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Can Minority Representation Promote Social Cohesion between Immigrants and Non-Immigrants? An Analysis of Local Governments in England

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Abstract: Despite increased government interventions, immigration rates in the UK remain high. However, the critical issue of social cohesion has received little attention. Without proper integration, immigration can result in segregation and marginalization of immigrants. We argue that one effective way to foster social cohesion is through minority representation, particularly when it influences policy outcomes. This study distinguishes between descriptive and substantive representation of ethnic minorities in three key regions of England: Greater London, West Midlands, and Greater Manchester. Using unique council-level panel data from 2002 to 2018, collected from various official sources, we apply a regression discontinuity design around close elections involving ethnic minority and native candidates. The findings reveal evidence of descriptive representation, indicating ongoing social integration, though its strength varies across time and regions. Moreover, under certain conditions, descriptive representation also influences local public spending, leading to substantive representations include a significant presence of minority representation in Labour-controlled local governments. In light of the absence of prior evidence, this study underscores the urgent need for a coordinated national policy to promote social integration at the local level, encompassing all devolved units of the UK government.

JEL Classification: H4; H7; P0

*Keywords*: Immigration; Ethnic diversity ; Minority representation; Descriptive vs. substantive representation; Local public spending; Regression discontinuity; English local governments;

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# Introduction

As Europe's refugee crisis peaks, there is an urgent need to effectively integrate migrants into their new societies; otherwise, immigration gives rise to segregation and marginalisation. While migration policy remains a national responsibility, integration/assimilation needs to happen locally, where people are, in their workplaces, in their neighbourhoods, and in the schools where they send their children. Promoting assimilation necessitates active and co-ordinated government intervention, both at the national and local levels. Unlike immigration, there is, however, a lack of political debate on integration and assimilation of immigrants. Immigration works only when integration works.

How can we effectively and efficiently integrate new immigrants? The present paper highlights an important channel that has the potential to promote integration and assimilation, namely, the political representation of ethnic minorities in government. While descriptive representation of ethnic minorities may indicate an aspect of social cohesion, it is not enough to influence policy outcomes. Hence, the present paper also examines the conditions under which elected minority representatives may influence public policy at the local level and we consider their effect on selected local spending shares. In doing so, the analysis focuses on three large English cities, namely, London, Greater Manchester and West Midlands, the cities with large and growing concentration of ethnic minority population of EU and non-EU origin. It is important to focus on local councils where immigrants live and settle in a foreign country. Choice of these three cities also offers a comparative perspectives in these respects.

Immigrant's interests are likely to be better represented by politicians who are themselves of immigrant origin. Selecting minority candidates might increase a party's attraction in the eyes of immigrants and minority voters, or even encourage them to vote for the first time, thus initiating the process of social cohesion. Evidence from the U.S. supports this empowerment effect: as a percentage of state legislators with minority backgrounds grew, voting among African Americans and Latinos increased by 10 to 40 per cent (Rocha et al., 2010). Much of the relevant literature that comes from the US highlights the importance of political representation of the minority population in the legislature (see, for example Cameron *et al.*, 1996, Hero and Preuhs, 2007). But as Cameron *et al.* (1996) contend, it is unclear that creation of concentrated minority districts (i.e., "majority-minority" districts, with a majority of minority voters) necessarily further minority interests, as outside of such districts the elected representatives may be unsympathetic to minority concerns. On the other hand, minorities could benefit by influencing their representatives' actions without comprising a majority of the electorate – an example where a trade-off may exist between descriptive and substantive representation.

Outside the US, Pande (2003) showed that when a segment of the population gains higher representation in local government, it leads to more focused spending on public resources in favour of this group in India. Further, in the context of ethnic divisions and ethnic parties in India, Chandra (2004) unearthed a worst-case scenario of a self-enforcing equilibrium, where voters expect co-ethnic leaders to benefit them in the distribution of public goods; the co-ethnic leaders expect voters to benefit them with a proportional distribution of votes. A later study by Hajnal (2006) observed that the election of black council representatives

in the U.S had resulted in an increase in some local public goods provided such as education, but only in the most ethnically diverse areas. Besley, Pande and Rao (2012) observed robust and transparent effects of political influence within Indian villages: politicians retain substantial unrestricted authority and use this power to advance their broad self-interest. Ghosh and Pal (2012), however, found that the effect of elected scheduled caste, scheduled tribe and women legislators remained rather insignificant on public spending in the Indian states.

Despite increasing level of immigration, a lack of diversity in Europe's legislatures, however, signals a democratic deficit within domestic politics (Phillips 1995). Sobolewska (2013) had, however, highlighted a new commitment to increased minority representation at the parliamentary elections in the UK that received a steady flow of immigrants for much of the post-war period. In the 2010 election both Labour and Conservatives employed a variety of strategies for increasing ethnic minority representation. The strategy to select more minority candidates in 'white' seats was not only a key to increasing the numbers of minority parliamentarians but also signals a departure from the traditional pattern of ethnic minority representation and its impact at the local level in the UK, where much of the integration happens.

In an attempt to bridge this gap in the literature, the present paper provides the first causal evidence of descriptive representation of the ethnic minority candidates at the local level in the UK, which is the first step towards social cohesion. We also analyse the impact of ethnic minority representation on local public spending at the council level to examine whether descriptive representation leads to substantive representation.

The key problem of assessing the impact of councillors of ethnic minority origin on local public spending shares on different accounts is that the assignment of councillor by ethnicity in these councils is unlikely to be random. For example, the councils most likely to elect an ethnic minority councillor may also be those where local government spending is correlated with local demographics including shares of ethnic minority population. To break this circularity, we use a regression discontinuity (RD) design that randomises the election of an ethnic minority councillor against a non-ethnic councillor in close elections, around the cut-off winning margin of 0 (e.g., see Myersson, 2014).

Local government policy can facilitate assimilation and increase immigrants' overall productivity. There are significant labour market disadvantages of immigrants as documented in the recent literature. Human capital theory suggests that increases in productivity, key for increasing wages and productivity, is enhanced through investments in labour, thus requiring host country investment in language, education, and training, and assistance with job placement. The latter justifies our focus on spending on schooling, training (part of education spending) and English language (part of cultural spending). Immigrants also benefit disproportionately from social capital, which in turn justifies spending on transport as well as culture. Housing is another key item for helping immigrants to settle in a host country. Accordingly, we examine if the election of an ethnic minority councillor against a native one in close elections has impacted local spending shares on education, transport, social care, housing and culture, which are identified as key for promoting integration at the local level (see further discussion below). We also explore how these vary across the sample cities and

also over the election cycles, thus building a comparative perspective as well. In this respect, we also explore the conditions under which substantive representation is strong: (a) size of minority representation; (b) whether minority representation is backed by minority population share including both the Commonwealth and others; (c) Characteristics of the elected minority representatives, namely, incumbent or not. (d) link of ethnic minority councillors to ruling government run by a given political party.

We use the data at our disposal to answer these questions. In particular, we compile a unique data set of three ethnically diverse English cities, namely, London, West Midlands and Greater Manchester. We use council and councillor-level data set over 2002-18 that covers five local elections 2002, 2006, 2010, 2014 and 2018, using various official sources. The UK is a pertinent case in point that has been failing to curb immigration and yet abstracting from issues of integration of immigrants (see Section 3). We focus our analysis on the sample where an ethnic minority candidate wins/loses against native candidate.

Overall, there is confirmation of significant and growing descriptive representation of ethnic minorities over time, especially since 2010. More importantly, we find evidence of some significant substantive representation of ethnic minorities too. In particular, the treatment effects of having an elected ethnic minority councillor is positive and significant for education spending on its own and also aggregate spending on education, transport and culture, which are known to promote social cohesion and integration. No significant effects are obtained for the full sample 2000-2018. Significant treatment effects are obtained only for the period 2010-18, when the share of ethnic minority councillors has gone up significantly, validating the role of the size of minority representation. This is further evident when we consider the treatment effects by election cycles. However, there is some variation in the treatment effects by cities/regions when we compare the case of greater London with West Midlands and Greater Manchester together on the other. Further analysis shows that significant substantive representation of ethnic minorities hold under the following circumstances: (i) when election of ethnic minority councillors is backed by larger share of ethnic population; (ii) when the ethnic minority councillors are elected for the first-time (not an incumbent); (iii) when the council leaders are not of ethnic-minority origin and (iv) when the ethnic minority candidates are in the labour-ruled councils. These results highlight the need for the national government to have a well-coordinated policy of social integration at the local rather than national level and across all devolved units of the UK.

# 2. Background, Literature Review and Research Questions

The recent increases in ethnic diversity in many European countries can be traced to movements across borders over the last few decades since the conclusion of the second World War. In particular, it is the years between 1945 and 1973 when developments of mass industrialisation and decolonisation brought growing numbers of foreign workers, followed by their family members. In Britain, for example, the broadest wave of non-white immigration arrived between 1951 and 1971 from the Commonwealth colonies in the Caribbean, the Indian subcontinent and Africa. There has also been a concomitant emergence of ethnic minorities as political actors who at least to some extent, express their ethnicity through their political projects. W raise two broader

questions here: (i) whether there is descriptive representation of ethnic minority candidates at the local level and (ii) whether descriptive representation of ethnic minorities can lead to substantive representation in that they can influence public policy. In order to answer these questions, we integrate different strands of the existing literature: (i) political science literature on the trade-off between descriptive and substantive representation of minorities; (ii) the more recent literature on the role of immigration on public policies. Other related literature is summarised in Appendix 2: (iii) public economics literature dealing with the effects of ethnic diversity on public goods provision; (iv) ethnic favouritism literature that deals with cases of government run by specific ethnic groups to allocate more public resources to co-ethnic groups;

#### 2.1. Descriptive vs substantive representation

In a democracy, where citizens of a state vote to elect representatives to create laws and policy on behalf of them, appropriate representation of different groups population in the government may help mitigating the problems involved with the presence of diversity, if any. In this respect, the literature makes a distinction between descriptive and substantive representation. The main difference between descriptive and substantive representation (which are the two most important forms of representation witnessed in indirect democracy) is that in descriptive representation, representatives have similar backgrounds to the people they represent, whereas, in substantive representation, representatives focus on the issues of a particular group.

The translation of descriptive representation into substantive representation requires certain preconditions (Bratton and Ray, 2002: 430). First, there should be differences in group interests among the mass public – such differences in interests are necessary for their representation at elite level because if groups do not have any interests that are likely to be affected by public policy, then descriptive representation of such groups will not lead to anything substantive. Second, there must be representatives of different groups, such as sexes or ethnic groups, in the representative bodies. Third, any representative bodies should have control over policy outcomes which may be of interest to a particular group.

Some studies also highlight the link between descriptive and substantive representation. Mansbridge (1999) argued that disadvantaged groups gain advantages from descriptive representation in many contexts. In environments characterised by group mistrust and unarticulated interests, the better communication and experience of descriptive representatives enhances their substantive representation of the group's interests by improving the quality of deliberation. In contexts of historical political subordination suggesting inability to rule, descriptive representation helps to overcome that, and increases the attachment to the polity of members of the group. This link could also be attributed to the differing electoral incentives of politicians (e.g., Canon 1999; Grose 2011, 30-37)—for example, black politicians who find it difficult to win support from white voters might promote the interests of blacks to a greater extent merely for strategic reasons. Both these angles typically lead to the same predictions.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> Broockman (2013) conducts a field experiment demonstrating that black politicians are more intrinsically motivated to advance blacks' interests than are their counterparts, which draws on interviews conducted with legislators who represent black-minority districts. The author e-mailed 6,928 U.S. state legislators from an ostensibly black alias, asking for help filing for unemployment

Hanni (2017) contends that many ethnic minorities demand (adequate) descriptive representation in parliament because they expect it to affect the responsiveness of governments towards their demands. It is argued that such representation has a discernible effect if representatives possess additional leverage to influence policy outcomes. Using hierarchical time series models from 88 minority groups in 47 multi-ethnic democracies, it is shown that descriptive representatives are most successful in influencing policy outcomes if they are included in the government, the legislature is powerful, and a group is comparatively large. Works by Haynie (2001) and others have found that black legislators in the US are able to place more policies important to black constituents on their state's legislative agendas. Using US state-level data, Preuhs (2007) shows that Latinos (the fastest-growing ethnic minority group) gain from their descriptive representation in terms of welfare spending effort, generosity and benefits.

