SUPERDIVERSITY HANDBOOK CHAPTER OUTLINE: PART 1 CH 8 [revised v2]

The Urban Economics of Superdiversity

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Abstract [217 words]

This chapter examines the economic impacts of superdiversity in theory and practice, drawing onUK experience in the early 2000s. Superdiversity has a largely urban footprint, reflecting the affordances of big cities, and the deep history of the 'multicultural city'. I build a simple framework to illustrate superdiversity's economic effects on production and consumption systems, and the roles of a) higher-skilled migrant groups b) physically close or historically linked sending countries and c) urban economic /demographic structures. Robustly quantifying superdiversity – in all its dimensions – is challenging: while a large body of empirical work by economists and others identifies positive economic impacts from demographic change, it typically proxies 'diversity' using single individual attributes. I outline alternative proxies using name-based information to identify the distribution of multiple cultural, ethnic, linguistic and religious groups at local area level, and use this to explore the conceptual framework for the UK case. I explore group distribution across UK towns and cities in 2001, finding positive links between these initial demographic characteristics and changes in wages/productivity and house prices in the following five years. These differ between urban and non-urban areas. I speculate about how variation in other individual characteristics, arrival routes, levels of mobility and legal status complicate this picture, and suggest ways for future research to incorporate these dimensions into economic analysis.

Keywords: superdiversity, cities, economics, productivity, quantification

1/ Introduction

Vertovec (2007) originally defined superdiversity as a new set of social features arising from 1990s migration patterns, which themselves reflect both economic and other globalisations and post-Cold War political change.[1] A rise in the number of 'sending countries', *and* shifts in the kinds of migrants and movement flows, has diversified 'receiving country' nationalities, ethnicities, languages and religions. As Meissner and Vertovec (2015) point out, within and across each of these identity groups we also see a greater variety of migrant legal statuses and socio-economic characteristics (such as gender, age, income and education). Further, supporting infrastructures of low-cost flights and communications technology have helped sustain higher mobility, transnational diasporas (Blommaert 2013). These new social complexities are now present across many countries (Vertovec 2019).

Superdiversity has a notably urban footprint – reflecting both the historic appeal of ports and economic centres to migrants, and the economic revival of many cities. But beyond this, we can also trace superdiversity back into the deeper, often hidden, history of the 'multicultural city' (for example, Schrover [this volume], (Olusoga 2016; Keith 2005; Sandu 2004; Sassen 2004; Sante 1998). Superdiversity is associated with global cities like London, which is now a 'majority minority' city (GOV.UK 2020); importantly, it can also be observed within smaller 'second tier' cities like Leicester (see Hall (2011), and as this chapter shows).

Engaging with geographies of superdiversity is unavoidable for researchers and policymakers, given its implications for urban lived experience Stansfeld, this volume] and for planning and economic development [Pemberton, this volume]. Growing diversity has been welcomed as culturally enriching and economically beneficial by many urban local

governments (including in London (Greater London Authority 2006)) but arguably, also produces new challenges in understanding difference and managing everyday coexistence (Kahn-Harris 2019).

Understanding the economic impacts and implications of superdiversity represents an important part of this academic and policy engagement. This chapter looks at the urban economic impacts of superdiversity in theory and in practice, using UK experience in the early 2000s as a case study.

2/ A framework for the economic analysis of superdiversity

How might demographic change shape (urban) economic outcomes? Imagine a simple framework of a dynamic economy, with a range of locations including cities. In this setting human capital and ideas help drive long term economic growth – by raising innovation and productivity, and through knowledge spillovers which allow these ideas to spread across society. Entrepreneurial individuals may bring these new ideas into new firms, which enter markets and compete with incumbents. Firms can gain market share via expansion into new markets, including via trade.

Per notions of superdiversity, in this setting migrants and minority group members will hold a range of human, financial and social capitals. Crucially, both diversity (by country of birth, ethnicity, religion and so on) and 'sameness' (co-ethnic groups, diasporic communities) can have a number of economic impacts, especially via high human-capital groups and individuals (Nathan 2014): these high-level effects will be further complicated by differences

in age and gender, as well as arrival channel and legal status (Meissner and Vertovec 2015; Meissner 2018), points I return to later in more detail.

