031	-.553	.581
	North West region	-.159	.767	-.016	-.207	.836
	West Midlands region	-.341	.776	-.031	-.440	.661
	East Midlands region	-.605	.800	-.062	-.755	.451
	Yorks and Humber region	-.121	.867	-.009	-.140	.889
	East region	-.271	.754	-.030	-.360	.719
	Large urban area	-.804	.520	-.083	-1.544	.124
	Other urban area	-.838	.477	-.101	-1.758	.080
	Significant rural area	.299	.516	.036	.580	.562
	Rural 50 area	.248	.552	.028	.450	.653
	Rural 80 area	1.045	.568	.124	1.840	.067
	ED RATE OF INCREASE	-.006	.005	-.051	-1.150	.251

IMMIGRATION RATE OF INCREASE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.764[a]	.584	.558	2.101
2	.768[b]	.591	.563	2.088

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1879.798	19	98.937	22.421	.000[b]
	Residual	1337.013	303	4.413		
	Total	3216.811	322			
2	Regression	1899.820	20	94.991	21.782	.000[c]
	Residual	1316.992	302	4.361		
	Total	3216.811	322			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(constant)	-7.048	2.369		-2.976	.003
	LLI	.145	.044	.210	3.271	.001
	Crime rate	.069	.009	.579	7.610	.000
	Deprivation	-.162	.037	-.433	-4.431	.000
	Income	.015	.003	.375	4.824	.000
	Degree qualifications	.057	.032	.138	1.806	.072
	Population density	.000	.000	.106	1.070	.286
	Region ref = London					
	South East region	-.286	.710	-.037	-.403	.687
	South West region	-.649	.813	-.065	-.798	.425
	North East region	-.676	.925	-.041	-.731	.465
	North West region	-.166	.767	-.017	-.217	.829
	West Midlands region	-.377	.776	-.035	-.486	.627
	East Midlands region	-.630	.801	-.065	-.787	.432
	Yorks and Humber region	-.310	.852	-.024	-.364	.716
	East region	-.385	.748	-.043	-.515	.607
	Area ref = major urban					
	Large urban area	-.814	.521	-.084	-1.563	.119
	Other urban area	-.848	.477	-.102	-1.778	.076
	Significant rural area	.309	.516	.037	.600	.549
	Rural 50 area	.304	.550	.034	.552	.581
	Rural 80 area	1.093	.567	.129	1.929	.055
2	(constant)	-5.700	2.437		-2.339	.020
	LLI	.130	.045	.188	2.913	.004
	Crime rate	.074	.009	.615	7.938	.000
	Deprivation	-.163	.036	-.434	-4.469	.000
	Income	.014	.003	.360	4.631	.000
	Degree qualifications	.041	.032	.098	1.257	.210
	Population density	.000	.000	.087	.879	.380
	South East region	-.329	.706	-.042	-.466	.642
	South West region	-.705	.808	-.070	-.873	.383
	North East region	-.727	.919	-.044	-.790	.430
	North West region	-.267	.764	-.028	-.350	.727
	West Midlands region	-.467	.772	-.043	-.604	.546
	East Midlands region	-.607	.796	-.063	-.762	.447
	Yorks and Humber region	-.248	.847	-.019	-.293	.770
	East region	-.392	.743	-.043	-.527	.599
	Large urban area	-.849	.518	-.088	-1.639	.102
	Other urban area	-.865	.474	-.104	-1.824	.069
	Significant rural area	.313	.513	.037	.610	.543
	Rural 50 area	.256	.547	.029	.469	.640
	Rural 80 area	1.034	.564	.122	1.833	.068
	IMM RATE OF INCREASE	-.009	.004	-.096	-2.143	.033