Saalfeld and Bischof (2013) observe that although Black, Asian and minority ethnic (BAME) citizens are under-represented in the UK House of Commons, its ethnic composition reflected the general population more after the 2005 and 2010 parliamentary elections. They test the hypothesis that BAME MPs will ask at parliamentary questions (PQ) more questions on the rights and problems of ethnic minorities in the UK than non-minority MPs. The authors show, based on the content analysis of over 26,000 PQs tabled in the 2005–10 Parliament and the Parliament elected in May 2010, that the number of such questions a BAME MP is predicted to ask was nearly six (5.91) times higher than the number predicted for an MP from the (White) ethnic majority at the 1% level of significance. Those MPs also ask more PQs about immigration issues than a matching sample of non-minority MPs. Hence, measures to boost the proportionality of descriptive representation are expected to make a difference for the way minority interests are articulated in Parliament.

At the local level, it has been found that when school administrations become more diverse, the performances of minority students within the school improve (Meier and England, 1984; Meier and Stewart, 1991; Wong, 1999), which demonstrates that with an increase in descriptive representation, more African Americans and Latinos sitting on school boards are followed by a change in outcomes like improved educational performance by African-American and Latino students. Bratton and Ray's (2002) showed how the growth of women's representation at the municipal level was associated with a subsequent increase in the level of local authority childcare provision in Norway. The relationship, they argue, was a direct result of the growth of female representation of women and childcare provision is not linear. The impact of women's representation on this policy declined over time, which was not a function of any backlash against 'women's policies', but rather indicative of the trend that policies that may arise from descriptive representation later become 'mainstream', thus seemingly lessening the impact of enhanced representation on this policy. Ueda (2008) exploits two instances of 'exogenous shocks' that led to large increases in the number of African-American legislators to test the relationship between descriptive and substantive representation. By examining

benefits. Crucially, he varied the legislators' political incentive to respond by randomizing whether the sender purported to live within or far from each legislator's district. Black legislators typically continued to respond even when doing so promised little political reward (although non-black legislators were markedly less likely to do the same), and so black legislators appeared substantially more intrinsically motivated to advance blacks' interests.

the school district-level data from the 1970s through the late 1990s across the United States, the paper finds statistically robust evidence that the political representation of African-Americans is associated with a more equitable allocation of state aid to school districts, which suggests that representation of traditionally underrepresented groups can lead to tangible changes in public policy. The results are robust to controls for the effects of other political and demographic factors. Some Indian studies have also shown the benefits of political reservations of SC/ST (Pande 2003) as well as women (Chattopadhyay and Duflo 2004).

While descriptive representation often leads to better outcomes, many normative theorists are sceptical as regards the merits of descriptive representation. For example, while black representation has increased in Congress due to the creation of black-majority districts, in several papers it is suggested that black legislative policy influence has declined (Swain, 1995; Cameron *et al.*, 1996; Lublin, 1997; among others). As Cameron *et al.* (1996) contend, higher concentration of blacks in majority-minority districts could strengthen Republican prospects in neighbouring districts (as the elected representatives may be unsympathetic to minority concerns): so, the result could be a Congress with more minorities but fewer total members that support policies that many minority representatives promote. Lublin (1997) examined black congressional voting patterns from 1961-1995 to find that black members of Congress were consistently more liberal than white members, regardless of party or region.<sup>3</sup>

Beach and Jones (2017) analyse the extent to which ethnic diversity within city councils in California between 2005 and 2011 affect public spending – thereby focusing on the composition of a governmental body – by implementing a regression discontinuity design that enables them to measure the extent to which these random shocks to diversity affect such spending. Their results indicate that diversity in the council leads to "gridlock", whereby the extent of spending on public goods - rather than public goods provision - decreases as the city councils become more diverse. The decline in spending is largest in cities with high levels of segregation.<sup>4</sup>

Evidence suggesting the impact of legislator identity on policy outcomes arising from a more diverse representative body is relatively rare in the UK and suggests some mixed results. Smith and Stephenson (2005), who study the effectiveness of institutions that were designed in Birmingham to engage black and ethnic minority groups, where nine ethnicity and faith-based umbrella groups (UGs) were created by 1993, show that rather than indulging in cross-community working, there was a competition for resources which led to the different UGs generally maximising their own interests (which tended to reinforce racial divisions) – this, unfortunately, does not conform to the belief that the inclusion of representatives from oppressed communities within the decision-making process automatically leads to greater social justice. That descriptive female gender did not provide support for women's substantive interests was echoed also by Schlozman and Mansbridge (1979). In the context of India, Ghosh and Pal (2012) document that minority representation fails

<sup>&</sup>lt;sup>3</sup> Owens (2005) observes that in many US states, the percentage of black legislators have doubled over the past 30 years, but in spite of this, recent studies were unable to detect any increase in black influence over legislative outputs. Nelson (1991) found that state differences in black legislative representation had no influence over per capita expenditures for education, welfare, mental health and hospitals.

<sup>[&</sup>lt;sup>4</sup> In such cities, the physical location of local public goods is often a source of ethnic disagreement (even if there is no other disagreement over the type of public good offered).]

to improve public spending on education to help their cohorts, as they compete with landed and capitalist elite at the state level.

#### 2.2. Immigration and public policy

While the literature in this respect is rather sparse, there are some recent studies on how public policy is influenced in the presence of immigration and how it may operate through the cultural background of immigrants.

Preston (2014) contends that immigrants differ from natives in demographic type, in skills and in customs, and consequently pay different taxes and impose differently on public services. The sensitivity of public expenditure to immigration will vary depending upon the composition of public spending, and, in particular, on its redistributive aspects and on the extent of rivalry in consumption. Immigration not only has the potential to generate costs through the consumption of public services by immigrants themselves but can also affect the costliness of provision to natives.

Dahlberg et al. (2012) used data from Sweden that has experienced a dramatic increase in the share of the population originating from a non-OECD country since the 1970s. By combining two data sources covering the period 1985–94, they find that an increasing share of immigrants leads to lower preferred levels of social benefits. This negative effect on preferences for redistribution is especially pronounced for individuals in the upper tail of the income and wealth distributions. Placebo analyses support a causal interpretation of the obtained results. They conclude that native Swedes become less altruistic when the share of non-OECD citizens increases.

The paper by Luttmer and Singhal (2011) provides evidence on the effect of culture on preferences for income redistribution by examining the determinants of preferences among immigrants across 32 countries. Their main findings are that immigrants born in a country with a high preference for redistribution tend to have higher preferences for redistribution than the natives of the countries in which they reside. Cultural determinants of preferences for redistribution appear to be strongly persistent across generations. In a similar vein, Giuliano and Tabellini (2020) argue that cultural transmission took place from immigrants to the nativeborn, as European immigrants brought with them their preferences for redistribution and the welfare state, which in turn were transmitted to individuals born in the US and shaped their political ideology. They find that higher exposure to social welfare reforms in the immigrants' countries of origin is predictive of stronger preferences for redistribution and a more liberal ideology today. Their results are shown to be stronger when inter-group contact between natives and immigrants, measured with either intermarriage or residential integration, was higher.

## 2.3. Research questions: Integration of immigrants via descriptive and substantive representation

Unfortunately, there is very little systematic and comprehensive review of immigrant and ethnic minority representation in local, regional and national political bodies, especially in Europe. Political organisations, beyond parliaments, are under-researched territory in Europe, especially concerning immigrant and ethnic minority political involvement at the local level and this happens despite the growing importance of the topic. This motivates us to examine the process and impact of the minority representation in selected English councils. Although it is well-understood by now that diverse representation (via the election, for example, of ethnic minorities and women) has influenced the politics of many developed countries (for example, the US in the post-civil rights era), the policy demonstrable impact of such representation has not been examined in any great detail for the UK and Europe in general. Further many of these existing studies do not perform any quantitative analysis of the economic outcomes of their policy agenda (e.g., see Fraga *et al.* (2006)), and this is very much the cornerstone and original contribution of our study.

As indicated in the previous sections, significant parts of the political science literature suggest that when legislators share key traits with their constituents, the needs and interests of constituents are specifically emphasised and addressed by their elected officials - see, for example Pitkin (1967), Williams (1998), Tate (2003). The under-representation of a particular group, however, means that its views are likely to be stifled, thus justifying the need for descriptive representation. With substantive representation, the representation of specific stances on policy is of higher importance than the simple echoing of demographic attributes, because individuals generally vote with their policy stance in mind. Phillips (1995) further suggests that descriptive representation is most likely to lead to interests being realized in the course of deliberation, decision-making and implementation, thus linking descriptive representation to substantive representation on substantive representation can, however, be found in Bratton and Ray's (2002) study of municipal government in Norway. They show how the growth of women's representation at municipal level was associated with a subsequent increase in the level of local authority childcare provision. The relationship, they argue, was a direct result of the growth of female representatives on councils though the effect declined over time.

Much of the relevant literature (mainly from the US) highlights the importance of political representation of the minority population in the legislature (see, for example Cameron *et al.*, 1996, Hero and Preuhs, 2007). In particular, Hanni (2017) argued that minority representation has a discernible effect if representatives possess additional leverage to influence policy outcomes. Using hierarchical time series models from 88 minority groups in 47 multi-ethnic democracies, he argued that descriptive representatives are most successful in influencing policy outcomes if they are included in the government, the legislature is powerful, and a group is comparatively large. But as Cameron *et al.* (1996) contend, it is unclear that creation of concentrated minority districts (i.e., "majority-minority" districts, with a majority of minority voters) necessarily further minority interests, as outside of such districts the elected representatives may be unsympathetic to minority concerns. Further, some normative theorists tend to disagree with this link between descriptive and substantive representation (see discussion in Section 2.2). As such the existing literature in

this respect remain mixed, necessitating more in-depth quantitative analysis for identifying the causal effects of minority representation on public policy.

Accordingly, we identify the nature and impact of minority representation, both descriptive and substantive representations, at the local level for selected English councils that remains little understood. We start by examining the aspect of descriptive representation of ethnic minorities, i.e., to what extent, ethnic minority candidates are expected to win against native candidates at the local level and how it is changing over time. Peaceful existence of Britain's multicultural community necessitates a shared recognition of religious and cultural differences as a basis for social cohesion. The key to ensuring this social cohesion is that a society united on multicultural values will include minorities on an equal footing. In contrast, in the absence of social cohesion, one might just expect a non-EM councillor to win as the voters are distrustful in general and particularly so of ethnic minorities/immigrants.

Second, we examine whether descriptive representation of ethnic minorities lead to substantive representation too in terms of their influence of local public policies. The underlying idea is that <u>i</u>mmigrant's interests are better represented by politicians of immigrant origin. Following the literature, we also explore the conditions under which descriptive representation leads to substantive representation of ethnic minorities:

- Size of elected representatives of minority origin
- Whether election of ethnic minority candidates is backed by ethnic minority population shares
- ➢ Whether ethnic minority councillor is not an incumbent
- ➢ Whether the leader of the council is of ethnic minority origin
- > Whether ethnic minority councillors are in the ruling government

We use the data at our disposal to examine these issues.