In theory, diversity and sameness offer a number of advantages on the production side of this simple economy. First, many high-ability individuals select into migration, or are selected by policy regimes (Hunt 2011). Relatedly, through choice or necessity, migrants and minority ethnic group members may be more entrepreneurially orientated and more open to 'disrupting' existing industries (Hunt 2011; Duleep, Jaeger, and Regets 2012). Second, at group level – for example, in a firm – diverse teams may offer a broader pool of ideas, experiences and scrutiny (Page 2007). We might expect these effects to be larger for more complex tasks and workflows, and for higher-skilled activities. Access to a broader pool of 'talent' also helps firms improve matching of workers to tasks, raising productivity (Peri 2012). Third, through high-trust connections, diasporic networks may help knowledge diffusion, cross-boundary co-ordination and market access (W. Kerr 2008; Docquier and Rapoport 2012; Choudhury and Kim 2019).

In principle, these advantages are balanced by challenges. Communication barriers and low trust can hold back these processes, at least in the short term; market economies involve winners and losers; migrants and minority groups can experience structural discrimination and hostile policy regimes (Hall, King, and Finlay 2017), including restricting the set of formal economic opportunities individuals might otherwise access. Shifts towards superdiversity can thus, in theory, result in positive or negative outcomes for areas and protagonists.

In this setting, cities – especially big cities – are also key sites of action. In part this is because urban areas are, put crudely, 'where the (super)diversity is'. It is also because urban agglomeration economies – such as shared infrastructure and knowledge spillovers – already help firms and workers become more productive, and this may amplify diversity-growth channels (S.P. Kerr et al. 2017). Cities also offer consumption-side advantages to workers and households: urban scale supports a rich variety of amenities and experiences. So in this setting, growing diversity may increase the range of (say) retail and leisure available to residents (Mazzolari and Neumark 2012); an urban 'creative class' may also value diversity per se (Florida 2002). Conversely, to the extent that hostile or prejudiced residents dislike diversity, demographic change may lead to majority population outflows, or greater segregation within a city (Saiz and Wachter 2011). While these channels may lead to either higher or lower house prices and rents, more broadly, production-side gains from urban diversity might also push up housing through crowding, as more productive cities attract further residents.

In principle, then, we can imagine the economic impacts of superdiversity may be ambiguous in sign, and it is not clear how big effect sizes will be. Frustratingly, very little empirical work in economics, economic geography and associated quantitative disciplines directly engages with superdiversity in full. Rather, studies typically look at linkages from much simpler measures of migrant population shares and migrant diversity to economic outcomes; in some cases macro-ethnic or even racial groups are used instead; in some cases studies are able to break down results by human capital groups, or first / second generation status. Page (2007), Docquier and Rapoport (2012), Ottaviano and Peri (2013), Nathan (2014, 2015), Nijkamp et al (2015), Cooke and Kemeny (2017), Kerr et al (2017) and Trehan [this volume] provide reviews of this literature. Studies indicates positive economic impacts from these

diversity measures to entrepreneurship, innovation and productivity. Overall effect sizes are not always large, and vary both across industry setting and by group (with high human-capital migrants and diasporas linked to larger gains, as well as diasporas which are geographically closer or historically linked, for example through past colonial occupation). These aggregate results may also hide gains and losses for specific groups. The bulk of this evidence comes from the US, and studies from other countries generate still-positive but more mixed results, reflecting cross-country differences in migration histories, social structures, policy regimes and institutions (Nathan 2014). Evidence on consumption channels is sparser and less conclusive. Some studies (for example, Ottaviano and Peri (2006) for the US and Bakens and De Graaff (2020) for the Netherlands) find positive links from diversity to urban wages *and* house prices, consistent with the productivity/crowding channel referred to above.

3/ Metrics

How could we quantitatively test the ideas in the framework outlined above? Any quantitative work on superdiversity requires quantification. Meissner (2015) splits superdiversity into the core concept of a 'broad-based diversity' of individual attributes, versus the variables available to capture this, and versus specific local processes and contexts. As this typology implies, capturing such complexity is not straightforward – even if we restrict ourselves to the individual attributes that might *result* from different flows, processes and contexts (Aspinall [this volume], Lessard-Phillips and Fajth [this volume]). First, national governments and statistical agencies apply different approaches in tracking migrant status, ethnicity, religion and so on (including not collecting data). This cross-country

variation is not random, and reflects both national histories and contemporary political dynamics [Simon, this volume].

Second, there are more fundamental barriers. Operationalising individual multidimensionality in a quantitative setting is very hard (Lessard-Phillips and Fajth [this volume]). Subjective senses of self differ, and are entangled in broader social relations (Bulmer 1996); one's sense of self also evolves over time (Ahlerup and Olsson 2012). Manning and Roy (2010), for example, find that UK immigrants almost never see themselves as British on arrival, but are more likely to do so the longer they stay, and that this adjustment process varies by sending country. Together, these issues render the whole practice of classification contested (Modood 2005). The more complex shifts embodied in superdiversity make classification yet harder (Blommaert 2013).

For quantitative approaches, one promising way to start is by identifying least-worst proxies of Meissner's 'broad-based diversity' of individual attributes, and then exploring how these might vary across individual and group socio-economic characteristics, legal status and local contexts. Specifically, we need metrics that give a feasible combination of granularity (e.g. multiple dimensions) and validity (e.g. reflecting context) (Aspinall 2009). This entails working through a larger trade-off between reducing the complexity of lived experience, and being able to represent it in metrics [Lessard-Phillips and Fajth, this volume, Simon, this volume].

While a superdiversity lens explicitly demands moving beyond a focus on ethnic group and proxy variables for ethnicity, recognising the importance of variable granularity for the analysis of urban diversity and its implications can at this point best be illustrated with this

base-line aspect of superdiversity. Conventional measures of country of birth, nationality and macro-ethnic classifications (such as UK Office of National Statistics ethnic groups) are unlikely to be sufficient for granular analysis. While birth country is often easily observable, alongside arrival year and (in some cases) age, gender and legal status, this can only capture some of the shifts implied in superdiversity (Meissner 2015). In the UK, for example, over 40% of the non-White British population was born in the UK.[2] Macro-ethnic classifications such as 'White', 'Asian / Asian British' and 'Black African / Caribbean / British' have been criticised for hiding important variation, limited relation to real-world contexts, and focusing on visible appearance. Notably, in the 2011 Census the second largest minority group was the uninformative 'White Other'.[3]

Name-origin analysis has been proposed as an alternative that provides rich information across multiple identity bases, where groups have a common geographical, linguistic or ethnic origin (Pablo Mateos 2007). The intuition is that naming practices reflect long-standing norms and 'ethno-cultural customs' that map both to specific ethnic and cultural groups – for better or worse, see Benjamin (2020) – and to specific geographies (Pablo Mateos, Longley, and O'Sullivan 2011). Specifically, to the extent that naming practices are distinctive among different groups, a network of forenames and surnames will show clusters of forename-surname combinations, or 'communities' in the language of social network analysis. Researchers working in this field typically combine large name databases (from electoral rolls or phone directories) with probabilistic methods, which are then validated against reference databases of names whose provenance is known.

Name-origin approaches, by proxying culture, ethnicity, religion and language separately, potentially offer some of the granularity and flexibility required to get at the realities of

superdiversity. Nevertheless, name-scoring alone is also an incomplete proxy for superdiversity. It is unable to distinguish country of birth, arrival pathways or legal status (and so cannot directly distinguish recent migrants, or those not yet on electoral registers). It could also suffer from measurement error from international languages – such as Spanish and English – where naming practices may span many countries.