## 1. Data description

## **UK Immigration History**

The United Kingdom is a diverse nation. Following the Second World War, the country experienced a substantial influx of immigrants that transformed the demographic makeup of its population. The immigration primarily originated from South Asian, African, and Caribbean countries as part of the post-war New Commonwealth immigration. During the 1960s and 1970s, there was a perceived cultural divide between these immigrant groups and the host society, despite sharing a language and historical ties. Their presence in Britain was particularly noticeable in a predominantly white society. It is now acknowledged that there was widespread racial discrimination during the post-war period, which impeded integration efforts and influenced how neighbourhoods were perceived by the broader society. In many instances, the presence of minority individuals presented challenges to the established practices and understandings of the dominant ethnic group.

Liberal multicultural democracy is founded on the principle of equal treatment for all ethnic groups in political matters and seeks to protect individuals belonging to minority groups. The multicultural character of

the United Kingdom was enhanced by the enactment of the British Nationality Act in 1948, which facilitated immigration from the British Empire and the Commonwealth. Up until 1962, the UK had a history of maintaining close ties with the Commonwealth and had few significant restrictions on immigration. However, the Labour party, which assumed power in 1964, introduced measures to tighten external immigration due to growing concerns about racial tensions within the country.

The Labour government of 1997 adopted a divided approach to British multiculturalism, focusing on fostering a sense of community and citizenship while also implementing devolved governance. In 2000, the publication of the Future of Multi-Ethnic Britain report received negative media coverage and prompted a reassessment of multiculturalism policies in the UK. The subsequent New Labour government emphasized the importance of minority individuals assimilating into British traditions and values, which led to the introduction of stricter immigration laws and a new nationality examination.

In recent years, there has been an increase in public apprehension about the perceived threat posed to British identity by immigration. This sentiment has bolstered resistance against multicultural government policies.<sup>5</sup> However, the growing fear did not stop the steady flow of immigrants arriving in the UK. Between 1995 and 2015, the number of immigrants from other EU countries living in the UK rose from 0.9 million to 3.3 million (see Appendix 1 Figure A1). Empirical evidence from Ipsos-MORI (2014) observed 74% of UK citizens regard immigration as a 'problem' and 64% of UK citizens perceived there to be 'too many' immigrants within the population of the UK. It should be noted that anti-immigration opinions are not isolated to the UK; many European countries and their citizens exhibit anti-immigration beliefs to a degree (Card et al., 2005).

### **Unit of Analysis**

Researchers investigating this matter face a crucial challenge in determining the appropriate geographical indicators to utilize (Saggar, 2012). Determining the optimal approach involves balancing two considerations. Firstly, understanding the effects of migration on social cohesion and integration necessitates considering national or regional levels. This is because people's attitudes may be influenced not only by direct experiences with immigration but also by their perception of increasing immigration. For instance, individuals living near diverse neighborhoods tend to show greater support for the BNP (British National Party) compared to those residing in ethnically diverse areas (Biggs and Knauss, 2011). Secondly, using finer geographical divisions provides a more accurate representation of individuals' daily social environment, allowing for a better understanding of the impact of migration on their lives. Additionally, it enables a more precise analysis of diverse migration effects by capturing significant variations in the level and pattern of movement.

Several studies on societal cohesion have determined that the community level is the most appropriate for examining cohesion aspects (Kearns and Forrest, 2000). Local areas, such as local communities, are

<sup>&</sup>lt;sup>5</sup> A study by Wadsworth (2016) observed that many people are worried about the growing level of immigration into the country and believe that this immigration has already impacted their quality of life, wages and UK job prospects.

regarded as spaces where individuals achieve specific well-being and quality of life objectives (Saggar et al., 2012). Consequently, studying these natural environments is relevant when analyzing social cohesion. Furthermore, since local authorities possess significant political powers over areas that can influence social cohesion, it is logical to focus on this community level (Atkinson, Cantillion, Marlier and Nolan, 2002). These substantial powers encompass various domains such as education and training, housing matters, urban planning, cultural and social affairs, and others (Deschouwer, 2009).

The organization of local government in England differs from one area to another. In certain regions, there are two levels of government – county and district – which share the responsibility for providing council services. The county council holds the authority to make decisions regarding social integration. On the other hand, London, along with other metropolitan areas and some other parts of England, follows a single-tier structure, where the councils are accountable for all services within their respective areas, including social integration. For our analysis of the first objective, we concentrate on the London boroughs, as well as the metropolitan councils in western England and Greater Manchester, all of which fall under the single-tier category. However, when examining the second objective, we include all single-tier councils, such as unitary authorities, metropolitan districts, London Boroughs, and the City of London.

## 3.1. Data Sources

In order to empirically examine the validity of our central hypothesis: whether greater representation of ethnic minority councillors cater to their cohort we collect data from various official sources of data. Firstly, we get election data for 2002-2018 from the local government websites. In particular, we collect data on elected councillors including their name, gender, ethnicity, party affiliation and the share of votes they won their seat by. We focus on local government elections to London Boroughs, West Midlands Districts and Greater Manchester councils since these areas are the main hubs of ethnic minority population in the UK.

The Census provides information on social demographics at a council level also - this allows us to construct council-level variables pertaining to council's socio-demographic and economic characteristics including population density, share of females in the population, share of individuals who own a car, share of individuals with a university degree and also the share of the population who are currently employed.

Second, we collect data from the Ministry of Housing and Communities each council's expenditure on numerous services. We particularly focus on spending which promotes social inclusion within council such as education, transport, housing, social care and cultural services as well as police spending. There are many reasons why spending needs for councils could differ. These include: socio-economic disparities (councils facing higher level of deprivation and social disadvantage may have higher demands for costly social services); differences in population size (councils that must provide services to more people will generally face higher overall costs); differences in input costs (councils, where labour property costs are higher, may need to spend more per unit of services). Note that the allocation of funding from central government is based on a relative need formula, using measures of population and sparsity; the daytime working population and the number of day visitors to the council relative to the number of residents; the proportion of the population in receipt of specific benefits - this includes severe disablement allowance, incapacity benefit, income benefit, income-based jobseekers allowance pension credit or other unemployment benefits; the proportion of the population born outside the UK.

## **3.2. Variable description**

## Outcome variables

At the first stage, we consider the election of an ethnic minority candidate against a native one, that substantiates the aspect of descriptive representation of ethnic minorities in multicultural Britain. For testing the substantive representation of ethnic minorities, our outcome variables pertain to various local government spending shares, which may promote social cohesion and integration of diverse population groups. Integration as a theory is about identifying and measuring ethnic, racial and religious dissimilarities, how society is structured around such dissimilarities, and how social relations evolve over time to reinforce or dilute the effects of such dissimilarities. A number of policy measures that focus on social integration include the expansion of human rights and equalities legislation; a formal refugee integration strategy; community cohesion strategy (2001-2010); elements of counter terrorism strategy post-2005; citizenship policy and legislation; and additional funding programmed for minorities (Saggar and Somerville, 2012; Somerville, 2007). Measures used in previous research on integration in society can be categorised into three groups (Saggar and Somerville, 2012). Firstly, measures based on national identity which focus on Britishness or ways of national life (including feelings of belonging. The second category of measures are the cohesion in local neighbourhoods relate to how people felt about their local community, whether people showed each other respect and how far people felt they lived in a safe and contented place. Finally, there are group measures of integration in which immigrants themselves live, as a religious or ethnic group that range from employment rates, unemployment rates, levels of underemployment, earnings, health outcomes, quality of housing etc. We instead focus on the role of minority representation on selected local public spending shares that promotes social cohesion and integration. It is about enabling everyone to participate in society fully. Social exclusion is a phenomenon where particular people have no voice or stake within the society in which they live. The causes of social exclusion are connected to influences affecting a person's or community's social or economic circumstances where the effect prevents people from participating fully in society. To this end, we consider spending shares on education, culture, transport, housing and social care. We also create the following aggregate spending shares as follows:

Edu\_trans\_cul = Education + Transport +Culture

Soc\_house\_cul = Social Care + Housing

Allspending= Education + Transport +Culture+ Social Care + Housing

While spending on education, culture and transport are key for education, training for jobs and productivity promoting economic integration, spending on social care and housing are essential for socio-cultural integration.

## Key explanatory variable

One of our objectives is to assess the role of minority representation on local public spending promoting social inclusion. As such, the key explanatory variable is the ethnicity of the winner vis-à-vis the runner up for each council seat. To determine the ethnic minority status of winners and runners-up, we utilized Namsor (https://www.namsor.com/), a software tool that accurately classifies personal names based on gender, country of origin, and ethnicity. We took extra precautions by cross-referencing the Namsor classification with visual examination. Any councillor names that were identified as non-British European or non-European were considered to belong to individuals of ethnic minority origin.<sup>6</sup> Considering the five election cycles 2002, 2006, 2010, 2014 and 2018, 19.38% candidates have been identified as of ethnic minority origin defined in this way. We do the same for the ethnic identity of the runner-up candidate in each council in each election year and find that about 18.3% of the runner up candidates are of ethnic minority. Accordingly, we determine whether an ethnic minority candidate winning against an ethnic minority candidate (nonEM\_EM) as binary variables. This creates the baseline sample where an ethnic minority candidate may win or lose against a native one.

### Other controls

Among other variables, we consider ethnic minority population share,<sup>7</sup> university educated population share, car owning population share and also if the council is in the city centre. Additionally, we also make use of some election information, e.g., if it is an election year, if the mayor is of ethnic minority origin and whether the councillor is an incumbent or not.

\*\*\*Insert Table 1 about here \*\*\*

Table 1 reports the summary statistics of various spending shares used in this analysis.

Table 2 tests for differences in group means of selected variables of councils with and without ethnic minority councillors.

\*\*\*Insert Table 2 about here \*\*\*

Areas that elected ethnic minority councillors had, on average, significantly higher total spending shares. The following rows in the same column further reveal that areas governed by ethnic minority councillors were wealthier, more educated and more ethnically fragmented, thus highlighting the close association between

<sup>&</sup>lt;sup>6</sup>We also experimented with a second software Naam Pahechan which only classifies south Asian names from non-south Asian names and hence we preferred to use Nam Shor for our purpose as the latter allowed us to identify various European names as well.

<sup>&</sup>lt;sup>7</sup> We use the share of people speaking different languages from the Census data to define the ethnic minority population shares as those speaking non-English languages. We also use the same information to define the share of non-English speaking Commonwealth languages. It is important to distinguish the Commonwealth population as they have the voting rights, unlike the other ethnic groups living in England.

local demographics and election of ethnic minority councillors. Although informative of difference between ethnic minority and native councillors being elected in an area, this does not establish whether differences represent causal effects of the ethnic minority elected official.

#### Trend in ethnic minority councillors winning

Councillors of ethnic minority origin won on average 18 percent of seats over the 12-year time period in the full sample. However, we get a more heterogeneous picture when we focus on the three selected cities individually over these five election cycles.

Comparing the trends in ethnic minority councillors in the three selected cities, it is evident that the share of ethnic minority councillors has been increasing steeply in both London and Greater Manchester, especially from 2010 onwards. The West midlands behaves somewhat differently where the share increased around 2005, but remained stable between 2005-2015 and then it increased steeply after 2015. However, on average, the ethnic minority councillor shares are comparable (around 0.27 or so) in London and west midlands in recent years while greater Manchester seem to have much lower (around 0.15) share in this respect. The aggregate picture for cities taken together resembles that of London approximately which has greater ethnic representation than the other two cities in our sample.

In order to determine what drives the increase in ethnic minority councillors over time we examine its link respectively with ethnic minority population share and the Commonwealth population share. It is important to distinguish Commonwealth population share separately from all ethnic minority population share in our sample because the former (unlike the European immigrants) has the right to vote at all levels of governments and hence may have a more significant effect on the likelihood of ethnic minority councillors winning. Post-war new Commonwealth immigration derived mainly from South Asian, African and Caribbean countries. We use Census information to define commonwealth population shares variable by commonwealth nationality (as share of total population of the council). Figure 2 shows two local polynominal fit regressions of (i) ethnic population share against winnerethnicminority on the left and (ii) Commonealth population share against winnerethnicminority on the right in the full sample. Evidently, the likelihood of an ethnic minority councillor winning is a strong positive function of ethnic minority population share in our sample and undoubtedly it is more so when we consider Commonwealth population share. We would argue that the latter reflects the voting power of the Commonwealth population.

#### 4. Empirical Strategy

The main problem of comparing the councils that chooses an ethnic minority candidate as opposed to a native one is that the assignment of candidates by ethnicity is unlikely to be random. For example, councils most likely to elect an ethnic minority candidate may also be those where local government spending differs for other reasons including shares of ethnic minority population. Such unobserved factors could then lead to strategic differences in spending as well as an elected official of ethnic minority origin. Therefore estimates from standard OLS regression analysis are likely to be biased. We employ a regression discontinuity (RD) design around close elections (with winning margin 0) to resolve this potential endogeneity concern.

### The RD Design

Regression discontinuity design is an important quasi-experimental method for estimating treatment effects. The RD design (Hahn, Todd and Van de Klaauw (2001), Imbens and Lemieux (2008)) exploits a discontinuity in the treatment assignment to identify a causal effect. In this design, units receive treatment on the basis of whether their value of an observed covariate is above or below a known cut-off. The key feature of the design is that the probability of receiving the treatment, conditional on this covariate, jumps discontinuously at the cut-off, inducing "variation" in treatment assignment that is assumed to be unrelated to potential confounders. In our context, the election of an ethnic minority candidate against a non-ethnic minority one in a close election is likely to be random around the cut-off of 0 voting margin. In particular, we assume that the treatment assignment, m<sub>it</sub>, for the i-th councillor in t-th election is determined solely based on a cut off score, c, on an observed forcing variable, xi. We take the forcing variable x to be the winning margin for an ethnic minority councillor relative to a non-ethnic minority councillor and the cut-off c = 0 as we consider close elections. The councillors that fall below the cut off (c = 0), constitute the control group (mi = 0) where a native candidate wins against an ethnic minority candidate. Those above the cut-off, the treatment group (mi =1), are the ones where an ethnic minority candidate wins against a native candidate. The assignment follows a known deterministic rule, mi = 1 { xi  $\ge$  c}, where 1{•} is the indicator function. Accordingly, we consider the following specification for estimating the RD treatment effect of selected local spending shares Y<sub>it</sub> of the i-th council in t-th election cycle:

## (Equation 1) $Yi = \alpha + \beta m_i + f(xi) + \varepsilon i V xi \varepsilon (c - h, c + h)fd$

Where  $Y_i$  is the outcome in question and h is the neighbourhood around the cut-off c, hereby referred to as the bandwidth. In our case  $Y_i$  refers to the selected local spending shares. The control function  $f(x_i)$  is some continuous function, usually a n-th degree polynomial in the forcing variable on each side – we try polynomials of degree 1, 2, 3. We run Equation (1) for the full sample involving all election cycles and also for individual election cycle for individual cities as well as for all cities taken together.

Previous research has used variations of Equation 1 with different bandwidths and control functions. At one end, Angrist and Lavy (1999) had used a discontinuity sample to compare means on each side by only using observations arbitrary close to the cut-off (i.e., setting a low h and excluding f(xi) altogether). This method, although simple and straightforward, can be demanding if the number of observations is limited, and could result in noisy estimates. At the other end of the spectrum, Lee, Moretti, and Butler (2004) included all observations (setting h high) and defined a higher-order polynomial in the control function. While this method makes full use of the data available, it puts equal weight on observations far from the cut-off, which is intuitively not very appealing and relies on the correct specification of f(xi).

Local linear regression (Hann, Todd, and Van der Klaauw (2001), Porter (2003), Imbens and Lemieux (2008)) combine a setting a suitable bandwidth with a linear control function. We use the robust RD estimation method proposed by Calonico, Cattaneo and Titunik (2014b) that implements the bias-corrected inference procedure proposed by Calonico, Cattaneo, and Titunik (2014a). The advantage here is that these estimates are robust to "large" bandwidth choices. We also attach higher weights to our observations closer to the cut-off, which is common in the literature.

#### **Our context:**

Close elections are defined as those in which the winner and the runner up are of opposite ethnicity and the margin of victory is so small (very close to the cut-off margin 0) that the ethnic identity of the winner of a close election turns out to be quasi-random. To see this, the probability of being elected is a function of the vote difference between the winner and the runner-up and this function has a discontinuity at zero. As the vote difference approaches the discontinuity, constituencies in which an ethnic minority councillor wins by a small vote margin are increasingly similar to constituencies in which a native individual wins by a small margin (Lee 2001; Pettersson-Lidbom 2001).

Since all local council elections are determined by plurality, the treatment –election of an ethnic minority candidate – is an indicator variable taking the value 1 if the ethnic minority councillor has more votes than any councillor of non-ethnic minority origin. The forcing variable used in the RD design is defined as the difference in vote share between an ethnic minority winning against a native candidate and a native candidate wining against an ethnic minority candidate, resulting in a cut-off point at zero. Consequently, the ethnic minority candidate indicator is equal to 1 when this measure, hereby labelled as margin, is positive and zero when it is negative. Each council area will have a value of margin anywhere between -1 and 1. We start by choosing winning margins 1%, 3% and 5% as possible close election winning margins and explore which one of these close margins is held up by our data. We also check the robustness of these results by calculating the optimal bandwidth from our data as proposed by Calonico, Cattaneo and Titunik (2014b).

Figure 3 shows multiple plots of the share of seats in the council won by ethnic minority candidates (against a native candidate) against selected winning margins (1%, 3% and 5%) of victory between the ethnic minority and non-ethnic minority candidate. Note that a positive (negative) winning margin means that an ethnic (non-ethnic) minority candidate has won against a non-ethnic (ethnic) minority candidate. We plot a lowess smoothing line on each side of the winning margin with a discontinuity at 0 in each panel for each chosen winning margin of 1%, 3% and 5% respectively using linear, quadratic and cubic polynomials. While there is no discrete jump in the likelihood of an ethnic minority candidate winning margin 3% and 5% irrespective of the choice of the polynomial. These indicate that an ethnic minority candidate is winning a close election in a council area, which in turn increases the share of seats won by ethnic minority politicians

in that council at 3% and 5% margins, but not at 1%. This is the first evidence of descriptive representation of ethnic minority candidates.

### 4.1. Validity of the RD design

A useful attribute of the RD design applied to English councils is that voter fragmentation across different candidates up for election leads to close elections over a wide range of underlying seats for ethnic minority councillors. This is tested in Figure 4, which shows the ethnic minority winning margin (the difference between the vote share for an ethnic minority candidate and the runner up, a native one) against ethnic minority seat share. Observations within 2 percentage points of the winning margin threshold at zero are in red. The diagonal line is the hypothetical one-to-one relationship between the two variables. Observations close to the horizontal line marking the winning margin cut-off around 0 vary from just under 2 percent (with votes split across many individuals up for election) up to 50% (with votes more concentrated across fewer individuals up for election) of the total votes cast for an ethnic minority candidate. The RD treatment effect is thus not singular to a specific preference point, but representative of a more heterogeneous constellation of political circumstances. This has the additional benefits that a core assumption of the design – that ethnic minority preferences are continuous over the threshold – can be explicitly validated.

Second, we conduct the standard validity checks (Imbens and Lemuix (2008)), i.e., whether the discontinuity of the forcing variable, ethnic minority win margin, is continuous at the cut-off winning margin 0. Figure 5 shows a histogram of the winning margin for the entire range in bins of 2 percent, which supports the continuity of the ethnic minority winning margin on both sides of the cut-off 0.

Nonparametric identification of the RD treatment effect typically relies on continuity assumptions, which motivate nonparametric local polynomial methods tailored to flexibly approximate, above and below the cut-off, the unknown conditional mean function of the outcome variable given the score. So, we examine the balancing of selected covariates, used in regressions, at the discontinuity. Each panel in Figure 6 consists of local averages of the outcome, in 8-percent bins, plotted against the forcing variable (winning margin), with overlaid smoother linear regression lines based on raw data on each side of the cut-off 0. In particular, each panel in Figure 6 pertains to the selected covariates as follows: ethnic minority population share, ethnic fractionalisation index, wealth index, population share owning cars, population share with a university qualification, voter turnout (share). First six panels of Figure 6 use linear specification while the next six panels use quadratic specification. Each dot corresponds to the unconditional means in bins of 8 percent by the ethnic minority win margin in elections. The solid line represents the predicted values of a local linear smoother estimated using raw data on each side of the threshold at zero. The grey bars represent 95 percent confidence intervals. Overall, these figures indicate that each of these covariates are balanced on both sides of the discontinuity at c=0.

Finally, Figure 7 tests the balancing for the outcome variables, i.e., selected expenditure shares, around the cut-off c=0. The Figure plots the local averages of local government spending shares against ethnic

minority win margin for the full sample (2002-2018). The top three panels show the RD plots for shares of total spending on (i) education and transport, (ii) social care, housing and culture and (iii) the sum total of (i) and (ii) using linear specification. The bottom panels show the same using quadratic specification. In each panel, a local linear smoother is overlaid using raw (e.g., unbinned) data on each side of the cut-off 0. The black vertical line marks the cut-off at zero. The solid black lines represent the predicted lines from the local linear smoothers estimated using raw data on each side of the discontinuity at winning margin cut-off at 0. The grey bars mark the 95 percent confidence intervals in each panel. These figures confirm that the distribution of various spending shares is balanced around the cut-off c=0, thus enabling us to proceed with the robust RD estimates (a la Cattaneo et al. 2017).

## 4.2. Likelihood of an ethnic minority candidate winning - test of descriptive representation

First stage of our analysis is to examine the likelihood of an ethnic minority candidate winning against a nonethnic minority candidate as summarised in Table 3. Results with winning margin 3% are summarised in columns (1)-(4) while the corresponding results with winning margin 5% are summarised in columns (5)-(8) respectively for no polynomial, linear, quadratic and cubic polynomials.

## \*\*\*Insert Table 3 about here \*\*\*

Column 1 does not have any control variables, columns 2-4 respectively control for linear, quadratic and cubit polynomials; column 3 controls for CitycentrexElectionyear dummies and column 4 controls for additional covariates: ethnic minority population share, ethnic fractionalisation index, car ownership share and population share with any university qualification. Each column uses robust standard errors clustered at the council level. T-statistics are reported in the parentheses. Ceteris paribus, both winning margin variables, *wm3* (at 3%) and *wm5* (at 5%), are statistically significant in all columns (1) -(8) of Table 3, independent of choice of bandwidths (3% or 5%) and polynomials. The size of the coefficient for wm3 and wm5 are quite comparable too, varying between 0.117-0.130 across columns, indicating a statistically significant and positive correspondence between each winning margin threshold and the election of an ethnic minority candidate winning against a native one at close margin (3% or 5%) is indicative of a process of social integration in operation.

#### 4.3. RD robust estimates of local spending shares – Test of substantive representation

Now we shall analyse the evidence of substantive representation as we consider the RD robust estimates of ethnic minority representation on various spending shares in close elections. We start by using the full sample estimates for all cities taken together over 2002-18.

#### 4.3.1. 2002-18 estimates

We follow Calonico, Cattaneo, and Titiunik (2014) that uses local polynomial regression-discontinuity (RD) point estimators with robust bias-corrected confidence intervals. This method produces the treatment effects of having an ethnic minority councillor winning against a non-ethnic minority candidate in close elections with and without control for other covariates. Table 4 summarises the RD treatment effects of ethnic minority councillors winning against a non-ethnic minority candidate in close elections for the selected expenditure share variables on education, transport, social care, housing and culture over 2002-18. For each outcome variable, we obtain three sets of estimates: i) conventional RD estimates with a conventional variance estimator (labelled convetional); ii) bias-corrected RD estimates with a conventional variance estimator (labelled bias-corrected); and iii) bias-corrected RD estimates with a robust variance estimator (labelled robust). As per our argument above, robust estimates (iii) remain our preferred method though these estimates turn out to be rather close to bias-corrected ones in most cases. We experiment with various bandwidths (0.03, 0.05 as well as optimal bandwidth calculated from the sample);<sup>8</sup> we also apply polynomials of degree 1, 2, and 3 for each outcome.