In the rest of this chapter I will use name-based analysis of distinct cultural / ethnic / linguistic (CEL) groups to highlight the importance of granularity in thinking about and analysing superdiversity – here understood as a diversity of individual demographic attributes. The analysis will test how CEL links to economic outcomes across different local contexts, controlling for other area socio-economic characteristics. I will compare these results to those derived from using cruder, more conventional 'diversity' measures, specifically ONS ethnic groupings. In the conclusion, I discuss how bringing in further aspects of superdiversity – variation in attributes, processes and contexts – could productively complicate the picture.

My CEL groups are derived from UK electoral roll data processed via the ONOMAP classification system. ONOMAP uses forename-surname combinations to assign individuals probabilistically into CEL groups (see Table 1, below, for some examples). Groups are derived from classifying forename-surname combinations in 26 countries' electoral registers or phone directories, covering around 300m people, then validated against cross-country reference lists of surnames derived from academic literature or official statistics (Lakha, Gorman, and Mateos 2011; Pablo Mateos, Longley, and O'Sullivan 2011).

Using ONOMAP goes some way towards addressing the measurement concerns outlined above. Lakha et al (2011) test birth registration, pupil census and health data for over 260,000 individuals in the UK; ONOMAP matches over 99% of names and gives under 5% measurement error. ONOMAP also explicitly models country and region-level variations of Spanish and English names (for example, including a range of African, Caribbean and North American English groups). ONOMAP also separately scores names on religious tradition, geographic origin, ethnic background or common linguistic heritage, but I am unable to access these detailed scores for this analysis.

4/ Empirics

I explore the conceptual framework in Section 2 by looking at the UK experience in the early 2000s, the period immediately following the emergence of superdiversity as outlined by Vertovec (2007). I first look at demographic diversity across local areas in 2001. Next, test linkages between area differences in superdiversity in 2001 and local economic outcomes in the five years following. Along the lines of Section 3, I proxy superdiversity through ONOMAP-based Fractionalisation Indices (Ottaviano and Peri 2005; Alesina and Ferrara 2005). Specifically, Indices represent take the number of cultural/ethnic, linguistic and geographical-origin name groups in a location and their relative sizes, to give Indices ranging from zero (non-diverse) to one (very diverse). As noted above, this metric simplifies superdiversity by focusing on the area-level aggregation of specific individual attributes, across different local contexts (urban, non-urban). In the conclusion I set out some ways for future empirical research to complicate this picture.

I build the Index for 65 ONOMAP Cultural-Ethnic-Linguistic (CEL) groups using 2001 Electoral Roll data for the adult population of Great Britain.[4] As a comparator, I also build a more conventional Index for the six main ethnic groups defined by the UK Office of National Statistics (ONS) as of 2001, using 2001 Labour Force Survey data for the working-age population.[5]

My final dataset covers the 232 ~~2001-era~~ Travel to Work Areas (TTWAs) in Great Britain, as defined for 2001. Travel to Work Areas are defined as self-contained commuting zones, and represent the best available approximations for local economies (Bond and Coombes 2007).[6] Within these I identify 'primary urban' TTWAs which contain cities of at least 125,000 people (Gibbons, Overman, and Resende 2011). This allows me to compare outcomes in primary urban versus less urban / rural areas.

4.1 / Descriptive analysis

Table 1 shows population shares by the 25 largest ONOMAP CEL groups in 2001, and for comparison, all six ONS macro-ethnic groups for the same year.

Table 1 about here

The 25 largest CEL groups cover over 99% of all names. English, Celtic, Scottish and Welsh name groups make up the vast majority of the 2001 electoral roll, followed by a range of South Asian-heritage name groups, then a mix of European, East and West African and East Asian-heritage groups. This mix reflects both the UK's colonial past and its geographic proximity to the rest of Europe. ONOMAP also picks out specific ethno-religious and ethno-

linguistic groupings not usually visible in official categories, which can be further disaggregated (for example, 'Muslim Other' breaks down into Balkan, Malaysian, Indian, Sudanese, West African and other name groups). Reassuringly, the ONS groups are broadly consistent by size, but by construction offer far less detail.