#### \*\*\*Insert Table 4 about here\*\*\*

Panel a of Table 4 shows the estimates with bandwidth 0.03, panel b shows those with bandwidth 0.05, while panel c shows those with optimal bandwidth. For each spending shares, we show estimates using polynomials of degree 1, 2 and 3. Evidently, most treatment effects remain statistically insignificant across all columns and all panels. The only exception is that related to transport spending shares. In this case, the treatment effect is negative and significant using polynomial of degree one only; the corresponding effects using polynomials of degree 2 and 3 turn out to be statistically insignificant. The size of this treatment effect when significant is around 0.01, indicating that councils electing an EM candidate against a native one tend to have 1% lower transport spending share relative to those electing a non-EM candidate against an EM candidate. Treatment effects remain statistically insignificant for all other outcome variables. In other words, the impact of the EM councillors on selected expenditure shares remains rather weak over 2002-18 and we attribute this to the low share of EM councillors in our sample until 2010 (also see Figure 1).

#### 4.3.2. 2010-18 estimates of individual spending shares

Next we consider the robust estimates of having an EM councillor winning against a non-EM candidate for the subsample 2010-18, a period marked a significant increase in minority representation (a la Figure 1). These estimates are summarised in Table 5. Panel a shows the estimates with bandwidth 3%, panel b shows those with bandwidth 5% and panel c shows those with optimal bandwidth estimated as per Calonico et al. (2014).

\*\*\*Insert Table 5 about here\*\*\*

<sup>&</sup>lt;sup>8</sup> We try msetwo and msecomb1 using Stata rdrobust command. Msetwo specifies two different MSE-optimal bandwidth selectors (below and above the cutoff) for the RD treatment-effect estimator. Msecomb1 specifies min(mserd, msesum). Optimal bandwidth estimate produced by these alternative methods are comparable and lies around 0.035, which lies in between 3% and 5% winning margin that we have chosen.

As before, we focus on the robust estimates obtained using polynomials of degree 1, 2, 3. The robust treatment effects are positive and statistically significant for education spending shares in columns 1-3 irrespective of the choice of bandwidth (3%, 5%, optimal bw), thus highlighting a statistically significant and positive impact of an ethnic minority councillor (in close election against a non-ethnic candidate) on education spending share. Size of the effect is quite stable across the bandwidth choice – it is around 9% for linear polynomial and 11% for polynomials 2 and 3. Given the average education spending shares is around 0.19 over 2010-18, the estimated treatment effect of electing an EM councillor seems large.

However, the corresponding effect for transport spending shares is negative and statistically significant using linear polynomial, but turns out to be insignificant for polynomial of degree 2 and 3 in all panels a-c. In other words there is some weak evidence of a negative treatment effect of transport spending that holds only for linear polynomial and the size of the effect is rather small, around 1%. We do not find any statistically significant treatment effects for social care, housing or culture spending share.

In other words, ethnic minority councillors exert significant and positive effects on education spending shares only over 2002-18, which is an important item of the local council budget and is instrumental for promoting social cohesion.

#### 2010-18 estimates of aggregate spending shares

Next, we aggregate education, transport and culture spending shares together and label it as edu\_trans\_cul. We also aggregate spending shares on social care and housing. The underlying idea is that spending on education, transport and culture is essential for employment and productivity, spending shares on social care and housing are more likely to help the vulnerable socially. These robust estimates are summarised in Table 6.

## \*\*\*Insert Table 6 about here\*\*\*

Evidently, the presence of elected EM councillor has been associated with a significantly higher spending share education, transport and culture irrespective of the choice of bandwidth or polynomial. The corresponding effects for social care and housing is not significant although still positive.

Taken together, these robust estimates of various spending shares over 2002-18 provide some evidence of substantive representation of ethnic minority candidates too.

#### 4.3.3. Treatment effects by election cycles

Table 7 then breaks the full sample period (2002-2018) into individual election cycles, namely, 2002-2005, 2006-2009, 2010-2013, 2014-2017 and 2018. However, we are unable to obtain any estimates for the final election cycle 2018 because of limited number of observations afterwards. So we present the estimates for the first 4 election cycles in our data.

## \*\*\*Insert Table 7 here \*\*\*

Panel a shows the estimates for edu\_trans\_cul, i.e., education, transport and culture spending shares taken together. Columns 1-4 respectively show the estimates for 2002-2005, 2006-2009, 2010-2013, 2014-2017

using polynomial of degree 2 and bandwidth 3%; columns 5-8 show the corresponding estimates for these four election cycles using quadratic polynomial and optimal bandwidth generated from the data. Evidently, the treatment effects of minority representation on edu\_trans\_cul is negative and statistically significant during 2002-05, but then subsequently these treatment effects turn out to be positive from 2006 onwards; however these effects are significant only in the 4<sup>th</sup> election cycle between 2014-17. We see very similar picture when using the optimal bandwidth. The size of the treatment effects are also quite comparable – around -6% during 2002-05, which increases to about 10% in the final election cycle 2014-17.

Panel b of Table 7 shows the estimates for social care and housing spending shares taken together (soc\_housing) for the four election cycles 2002-2005, 2006-2009, 2010-2013, 2014-2017. As with edu\_trans\_cul estimates, here too the robust treatment effect is negative and significant during 2002-05, which gradually turns positive in subsequent election cycles. The effect is, however, weaker than noted for edu\_trans\_cul in panel a, which is weakly significant during 2010-13, but remains insignificant during 2014-17.

Taken together, these results indicate a growing impact of ethnic minority councillors on public spending as we move from early election cycle to later ones, especially after 2010 as minority representation increases significantly over time in our sample (see Figure 1). However, compared to education, transport and culture spending shares, that effects of ethnic minority councillors on social care and housing shares remain weaker even in the later cycles.

#### 4.3.4. Treatment effects by individual cities

We now explore the heterogeneous effects of minority representation in close elections, if any, by city/regions over 2002-18 as summarised in Table 8. Panel a shows the estimates for London while panel b shows those for Greater Manchester (GM) and West Midlands (WM) taken together. We were unable to obtain estimates for these individual regions of GM and WM because of low number of observations in each. Columns 1-4 show estimates of edu\_trans\_cul (education, transport and cultural spending shares together) and columns 5-8 show those for soc\_housing (social care and housing spending taken together). We show estimates using bandwidth 3% (cols 1-2 and 5-6) as well as optimal bandwidth (cols 3-4 and cols 7-8) respectively for 2002-18 and for 2010-2018. The estimate of the optimal bandwidth in our sample is around 0.035. All estimates use second order polynomial and use robust standard errors clustered by councils.

\*\*\*Insert Table 8 here \*\*\*

For the London region, we find significant effects of EM representation on edu\_trans\_cul taken together and these effects are positive and statistically significant only when we consider year>=2010 irrespective of the choice of bandwidth. However, the corresponding effects for soc\_housing remain statistically insignificant for all specifications as we find in the full sample. In other words, these London estimates are compatible with the full sample estimates considered earlier.

Estimates are however more significant for GM and WM regions taken together as highlighted in panel b of Table 8. Generally, the robust estimates are negative when we consider 2000-18, but positive and statistically significant for the subsample year>=2010. Unlike the London region, positive and statistically significant effects of EM representation are found not only for edu\_trans\_cul spending shares, but also for soc\_housing shares, thus highlighting some regional variation in the effects of EM representation.

#### 4.3.5. Possible Mechanisms

Overall, we observe no significant effect of EM representation for 2002-2018 or 2002-2009. Significant positive effect of EM representation on education by itself or on edu\_trans\_cul is observed for 2010-18. This is also supported by estimates by election cycles (significant effect is observed only from 2010 onwards) and regions.

What explain these results? We classify the possible explanations into two groups: (i) voter characteristics that determines the demand for local public spending on different accounts; (ii) Council/councillor characteristics that determine the supply of public spending on selected accounts. We consider each of these factors in turn.

#### Voter characteristics: Minority population share

Considering the voter characteristics, we start by examining the effects of ethnic population share. The underlying idea is to explore if EM representation is more effective to influence public spending geared towards its cohorts in areas dominated by EM population share. To this end, we classify sample councils by median value of ethnic minority (EM) population share that includes all non-English speaking population living in the sample councils. We repeat the same analysis with the Commonwealth (CW) population share. One important difference of CW population from other ethnic minority population is that they are eligible to vote at all levels of government, which makes the elected representatives more accountable to their causes.

\*\*\*Insert Table 9 here \*\*\*

Table 9 shows the treatment effects of minority representation in close elections by minority population share for 2010-18. Panel a shows the estimates for minority population share being above/below its median value (0.275699) while panel b shows the same for the Commonwealth (CW) population share. Columns 1-2 and 5-6 show estimates of edu\_trans\_cul (education, transport and cultural spending shares together) and columns 3-4 and 7-8 show those for soc\_housing (social care and housing spending taken together). We show estimates using bandwidth 3% (cols 1-4) as well as optimal bandwidth (cols 5-8).

The estimated robust treatment effect of having an elected EM representative is positive and statistically significant for spending shares on education, transport and culture (edu\_trans\_cul) in councils with above median ethnic minority population share. The opposite is true for soc\_housing spending shares: the treatment effect of having an elected EM representative is positive and statistically significant in areas

with less than median ethnic minority population share. This holds irrespective of the choice of bandwidth. We get very similar treatment effects even when consider areas above and below the median CW population share (0.0892654) in our sample though the size of the treatment effect for education, transport and culture spending share is bigger in this case.

Low EM popsh High EM popsh T-stat University degree 0.25 24.3622\*\*\* 0.21 Car ownership share 0.31 0.28 22.9744\*\*\* Voter turnout 0.072 0.067 2.9801\*\*\* -41.7587\*\*\* Voted\_leave 0.022 0.34

Presumably these results reflect the difference in demand for these goods in councils with high/low ethnic minority population shares.

The above table shows that the councils with greater than median EM or CW population share tend to be significantly better-off with more university educated people with greater car ownership and also higher voter turnout relative to those below the median. These councils are therefore more likely to have higher demand for spending on education. In other words, these findings explain why election of an EM representative in areas with more EM or CW pop share would be associated with significantly higher spending shares on education, among others.

### **Characteristics of elected officials**

Next, we turn to the possible role played by the characteristics of the elected officials.

One significant mechanism in this respect relates to the length of the time in office for the elected councillors. To this end, we distinguish incumbent councillors from the first-time ones and obtain separate estimates for the two subsamples. This is shown in panel a of Table 10. Columns 1-4 show estimates using bandwidth 3% while columns 4-8 show those using optimal bandwidth. Columns 1, 3, 5, 7 show estimates of edu\_trans\_cul (education, transport and cultural spending shares together) and columns 2, 4, 6 and 8 show those for soc\_housing (social care and housing spending taken together).

An incumbent councillor is one who has been elected before. As high as 85.63% of sample councillors are, however, non-incumbent or first-time ones. There is confirmation from panel a of Table 10 that the significant positive effect of an EM councillor on edu\_trans\_cul spending shares in close elections is present only for the first time councillors. The estimated robust treatment effect for edu\_trans\_cul for non-incumbent councillors is around 0.125, irrespective of the choice of the bandwidth. The corresponding effect for soc\_housing remains statistically insignificant. Also, no such significant positive impact is observed for incumbent councillors for either edu\_trans\_cul or soc\_housing.

\*\*\*Insert Table 10, panel a here \*\*\*

We also investigate the role played by the ethnicity of the leader of the council or the mayor of the region. Only a minority of 17% of sample councils have a leader or Mayor of the EM background. Panel b of Table 10 summarises the robust estimates of having an EM councillor in councils led by EM or non-EM

leaders. Columns 1-4 show estimates using bandwidth 3% while columns 4-8 show those using optimal bandwidth. Columns 1, 3, 5, 7 show estimates of edu\_trans\_cul (education, transport and cultural spending shares together) and columns 2, 4, 6 and 8 show those for soc\_housing (social care and housing spending taken together).

## \*\*\*Insert Table 10 panel b here \*\*\*

Evidently, the election of an EM councillor in close elections against a non-EM candidate is associated with significant increase in both edu\_trans\_cul and soc\_housing spending shares when leader or mayor is not of EM background; these effects remain statistically insignificant when a leader/mayor is of EM background. Considering the fact that about 83% of the sample mayors or leaders of the council are of non-EM origin in our sample, perhaps this is not surprising.

## \*\*\*Insert Table 10 panel b here \*\*\*

Finally Table 11 shows the estimates for the EM councillors linked to the ruling government at the local level. Panel a shows the estimates for EM councillors linked to any ruling government while panels b-d show the cases when an EM councillor is respectively linked to Labour, Conservative and Liberal Democrat ruled local governments. Columns (1)-(3) respectively show the estimates of edu\_trans\_cul, soc\_housing and all spending taken together. Evidently, we see significant substantive representation of EM councillors only in Labour-ruled local governments, indicating that the Labour party provides more discretion to its EM councillors than other parties do when it comes to influencing policy outcomes.

## 5. Concluding comments

Immigration works only when integration works – integration and assimilation of immigrants in the host country is the most relevant and durable solution. Yet unlike immigration, there is a lack of nation-wide policy of integration in the devolved regions of the UK government. Political representation of immigrants and minorities is an obvious mechanism to promote integration in Britain's multicultural society. In this context, the paper examines the likelihood of an ethnic minority candidate winning local elections against a native candidate and also the resultant effects on policy outcomes in three English cities, namely, London, Greater Manchester and West Midlands over 2002-18.

Given the inherent endogeneity of the election of ethnic minority candidates to determining local public spending shares, we adopt a regression discontinuity (RD) design around the close election between an ethnic minority and a native candidate at the local elections. The underlying idea is that a close election (as defined by a close winning margin) would randomise the election of an ethnic minority candidate against a native one and vice-versa for a native candidate winning against an ethnic minority candidate. RD robust estimates highlights aspects of both descriptive and substantive presentation of ethnic minorities. Overall an ethnic minority candidate has around 12-13 percent chance of winning a local election against a native candidate in close elections.

There is no evidence of a significant substantive representation of ethnic minority councillors for the full sample 2002-18. Minority representation, however, exerts a significant impact on spending shares on education on its own and also that on education, transport and culture taken together, items of spending most relevant for the process of integration though securing jobs and boosting productivity for the sub-period from 2010 onwards, when the size of minority representation has gone up. These results are robust even when we consider estimates by election cycles 2002-05, 2006-09, 2010-13, 2014-17 or by individual cities/regions though some heterogeneity is observed across the cities. Further analysis shows that substantive representation are driven by the following factors: (i) when the election of ethnic minority candidates is backed by greater ethnic minority population shares, especially those from the Commonwealth; (ii) when the ethnic minority councillor is not an incumbent; (iii) when the council leaders are of native origin and (iv) when the ethnic minority councillors are part of the labour-led councils. Overall, there is evidence of growing descriptive representation among minority. However, there is heterogeneity over time and across cities/regions that needs to be addressed.

In the UK, there has been a shortage of national policies that address issues related to integration of immigrants and refugees, such as education, training, language skills, health, and housing. This is partly due to the fact that some of these areas fall under the jurisdiction of devolved administrations, which can create confusions about who is responsible for what. Because integration usually occurs at the local level, it is important for the national government to have a well-coordinated policy that promotes integration in the places where immigrants live and work and that too across all devolved units. This requires more decentralised governance so that the councillors have bigger budgets to work with, more investment into creating socially cohesive ethnically diverse local communities in multicultural Britain.

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Variable label	Definition	Mean	Standard deviation
Election data			ut viution
TotalVotes	Total votes cast	9686.715	4077.751
Turnout	Share of council population who voted	0.069	0.074
EMnonEM	Takes a value 1 if an EM candidate wins against a	0.509	0.499
	non-EM candidate		
WinningMargin	Difference in vote share between the winner and the runner up	0.005	0.139
WinnginMarginEM	Winning margin if a EM candidate wins	0.097	0.106
Incumbent	If a councillor has been re-elected	0.144	0.351
LeaderMayorEM	If leader/Mayor is EM	0.173	0.378
Census data, 2001 and			
2011			
Population	Total population of the council	194933.5	112250.8
CWPop	Share of population speaking CommonWealth	0.159	0.229
	language		
EUPop	Share of population speaking EU languages	0.103	0.047
EMPop	Population share of Commonwealth, Europeans & others	0.293	0.128
QualificationShare	Share of population with a university degree	0.230	0.081
CarOwnership	Share of population with at least one car/vehicle	0.298	0.053
EmployedShare	Share of employed population	0.261	0.172
CityCentre	If a council is a city centre too	0.352	0.478
Local government			
spending			
EducationSpendingShare	Share of education spending	0.232	0.217
TransportSpendingShare	Share of transport spending	0.03	0.023
SocialcareSpendingShare	Share of social care spending	0.14	0.136
HousingSpendingShare	Share of housing spending	0.037	0.028
CultureSpendingShare	Share of culture spending	0.05	0.037
AllSpendingShare	Share of spending on educ, trans, soc, housing,	0.491	0.316
DoligoSpondingShore	culture Share of police sponding	0.202	0.109
Foncespendingsnare	Share of police spending	0.283	0.198

Table 1. Variable Definitions, Data Sources and Descriptive Statistics of key variables

Note: Author's calculation from the data sample

Table 2. T-test of mean comparisons of selected characteristics

Variables	Winner EM	Winner nonEM	T-stat
Education spending	0.23	0.2302	-0.4910
Transport	0.039	0.035	15.4247***
Social care	0.155	0.147	4.2035***
Housing	0.0346	0.0347	0.5233
Cultural	0.057	0.059	-4.2638***
Police	0.24	0.27	-8.4897***
Ethnic frac	0.32	0.30	18.8440***
Leader/Mayor EM	0.025	0.014	7.5274***
Car ownership share	0.31	0.30	10.3129***
Qualification share	0.163	0.159	3.9745***
No of obs.	8881	38077	

Notes: Columns (1) and (2) show the means of selected variables for councils with and without elected ethnic minorities. Column (3) shows the corresponding t-statistics of mean comparisons. Level of significance: \*\*\*, \*\*, \* denote significance at the 1,5 and 10 percent levels, respectively.

Table 3.	Likelihood	of an eth	nic minor	ity councillo	winning	against a n	non-ethnic	minority	councillor

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			
VARIABLES	ARIABLES 3% winning margin			5% winning margin							
Winning margin	0.119***	0.117***	0.128***	0.130***	0.119***	0.117***	0.128***	0.130***			
	(0.00913)	(0.00944)	(0.0136)	(0.0191)	(0.00913)	(0.0101)	(0.0141)	(0.0196)			
Linear polynomial	No	Yes	Yes	Yes	No	Yes	Yes	Yes			
Quadratic polynomial	No	Yes	Yes	Yes	No	Yes	Yes	Yes			
Cubic polynomial	No	Yes	Yes	Yes	No	Yes	Yes	Yes			
CitycentrexElection yr	No	No	Yes	Yes	No	Yes	Yes	Yes			
Other controls	No	No	No	Yes	No	Yes	Yes	Yes			
Observations	46,958	46,958	46,958	44,612	46,958	46,958	46,958	44,612			
R-squared	0.0004	0.0004	0.004	0.008	0.0004	0.0004	0.004	0.008			

This table summarises the OLS estimates of an ethnic minority councillor winning against a non-ethnic minority councillor (EM\_nonEM) in the full sample. Columns (1)-(4) show estimates using the 3% winning margin threshold (Wm3) while columns (5)-(8) show those corresponding 5% winning margin as close election. Columns (1), (3), (5), (7) do not include any other controls while columns (2), (4), (6) and (8) include covariates. We use robust standard errors clustered at the council level. T-statistics are reported in the parentheses: Significance level -\*\*\* p<0.01; \*\* p<0.05; \* p<0.1.

	Education			Transport	t		Social			Housing			Culture		
Polynomial	P1	P2	P3	P1	P2	Р3	P1	P2	P3	P1	P2	Р3	P1	P2	P3
bw=0.03	0.0354	0.0326	0.0191	-0.0085	-0.004	-0.003	0.0056	-0.002	-0.010	-0.002	-0.0003	0.004	-0.0037	0.002	0.0049
(se)	(0.043)	(0.050)	(0.058)	(0.005)	(0.006)	(0.006)	(0.030)	(0.036)	(0.040)	(0.005)	(0.006)	(0.007)	(0.006)	(0.009)	(0.010)
bw=0.05	0.0348	0.0375	0.0220	-0.009*	-0.004	-0.002	0.0057	0.0025	-0.011	-0.003	-0.001	0.003	-0.005	0.001	0.0048
(se)	(0.043)	(0.049)	(0.057)	(0.005)	(0.006)	(0.006)	(0.029)	(0.035)	(0.040)	(0.005)	(0.006)	(0.007)	(0.006)	(0.008)	(0.010)
Optimal bw	0.0345	0.0321	0.0189	-0.0075	-0.003	-0.005	0.0025	-0.003	-0.00	-0.002	-0.0003	0.005	-0.003	0.002	0.0038
	(0.043)	(0.051)	(0.059)	(0.005)	(0.006)	(0.006)	(0.031)	(0.036)	(0.041)	(0.005)	(0.006)	(0.007)	(0.006)	(0.008)	(0.009)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs	8458	8,458	8,458	8,458	8,458	8,458	8,458	8,458	8,458	8,458	8,458	8,458	8,458	8,458	8,458

Notes: The table shows the RD robust estimates of five selected expenditure shares, namely, education (columns 1-3), transport (columns 4-6), social care (columns (7-9), housing (columns 12) and culture (columns 13-15) respectively using polynomial 1, 2, 3. All estimates include other controls: minority population share, ethnic fractionalisation, population share with own car, population share with any qualification and also if the council is in the city centre. The discontinuity is determined by the ethnic minority win margin, defined as the difference in vote share between an ethnic minority councillor and a non-ethnic minority councillor. Panel a uses the bandwidth of 3% while panel b uses a 5% bandwidth around the cut-off point 0. Panel c uses optimal bandwidth. The optimal bandwidth used is **mserd** which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. We use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*\* denote significance at the 1, 5 and 10 percent levels, respectively.