Table 2 about here

Table 2 shows the CEL and ONS Indices by area, for the 20 most diverse Travel To Work Areas in 2001. Here, the differences between the two measures are very striking. The ONS Index returns a familiar list of large cities and urban areas which are established 'diverse locations' (London, Birmingham, Leicester) and/or contain large and well-known minority populations of varying South Asian, African and Caribbean heritage.

By contrast, the CEL Index returns a very different list of locations. Within this we can pick out five overlapping groups. First, Scottish and Welsh cities (Glasgow, Lanarkshire, Dundee, Edinburgh, Swansea Bay, Cardiff). Second, English cities close to Scottish / Welsh borders, such as Gloucester. Third, coastal areas (Wirral, Portsmouth, Swansea Bay, Cardiff, Ipswich). Fourth, London and towns / cities in the wider London commuting zone (Crawley, Wycombe and Slough, Luton and Watford, Oxford). Fifth, other known 'diverse cities' (Leicester, Oxford, Blackburn).

These simple exercises highlight the relative affordances of conventional vs frontier metrics. The fine-grained analysis allowed by the CEL approach shows both the deep-rooted diversity of many British cities, the influence of geography on more recent changes, and gives some sense of the emerging social, cultural and religious formations highlighted in the extant

superdiversity literature. By contrast, the ONS categories simply reproduce an established picture of 'official' diversity without picking up shifts related to emerging superdiversity.

4.2 / Regression analysis

Next, I look at associations between area superdiversity in 2001, and changes in wages and house prices in the following five years. To do this I build a cross-sectional dataset covering diversity and control variables in 2001, plus the change in wages and house prices from 2001-2006. I control for a number of area-level socio-economic characteristics, including the share of degree holders, share female population, share population under 30, share long term unemployed, share employed in manufacturing / services, and the log of population density.[7] Wage data comes from the Labour Force Survey as before. House price data comes from the Land Registry PricePaid dataset, and is available for England and Wales only.

I test for statistically significant linkages from area-level superdiversity, as proxied by the two Indices, and subsequent changes in wages / productivity or housing costs. Wage regressions test the production-side channels set out in Section 3, using the five-year change in wages as indicative of underlying labour productivity shifts. House price regressions test consumption-side channels. To test for 'amplifying' effects of cities, I also fit an interaction of the superdiversity measure with a dummy variable for urban areas: this helps flag any additional effect of urban superdiversity specifically.

Table 3 about here

Table 3 shows results for wages (top) and house prices (bottom). In each case, column 1 fits CEL name group diversity against outcomes; column 2 adds controls; column 3 adds the urban area interaction. For comparison, columns 4-6 repeat using the crude ONS Index.

For wages, I find that a 10% rise in the CEL Index is robustly linked to a 1.2% drop in average wages across all TTWAs in the following five years, controlling for area socio-economic characteristics (column 2). However, for urban areas I find a strong positive link, while for non-urban areas the negative link remains (column 3). In cities, a 10% rise in name group diversity – say, shifting Birmingham's name group diversity to that of London – is linked to 1.9% higher wages in the following five years. In contrast, the wider effect of urban location on wage growth is close to zero and only marginally significant.

This result is consistent with superdiversity-productivity channels being stronger in bigger cities, through some combination of larger and more diverse populations, amplifying effects of agglomeration economies, or both. In non-urban areas, the negative result is consistent with smaller minority populations, lack of amplifying effects, hostility / discrimination or some combination of these. Notably, while the ONS Index gives similar results (columns 5 and 6), coefficients are smaller and less precisely estimated, with larger standard errors. Results are thus not statistically significant.