Table 5. RD estimates of effects of minority representation on individual spending shares, 2010-18

	Education			Transport	:		Social			Housing			Culture		
Polynomial	P1	P2	P3	P1	P2	P3	P1	P2	P3	P1	P2	Р3	P1	P2	Р3
bw=0.03	0.0929**	0.11**	0.11**	-0.012*	-0.008	-0.01	0.038	0.044	0.049	-0.003	-0.0003	0.007	-0.001	0.006	0.007
(se)	(0.037)	(0.046)	(0.053)	(0.006)	(0.007)	(0.008)	(0.030)	(0.037)	(0.041)	(0.006)	(0.008)	(0.009)	(0.007)	(0.011)	(0.013)
bw=0.05	0.088**	0.11**	0.11**	-0.01**	-0.008	-0.008	0.036	0.044	0.0457	-0.003	-0.0015	0.005	-0.002	0.09**	0.11**
(se)	(0.037)	(0.045)	(0.053)	(0.006)	(0.007)	(0.007)	(0.029)	(0.037)	(0.041)	(0.006)	(0.008)	(0.009)	(0.007)	(0.037)	(0.045)
Optimal bw	0.091**	0.11**	0.11**	-0.012*	-0.0079	-0.010	0.0369	0.0440	0.0471	-0.0026	-0.0004	0.0064	-0.0003	0.0048	0.09**
	(0.037)	(0.046)	(0.053)	(0.006)	(0.007)	(0.008)	(0.030)	(0.037)	(0.041)	(0.006)	(0.008)	(0.009)	(0.007)	(0.010)	(0.037)
Other		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
controls	Yes														
Obs	5022	5022	5022	5022	5022	5022	5022	5022	5022	5022	5022	5022	5022	5022	5022

Notes: The table shows the RD robust estimates of five selected expenditure shares: education (columns 1-3), transport (columns 4-6), social care (columns (7-9), housing (columns 10-12) and /culture (columns 13-15) respectively using polynomial 1, 2, 3. All estimates include other controls: minority population share, ethnic fractionalisation, population share with own car, population share with any qualification and also if the council is in the city centre. The discontinuity is determined by the ethnic minority win margin, defined as the difference in vote share between an ethnic minority councillor and a non-ethnic minority councillor. Panel a uses the bandwidth of 3% while panel b uses a 5% bandwidth around the cut-off point 0. Panel c uses optimal bandwidth obtained from the data. The optimal bandwidth used is **mserd** which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. We use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*: significance at the 1, 5 and 10 percent levels, respectively.

Table 6. Effects of minority representation on aggregate spending shares, 2010-18

	Edu+Trans-	+Culture		Social + H	Social + Housing			
Polynomial	P1	P2	P3	P1	P2	Р3		
bw=0.03	0.0803**	0.1087***	0.1079**	0.0352	0.0433	0.0553		
(se)	(0.034)	(0.041)	(0.048)	(0.026)	(0.032)	(0.036)		
Optimal bw	0.0807**	0.1088***	0.1098**	0.0349	0.0431	0.0538		
	(0.034)	(0.041)	(0.048)	(0.026)	(0.032)	(0.036)		
controls	Yes	Yes	Yes	Yes	Yes	Yes		
Obs	5022	5022	5022	5022	5022	5022		

Note: Columns 1-3 shows the RD robust estimates of education, transport and cultural spending shares together (edu\_trans\_cul), while columns 4-6 show those for social care and housing together (soc\_housing) respectively using the chosen degree of polynomial 1, 2, 3. Panel a shows RD robust estimates using bandwidth 3% while panel b shows those using optimal bandwidth. The optimal bandwidth used is **mserd** which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. We use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*\*; significance at the 1, 5 and 10 percent levels, respectively.

	h=0.03				h=optimal			
						2006-		
	2002-05	2006-09	2010-13	2014-17	2002-05	09	2010-13	2014-17
a. edu_trans_cul	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Polynomial	P2	P2	P2	P2	P2	P2	P2	P2
Conventional	-0.0772**	0.0745	0.0826	0.0510	-0.0745*	0.0773	0.0856	0.0414
	(0.034)	(0.073)	(0.055)	(0.049)	(0.039)	(0.072)	(0.055)	(0.052)
Bias-corrected	-0.0661**	0.0582	0.1046*	0.1036**	-0.0586	0.0585	0.1073*	0.1033**
	(0.034)	(0.073)	(0.055)	(0.049)	(0.039)	(0.072)	(0.055)	(0.052)
	-							
Robust	0.0661***	0.0582	0.1046	0.1036**	-0.0586**	0.0585	0.1073	0.1033**
	(0.024)	(0.087)	(0.065)	(0.043)	(0.026)	(0.089)	(0.069)	(0.046)
Observations	1,622	1,814	2,084	2,248	1,622	1,814	2,084	2,248
	h=0.03				h=optimal			
						2006-		
	2002-05	2006-09	2010-13	2014-17	2002-05	09	2010-13	2014-17
b. soc_housing	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Polynomial	P2	P2	P2	P2	P2	P2	P2	P2
Conventional	-0.0252*	0.0271	0.0377	0.0305	-0.0198	0.0280	0.0385	0.0234
	(0.015)	(0.040)	(0.024)	(0.049)	(0.017)	(0.040)	(0.024)	(0.051)
Bias-corrected	-0.0280*	0.0192	0.0519**	0.0649	-0.0192	0.0173	0.0526**	0.0625
	(0.015)	(0.040)	(0.024)	(0.049)	(0.017)	(0.040)	(0.024)	(0.051)
Robust	-0.0280	0.0192	0.0519*	0.0649	-0.0192	0.0173	0.0526*	0.0625
	(0.017)	(0.045)	(0.027)	(0.047)	(0.019)	(0.045)	(0.028)	(0.049)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,622	1,814	2,084	2,248	1,622	1,814	2,084	2,248

Table 7. Effects of minority representation by election cycles

Note: The table shows the treatment effects of minority representation in close elections by election cycles 2002-05, 2006-09, 2010-13, 2014-17. Panel a shows the estimates for edu\_trans\_cul (education, transport and cultural spending shares together) and panel b shows those for soc\_housing (social care and housing spending taken together). Columns 1-4 show estimates of using bandwidth 3% while columns 5-8 show the corresponding estimates using optimal bandwidth. The optimal bandwidth used is **mserd** which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. All estimates use polynomial 2. We use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*: significance at the 1, 5 and 10 percent levels, respectively.

	All	Year>=2010	All	Year>=2010	All	Year>=2010	All	Year>=2010
	h=0.03		optimal h		h=0.03		optimal h	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	edu_trans_cul	edu_trans_cul	edu_trans_cul	edu_trans_cul	soc_housing	soc_housing	soc_housing	soc_housing
Panel a		London						
Robust	0.0421	0.0929**	0.0371	0.0945**	0.0063	0.0353	0.0015	0.0364
	(0.046)	(0.044)	(0.049)	(0.046)	(0.032)	(0.034)	(0.034)	(0.035)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	7,459	4,401	7,459	4,401	7,459	4,401	7,459	4,401
Panel b	Greater Ma	anchester & We	st Midlands					
Robust	-0.2651***	0.0774***	-0.2294**	0.0359***	-0.0962*	0.0448***	-0.0982*	0.0311***
	(0.097)	(0.028)	(0.093)	(0.011)	(0.056)	(0.006)	(0.058)	(0.003)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	999	621	999	621	999	621	999	621

Table 8. Effects of minority representation by regions

Note: The table shows the treatment effects of minority representation in close elections by regions. Panel a shows the estimates for London while panel b shows those for Greater Manchester (GM) and West Midlands (WM) taken together. We were unable to obtain estimates for these individual regions because of low number of observations in each. Columns 1-4 show estimates of edu\_trans\_cul (education, transport and cultural spending shares together) and columns 5-8 show those for soc\_housing (social care and housing spending taken together). We show estimates using bandwidth 3% (cols 1-2 and 5-6) as well as optimal bandwidth (cols 3-4 and cols 7-8). The optimal bandwidth used is **mserd** which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. All estimates use polynomial 2 and use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*\*, \*\*; significance at the 1, 5 and 10 percent levels, respectively.

	EM>=Med	EM <med< th=""><th>EM&gt;=Med</th><th>EM<med< th=""><th>EM&gt;=Med</th><th>EM<med< th=""><th>EM&gt;=Med</th><th>EM<med< th=""></med<></th></med<></th></med<></th></med<>	EM>=Med	EM <med< th=""><th>EM&gt;=Med</th><th>EM<med< th=""><th>EM&gt;=Med</th><th>EM<med< th=""></med<></th></med<></th></med<>	EM>=Med	EM <med< th=""><th>EM&gt;=Med</th><th>EM<med< th=""></med<></th></med<>	EM>=Med	EM <med< th=""></med<>
	h=0.03				h optimal			
Year>=2010	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
VARIABLES	edu_trans_cul		soc_housing		edu_trans_cul		soc_housing	
Robust	0.0926*	0.0922	0.0142	0.0792**	0.0949*	0.0975	0.0154	0.0779**
	(0.051)	(0.061)	(0.045)	(0.036)	(0.051)	(0.061)	(0.046)	(0.037)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,739	2,283	2,739	2,283	2,739	2,283	2,739	2,283
	CW>=Med	CW <med< td=""><td>CW&gt;=Med</td><td>CW<med< td=""><td>CW&gt;=Med</td><td>CW<med< td=""><td>CW&gt;=Med</td><td>CW<med< td=""></med<></td></med<></td></med<></td></med<>	CW>=Med	CW <med< td=""><td>CW&gt;=Med</td><td>CW<med< td=""><td>CW&gt;=Med</td><td>CW<med< td=""></med<></td></med<></td></med<>	CW>=Med	CW <med< td=""><td>CW&gt;=Med</td><td>CW<med< td=""></med<></td></med<>	CW>=Med	CW <med< td=""></med<>
	h=0.03				h optimal			
Robust	0.1336**	0.0747	0.0385	0.0773**	0.1335**	0.0744	0.0386	0.0728**
	(0.056)	(0.059)	(0.057)	(0.035)	(0.057)	(0.056)	(0.057)	(0.035)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,298	2,724	2,298	2,724	2,298	2,724	2,298	2,724

Table 9. Mechanisms: Effects of minority representation by ethnic population share

Note: The table shows the treatment effects of minority representation in close elections by minority population share. Panel a shows the estimates for ethnic minority population share being below/above its median value while panel b shows those for non-English speaking Commonwealth population share being below/above its median value. Columns 1-2 and 5-6 show estimates of edu\_trans\_cul (education, transport and cultural spending shares together) and columns 3-4 and 7-8 show those for soc\_housing (social care and housing spending taken together). We show estimates using bandwidth 3% (cols 1-4) as well as optimal bandwidth (cols 5-8). The optimal bandwidth used is **mserd** which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. All estimates use polynomial 2 and use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*: significance at the 1, 5 and 10 percent levels, respectively.

Table	10.	Mechanisms:	Estimates b	OV	Councillor	Incumbency	and v	Leader	Characteristics
				/					

2010	bw=0.3		In sumb ant_0		Optimal bw		Incumbent-0		
2010- 18	incumbent=1		Incumbent=0		Incumbent=1		incumbent=0		
	Edu_trans_c	Soc_housin	Edu_trans_c	Soc_housin	Edu_trans_c	Soc_housin	Edu_trans_c	Soc_housin	
Panel a	ul	g	ul	g	ul	g	ul	g	
Robust	0.0035	-0.0178	0.1251***	0.0515	0.0276	0.0016	0.1256***	0.0512	
	(0.086)	(0.052)	(0.043)	(0.037)	(0.085)	(0.055)	(0.043)	(0.037)	
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Obs	988	988	4034	4034	988	988	4034	4034	
Panel b	Leader_EM		Leader_EM=		Leader_EM=		Leader_EM=		
	=1		0		1		0		
Robust	0.0107	-0.0247	0.1514***	0.1012***	0.0160	-0.0214	0.1507***	0.0990***	
	(0.037)	(0.020)	(0.048)	(0.032)	(0.038)	(0.019)	(0.047	(0.031)	
Control	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Obs	938	938	3988	3988	938	938	3988	3988	

Note: The table shows the treatment effects of minority representation in close elections by incumbency (panel a) and by leader from ethnic minority origin (panel b). Columns 1, 3, 5, 7 show estimates of edu\_trans\_cul (education, transport and cultural spending shares together) and columns 2, 4, 6 and 8 show those for soc\_housing (social care and housing spending taken together). We show estimates using bandwidth 3% (cols 1-4) as well as optimal bandwidth (cols 5-8). The optimal bandwidth uses **mserd**, which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. All estimates use polynomial 2 and use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*: significance at the 1, 5 and 10 percent levels, respectively.