For house prices, which are estimated only for England and Wales, I find positive associations between higher name-group diversity in 2001 and house prices five years later: in column 2, a 10% rise in the CEL Index is linked to 1.3% higher house prices. This is driven by non-urban areas, while for urban areas the diversity-prices link is negative but only marginally significant (column 3). However, these results are reversed for the simpler ONS

Index, and effect sizes are almost ten times larger: in bigger cities, a 10% rise in diversity is linked to an 11.2% rise in five-year house prices, while in non-urban areas the same change is linked to a 10.3% fall.

5/ Conclusions

Superdiversity, while still a conceptual work-in-progress (Vertovec 2019), remains a powerful device for understanding urban demographic change. This chapter has discussed the urban economics of superdiversity. It sets out a simple framework in which the emergence of superdiversity – at individual, group and area level – has a range of economic impacts, both on the production side (entrepreneurship, innovation, productivity, wages, trade) and the consumption side (amenities, cost of living). In theory impacts can be positive or negative. In practice a large body of cross-country identifies positive effects – albeit from much cruder diversity metrics, typically built from from single individual attributes, usually country of birth data. Quantifying superdiversity more completely is thus a prerequisite for economic analysis, but this is very challenging in practice, given the complexity of the phenomenon (see Aspinall and Lessard-Phillips and Fajth [this volume]. In this chapter I use simplified name-based proxies of superdiversity, focused on modelled individual cultural, ethnic, linguistic and religious attributes, to explore the UK's experience in the early 2000s, a period of great demographic change. I find some evidence linking name-based demographic patterns in 2001 to subsequent productivity and wage growth in urban areas during the 2000s; by contrast, CEL-house price linkages are positive overall but negative for urban areas.

On the face of it, these results provide support to the broader notion that superdiversity is an urban economic 'asset' and can be deployed in local economic development programmes, as many cities have already sought to do (Florida 2002). Nevertheless, the house price results suggest a more complex picture, in which (super)diversity may be both a productive asset and a consumption disamenity, at least in the eyes of some resident populations. That is, people may value superdiversity at work but not close to home. Further work is needed to understand these linkages (Cooke and Kemeny 2017). Using cruder diversity metrics based on macro-ethnic groups gives notably different results.

This divergence provides further support to the arguments of Simon and Lessard-Phillips and Fajth [this volume], that how we quantify complex social phenomena may lead to significant differences in our picture of social reality. More broadly, the superdiversity proxy used in this chapter is both experimental and highly simplified, modelling specific salient individual attributes (culture, language, religious heritage) across different area contexts. Although my regression analysis controls for the influence of area context and salient area-level socio-economic characteristics (human capital, age and gender distribution, labour market conditions, industry mix), I am unable to directly break down my superdiversity metric along these lines. That is, I cannot directly examine the interplay between these different aspects of superdiversity in practice. As noted in Section 3 above, to the extent the existing empirical literature grapples with these issues, studies find larger positive impacts from higher-skilled migrant groups, skilled migrant diversity and higher-human capital diasporas (for example, South and East-Asian heritage groups in the Bay Area, many of whom skilled tech / engineering workers, graduates of Bay Area universities or both).

How might future conceptual and empirical quantitative work bring this complexity back in?

At the conceptual level, economissts need to deploy framework that complements aggregate measures – such as those used here – with other metrics that proxy currently missing dimensions. Recent case study work by Vertovec et al (2018) shows one possible route forward, delineating superdiversity in terms of diversity of ethnicity, religion, migrant generation, income, education, legal status and mobility.[8]

At the empirical level, many countries' administrative datasets would – in theory – allow us to combine CEL-type information with country of birth, year of arrival, age, gender, labour market status (including students) and formal qualifications – straightforwardly at area level, and in theory at the individual level through microdata linkage. This would go some way towards allowing us to observe multiple salient dimensions of superdiversity at a range of scales, and crucially, the intersections of these dimensions. On the other hand, processes and flows – notably arrival routes and frequency/distance of international mobility – are much harder to capture structurally, at least through conventional datasets. Similarly, future quantitative work on superdiversity needs to seek to understand and represent relationships or linkages between groups. Complexity-based approaches could be used to embody – for example – historical connections or hierarchies. This work needs to be informed by qualitative, on-the-ground work that seeks to map lived experience (Blommaert 2013; Meissner 2015).

It should be noted that my empirics only explore the immediate early 2000s. A longer time horizon would cover continued migration and demographic change, as well as A8 Accession and Brexit. More broadly, it is critical to explore linkages between policy regimes and shocks on people flows and urban population change, both through borders and refugee movements

(Hall 2017), but also broader migration policies – such as points systems and migration caps, as well as emerging post-Brexit systems in the UK.

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Table 1. 2001 Great Britain population shares by 25 biggest ONOMAP CEL name groups (left) and all ONS ethnic groups (right).

CEL subgroup	%	ONS group	%
ENGLISH	68.08	White	97.58
CELTIC	12.22	Asian / Asian British	1.29
SCOTTISH	5.52	Black / Black British	0.51
IRISH	3.94	Other	0.27
WELSH	2.63	Mixed	0.19
PAKISTANI	1.16	Chinese	0.16
INDIAN HINDI	0.9		
OTHER MUSLIM	0.8		
SIKH	0.74		
ITALIAN	0.4		
BANGLADESHI	0.32		
OTHER EUROPEAN	0.3		
POLISH	0.24		
GREEK	0.24		
CHINESE	0.23		
NIGERIAN	0.18		
GERMAN	0.16		
PORTUGUESE	0.16		
OTHER SOUTH ASIAN	0.15		
FRENCH	0.15		
SPANISH	0.15		
PAKISTANI KASHMIR	0.14		
SRI LANKAN	0.11		
JEWISH	0.11		
TURKISH	0.1		

Source: Electoral Register / ONOMAP, Labour Force Survey. 1) ‘OTHER MUSLIM’ subgroup includes CEL name types ‘BALKAN MUSLIM’, ‘MALAYSIAN MUSLIM’, ‘MUSLIM INDIAN’, ‘SUDANESE’, ‘WEST AFRICAN MUSLIM’, ‘OTHER MUSLIM’ (SMALLER MIDDLE EASTERN COUNTRIES, N/AFRICAN COUNTRIES, CENTRAL ASIAN REPS). 2) ‘OTHER SOUTH ASIAN’ includes ‘ASIAN CARIBBEAN’, ‘BENGALI’, ‘BHUTANESE’, ‘GUYANESE ASIAN’, ‘KENYAN ASIAN’, ‘NEPALESE’, ‘PARSI’, ‘SEYCHELLOIS’, ‘SOUTH ASIAN’, ‘TAMIL’. 3) 'JEWISH' includes ‘JEWISH / ASHKENAZI’, ‘SEPHARDIC JEWISH’.

Table 2. The 20 most diverse areas by CEL name group Index (left) and ONS ethnic groups Index (right).

TTWA name	CEL Index	TTWA name	ONS Index
Crawley	0.811	London	0.427
Glasgow	0.739	Birmingham	0.367
Lanarkshire	0.725	Wolverhampton	0.337
Dundee	0.697	Bradford	0.317
Edinburgh	0.693	Leicester	0.291
Worcester & Malvern	0.689	Huddersfield	0.268
Aberdeen	0.681	Rochdale & Oldham	0.242
Wycombe & Slough	0.668	Blackburn	0.237
London	0.635	Bolton	0.231
Swansea Bay	0.634	Bedford	0.223
Luton & Watford	0.631	Wycombe & Slough	0.219
Stoke-on-Trent	0.629	Burnley, Nelson & Colne	0.186
Wirral & Ellesmere Port	0.623	Luton & Watford	0.185
Ipswich	0.613	Leeds	0.181
Oxford	0.602	Coventry	0.167
Cardiff	0.572	Manchester	0.163
Gloucester	0.571	Dudley & Sandwell	0.152
Portsmouth	0.56	Nottingham	0.138
Leicester	0.555	Milton Keynes & Aylesbury	0.133
Blackburn	0.554	Derby	0.132

Source: Electoral Register / ONOMAP, Labour Force Survey.