Table 11.	Mechanisms:	Estimates l	by EM	councillor'	's link to	ruling	party

	(1)	(2)	(3)			
VARIABLES	edu_trans_cul	soc_housing	allspending			
Panel a	Any ruling party					
Robust	0.0395	0.0008	0.0404			
	(0.045)	(0.034)	(0.075)			
Other controls	Yes	Yes	Yes			
Observations	7,346	7,346	7,346			
Panel b	Ruling Labour					
Robust	0.1163**	0.0282	0.1445*			
	(0.051)	(0.039)	(0.086)			
Other controls	Yes	Yes	Yes			
Observations	5,037	5,037	5,037			
Panel c	Panel c Ruling Conservative					
Robust	0.0048	0.0058	0.0106			
	(0.077)	(0.050)	(0.121)			
Other controls	Yes	Yes	Yes			
Observations	1,871	1,871	1,871			
Panel d	Ruling Liberal Democrats					
Robust	-0.0016	-0.0668	-0.0684			
	(0.076)	(0.058)	(0.124)			
Other controls	Yes	Yes	Yes			
Observations	834	834	834			

Note: We use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \*: significance at the 1, 5 and 10 percent levels, respectively.

## **Figures**



Figure 1 – Time trend for ethnic minority councillors winning over time





Note: Ethnic population includes both EU and non-EU language speaking population; Commonwealth includes Commonwealth language speaking population.

#### Figure 3 – Election of an ethnic minority candidate against a native one

We plot the fraction of seats won by ethnic minority politicians against the margin of victory in elections between ethnic minority and non-ethnic minority individuals. Panel A uses the whole sample with a 1% margin cut off with a linear polynomial. Panel B uses the whole sample with a 1% margin cut off with a quadratic polynomial. Panel C uses the whole sample with a 1% margin cut off with a cubic polynomial. Panel D uses the whole sample with a 3% margin cut off with a linear polynomial. Panel E uses the whole sample with a 3% margin cut off with a quadratic polynomial. Panel F uses the whole sample with a 3% margin cut off with a cubic polynomial. Panel G uses the whole sample with a 5% margin cut off with a quadratic polynomial. Panel I uses the whole sample with a 5% margin cut off with a cubic polynomial. Panel H uses the whole sample with a 5% margin cut off with a cubic polynomial. Panel H uses the whole sample with a 5% margin cut off with a cubic polynomial. Panel H uses the whole sample with a 5% margin cut off with a cubic polynomial. Panel H uses the whole sample with a 5% margin cut off with a cubic polynomial. Panel H uses the whole sample with a 5% margin cut off with a cubic polynomial. Panel H uses the whole sample with a 5% margin cut off with a cubic polynomial.



Figure 4 and Figure 5: RD identification



Figure 6 – Test of balancing of covariates



Figure 7. Balancing of spending shares variables around the cut-off c=0, 2002-18



## Appendix 1





Year<2010; h=0.03	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	edu_trans_cul	edu_trans_cul	edu_trans_cul	soc_housing	soc_housing	soc_housing
Polynomials	P1	P2	P3	P1	P2	P3
Conventional	0.0028	0.0388	0.0633	0.0054	0.0268	0.0362
	(0.044)	(0.055)	(0.067)	(0.022)	(0.026)	(0.032)
Bias-corrected	0.0335	0.0602	0.0464	0.0236	0.0355	0.0159
	(0.044)	(0.055)	(0.067)	(0.022)	(0.026)	(0.032)
Robust	0.0335	0.0602	0.0464	0.0236	0.0355	0.0159
	(0.055)	(0.067)	(0.092)	(0.026)	(0.032)	(0.042)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,436	3,436	3,436	3,436	3,436	3,436
Year<2010;						
optimal h	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	edu_trans_cul	edu_trans_cul	edu_trans_cul	soc_housing	soc_housing	soc_housing
Polynomials	P1	P2	P3	P1	P2	P3
Conventional	0.0021	0.0351	0.0645	0.0049	0.0241	0.0384
	(0.044)	(0.054)	(0.065)	(0.022)	(0.026)	(0.031)
Bias-corrected	0.0363	0.0602	0.0490	0.0248	0.0351	0.0163
	(0.044)	(0.054)	(0.065)	(0.022)	(0.026)	(0.031)
Robust	0.0363	0.0602	0.0490	0.0248	0.0351	0.0163
	(0.055)	(0.067)	(0.091)	(0.026)	(0.032)	(0.043)
Other controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,436	3,436	3,436	3,436	3,436	3,436

Table A1. Effects of ethnic minority councillors on public spending before 2010

Notes: The table shows the RD robust estimates of aggregate expenditure shares: edu\_trans\_cul is the aggregate spending shares on education, transport and culture; social care (columns (7-9), housing (columns 10-12) and culture (columns 13-15) respectively using polynomial 1, 2, 3. All estimates include other controls: minority population share, ethnic fractionalisation, population share with own car, population share with any qualification and also if the council is in the city centre. The discontinuity is determined by the ethnic minority win margin, defined as the difference in vote share between an ethnic minority councillor and a non-ethnic minority councillor. Panel a uses the bandwidth of 3% while panel b uses a 5% bandwidth around the cut-off point 0. Panel c uses optimal bandwidth. The optimal bandwidth used is **mserd** which specifies one common mean squared error (MSE)-optimal bandwidth selector for the RD treatment-effect estimator. We use robust standard errors clustered by councils. Standard errors are shown in the parentheses. \*\*\*, \*\*, \* denote significance at the 1, 5 and 10 percent levels, respectively.

#### **APPENDIX 2. Related literature**

#### A2.1 Ethnic diversity and public goods provision

There is an influential literature that argues that societies that are highly fractionalised in terms of race and/or ethnicity find it difficult to find common ground as regards the amount and type of public goods like infrastructure that they would like their governments to provide (see, for instance, Alesina and Drazen, 1991; Alesina and Rodrik, 1994). Alesina *et al.* (1999) observe that when individuals are heterogeneous and have different preferences, they are less keen to shore up resources for public projects, and conclude that ethnic conflict is an important determinant of local public finances: voters choose lower public goods when a significant fraction of tax revenues collected on one ethnic group are used to provide public goods shared with other ethnic goods provision in US cities: the shares of spending on productive public goods – education, roads, sewers and refuse collection – in those cities are inversely related to the city's ethnic fragmentation, even after controlling for other socioeconomic and demographic determinants, but those cities spend more on police protection. A similar view is echoed by Banerjee and Somanathan (2007), etc., who contend that even when the amount of public goods is not the issue, the quality of such goods is. Thus, ethnically diverse communities may not only have fewer public goods, but also ones of inferior quality.<sup>9</sup> Also see Habyarimana et al. (2007), Miguel and Gugerty (2005).

In contrast with studies highlighting the difficulties in achieving desired outcomes due to ethnic divisions, there is also some literature that argues that ethnicity may actually facilitate collective action and strategic coordination over a range of political outcomes. For example, Fearon and Laitin (1996) explain interethnic cooperation arising out of a fear of conflict between individuals spiralling to the whole group. They contend that although ethnic tensions around the globe are quite pervasive, the incidence of actual ethnic violence is much lower than cases of potential ethnic violence, as borne out by the post-Soviet world and by Africa between 1960 and 1979. They analyse the situation where ethnic tensions do not lead to sustained intergroup violence in terms of each ethnic group policing its members by imposing sanctions on its own deviant members, while ignoring deviations by members of other ethnic groups.

By using a panel of cities from 1970 to 2000 (rather than a single cross-section in 1990, as Alesina *et al.*, 1999, did), Boustan et al. (2013) find that an increase in racial heterogeneity is associated with large positive effects on fire protection and health and hospital spending. They contend that the classification of municipal spending into "productive" versus "non-productive" public goods is questionable as spending on fire protection and public hospitals is equally as productive as spending on roads. Hopkins (2011), too, re-

<sup>&</sup>lt;sup>9</sup> A consequence of lower and/or inferior public goods provision in fractionalised countries is that economic growth is reduced, which is a major reason behind Africa's dismal growth performance (Easterly and Levine, 1997). The point about increased diversity lowering the utility from public good consumption is reiterated by Alesina and La Ferrara (2005). However, they also point out that the skills of individuals from different ethnic groups are complementary in the production process for a private good, implying that more diversity translates into increased productivity. The presence of these two opposing forces explains why not all diverse societies are an economic failure but some work much better than others.

examines the issue and, in a similar vein to Boustan et al. (2013), looks not at a single cross section but instead at a 52-year time span from 1950 to 2002 and finds that roads, libraries, and hospitals do not necessarily receive less support in diverse locales.

Recent literature has, also, highlighted some shortcomings of Alesina et al. (1999). For example, Gisselquist (2014) argues that omission of important variables like state effects, community characteristics (e.g., urban/non-urban), fraction of school-going population in Alesina et al. (1999) could have made a difference to their results. Further Using data from American cities and school districts from 2000 to 2010, Lee et al. (2015) find that ethnic heterogeneity does not necessarily reduce local public spending due to low price elasticity of demand for local public goods and the substitution between public goods.

#### A2.2. Ethnic Favouritism

The analysis of legislator identity on policy formulation cannot be complete without referring to the literature on ethnic favouritism, which occurs when an ethnic group forming a government hands out a disproportionate share of public resources as patronage to co-ethnics. Using data on the ethnicity of top cabinet ministers since independence, Francois et al. (2015) show that African autocracies function through an unexpectedly high degree of proportionality in the assignment of power positions, even senior ministerial posts, across ethnic groups. Rarely are large ethnic minorities left out of government, and their size does matter in predicting the share of posts they control, even when they do not coincide with the leader's own ethnic group.<sup>10</sup>

The results of Franck and Rainer (2012) indicate the presence of large and widespread effects of ethnic favouritism in sub-Saharan Africa, thus providing support for ethnicity-based explanations of Africa's underdevelopment. Using the Demographic Health Surveys (DHS) from 18 African countries, and using the difference-in-difference methodology, they study how the primary education and infant mortality of ethnic groups were affected by changes in the ethnicity of the countries' top political leaders during the last 50 years. They find that while stronger fiscal capacity may have enabled African leaders to provide greater ethnic favours in education, the same is not true for infant mortality.

De Luca et al. (2018) study this issue by relying on night-time light intensity to capture a broad range of policies (like patronage, public infrastructure, and transfer payments) targeted towards the political leaders' own ethnic group. Their panel data-sets include 140 multi-ethnic countries with annual observations from 1992 to 2013. They find robust evidence for ethnic favouritism in that night-time light becomes 7%–10% more intense in the political leaders' ethnic homelands, and conclude that such favouritism is a global phenomenon.<sup>11</sup>

Focusing on road spending and construction across Kenyan districts, Burgess et al. (2015) assess whether or not ethnic groups that shared the ethnicity of the president disproportionately benefited from such

<sup>&</sup>lt;sup>10</sup> The inclusiveness of other elites could stem from threats to leadership survival from both revolutions and internal coups. <sup>11</sup> In a similar study, but with a panel of 38,427 sub-national regions from 126 countries with yearly observations from 1992 to 2009, Hodler and Raschky (2014) find that those regions have more intense night-time light when being the birth region of the current political leader. Such regional favouritism is shown to be most prevalent in countries with weak political institutions and poorly educated citizens.

schemes. Strikingly, across the 1963-2011 period, the authors find that Kenyan districts that share the ethnicity of the president receive twice as much expenditure on roads and almost five times the length of paved roads built relative to what would be predicted by their population share. But such an extreme degree of ethnic favouritism, prevalent in periods of autocracy, disappear during periods of democracy, which demonstrates the importance of the political regime as a determinant of ethnic favouritism.<sup>12</sup>

<sup>&</sup>lt;sup>12</sup> Another study on Kenya, but in the context of the education sector using a rich data-set of educational attainment and ethnic identities, by Kramon and Posner (2016) finds that having a co-ethnic as president during one's school-age years is associated with an increase in the schooling that children acquire; however, they find that multiparty political competition has no impact on the degree of ethnic favouritism in this sector.