Table 3. Links between diversity (2001) and wages / house prices (2001-2006).

Log wages, 2001-2006	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
CEL name groups Index, 2001	-0.078*	-0.120**	-0.178***			
	(0.044)	(0.047)	(0.064)			
ONS ethnic groups Index, 2001				0.062	-0.051	-0.269
				(0.085)	(0.095)	(0.373)
Urban TTWA		-0.002	-0.082*		-0.016	-0.024
		(0.018)	(0.042)		(0.019)	(0.024)
Urban * CEL Index			0.190**			
			(0.088)			
Urban * ONS Index						0.237
						(0.368)
Controls	No	Yes	Yes	No	Yes	Yes
Observations	211	205	205	232	222	222
F-statistic	3.137	5.306	4.929	0.527	2.429	2.171
R^2	0.016	0.176	0.192	0.001	0.092	0.093
Log house prices, 2001-2006	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
CEL name groups Index, 2001	0.128*	0.131**	0.193***			
	(0.065)	(0.056)	(0.070)			
ONS ethnic groups Index, 2001				-0.227**	0.020	-1.029**
				(0.108)	(0.101)	(0.406)
Urban TTWA		0.039*	0.116**		0.047*	0.008
		(0.023)	(0.051)		(0.024)	(0.028)
Urban * CEL Index			-0.189*			
			(0.109)			
Urban * ONS Index						1.119***
						(0.402)
Controls	No	Yes	Yes	No	Yes	Yes
Observations	158	156	156	179	173	173
F-statistic	3.862	8.925	7.984	4.452	7.593	7.113
R^2	0.029	0.373	0.384	0.021	0.282	0.309

Source: Electoral Register, Labour Force Survey, 2001 Census, Land Registry. Controls and constant not shown. Standard errors in parentheses, clustered on Travel to Work Area. * = statistically significant result at 10% level, ** = significant at 5% level, *** = significant at 1%.

Endnotes

[T] The UK's migration patterns and demography shifted further when a number of East European countries, plus Malta and Cyprus, joined the European Union in 2004. The UK was one of the only countries not to impose controls on labour market access to migrants from these countries.

[2] Data from the 2011 Census. For black and minority ethnic groups the figure is rather higher at 48%. Accessed via Nomis, 23 March 2021, http://www.nomisweb.co.uk/census/2011/lc2205ew.

[3] White British 45,134,686; Asian / Asian British 4,213,531; White Other 2,845,942; Black / African / Caribbean / Black British 1,864,890; Other ethnic group 563,696. Accessed via Nomis, 23 March 2021, http://www.nomisweb.co.uk/census/2011/ks201ew.

[4] Data for Northern Ireland is not available. To the extent Electoral Roll data under-represents minority ethnic communities, especially in urban areas, ONOMAP-based estimates will be lower bounds.

[5] I drop Northern Ireland to make the data directly comparable with ONOMAP estimates. I work with the quarterly microdata, keeping Wace 1 respondents and pooling to produce calendar years. I restrict the analysis to the ONS official working-age population (16-64 for men, 16-59 for women).

[6] Specifically, Travel to Work Areas (TTWAs) are defined as the area in which at least 70% of residents work in the area, and vice versa. Labour Force Survey and ONOMAP data are only available at Local Authority District (LAD) level, which do not represent real local economies. As District boundaries are not congruent with TTWA boundaries, I adopt a two-stage linking procedure. For LFS data, I first aggregate individual data to LAD averages using LFS weights. Next, for all data, using the November 2008 National Postcode Sector Database, I calculate the number of postcodes in each 2001 TTWA and in each of its constituent LADs. I then calculate each LAD's 'postcode share' of the relevant TTWAs' total postcodes. For each TTWA, shares sum to one. Shares are then used to construct TTWA-level averages from the relevant LAD-level averages.

[7] Control variables are all built from the Labour Force Survey, apart from population density which is taken from the 2001 Census.

[8] https://superdiv.mmg.mpg.de, accessed 18 April 2021.