Ethnic Pluralism, Immigration, and Entrepreneurship

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ABSTRACT

We consider the effects of immigration and ethnicity on entrepreneurship, distinguishing between the individual traits and the environmental characteristics. We look beyond the resource-opportunity framework and occupational choice: culture and values matter. Yet, instead of assigning the latter to specific ethnic features, we relate them to both immigration, and to the social environment defined by the share of immigrants, and by ethnic diversity. Empirical evidence we provide is based on Global Entrepreneurship Monitor UK data, 2003-2013. Having more immigrants in the locality enhances entrepreneurship. With increase in ethnic diversity, the likelihood of being engaged in start-up activity decreases, then increases.

KEYWORDS: Entrepreneurship, Migration, Ethnicity, Diversity, United Kingdom, Global Entrepreneurship Monitor

JEL: F22, J15, J61, L26, R23

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ABSTRACT

We consider the effects of immigration and ethnicity on entrepreneurship, distinguishing between the individual traits and the environmental characteristics. We look beyond the resource-opportunity framework and occupational choice: culture and values matter. Yet, instead of assigning the latter to specific ethnic features, we relate them to both immigration, and to the social environment defined by the share of immigrants, and by ethnic diversity. Empirical evidence we provide is based on Global Entrepreneurship Monitor UK data, 2003-2013. Having more immigrants in the locality enhances entrepreneurship. With increase in ethnic diversity, the likelihood of being engaged in start-up activity decreases, then increases.

INTRODUCTION

'The banker said: "It's a slum! It's still getting some immigrants!"' (Jacobs, 1961: 11)

In this paper, we examine the relationship between immigration, ethnicity and entrepreneurship, arguing that it is not a straightforward one, and that to understand it, one has to consider culture, values and attitudes. Furthermore, the values and attitudes cannot be explained by reference to specific ethnic traits alone. We posit that focusing on values and attitudes help us to understand why starting a new business is more likely for immigrants than for others, and why their presence in the local neighbourhood has a positive effect on entrepreneurship in the local community as well. We emphasise that what is often attributed to

'self-selection' and the dynamism of individual migrants characterised by entrepreneurial skills, may be confounded with a positive externality that they produce for the local community. This chimes well with the contention that areas that absorb large in-flows of immigrants also gain in social diversity, which is an important factor in enhancing local entrepreneurship (Jacobs, 1961; Lee, Florida and Acs, 2004; Smallbone et al. 2010; Efendic et al. 2015). This is a slightly different angle of diversity, compared to that considered by Florida et al. (2004), whose main focus relates to 'creative class'. To test the effects of diversity on entrepreneurial entry more directly, we use data on ethnicity and utilise a simple but effective measure: the ethnic Herfindahl Index. The evidence we obtain suggests that ethnic diversity has a non-monotonic, J-shaped effect on entrepreneurship. We explain this effect by distinguishing between 'ethnic pluralism' and 'ethnic polarisation', drawing on Effendic et al. (2015).

Combining the elements presented above, the overarching aim of this paper is to examine how aspects of both immigration and ethnicity, which may be taken as associated with entrepreneurial values, affect individual entrepreneurial entry. To achieve this, we adopt a multilevel conceptualisation, where both the individual traits of immigration and ethnicity, and the local neighbourhood characteristics related to those, affect individual entrepreneurship, understood as engagement in a start-up activity. Moreover, both the individual and the environmental effects of immigration may be easily confounded with the effects of ethnicity; and we make a contribution by disentangling those aspects.[i]

In our empirical analysis we use individual level data drawn from the UK Global Entrepreneurship Monitor (GEM), covering eleven years: 2003 to 2013. To test our hypotheses, we apply a multi-level estimator in a form of a logit model, enhanced with random effects corresponding to UK local administrative units. Our dependent variable is engagement in start-up activity (nascent entrepreneurship). Here, following the standard GEM definition, nascent

entrepreneurs are individuals between the working ages of 18 to 64 years, who have: taken some action towards creating a new firm; expect to own at least a share of the new business; and have not paid any salaries and wages for more than three months. In turn, immigrants, are those born abroad, as in Levie (2007) and Levie and Hart (2011). The ethnicity variable is based on fifteen ethnic categories as defined by the Office for National Statistics and adopted by GEM UK.

The study makes a contribution to the literature in three ways. First, integrating individual and environmental level explanatory variables related to immigration and ethnicity in a single conceptual framework enables us to solve some of the ambiguities confounding the literature. Here we follow the emerging literature on regional entrepreneurship that adopt multi-level theory and econometrics and utilise GEM dataset (Bosma, 2009; Stuetzer et al., 2014; Hundt and Sternberg, 2014). The stress on locality and neighbourhood in explaining entrepreneurship can be traced back to Jacobs (1961).[ii] Second, we contribute to a narrower knowledge on entrepreneurship, ethnicity and immigration by testing the empirical reach of the theory at a sub-regional, local level, which until now, notwithstanding its importance, has been overlooked in empirical quantitative research.[iii] Third, and related, our results suggest that in addition to the individual effects of immigration and ethnicity, the environmental aggregated effects of these two characteristics are important for entrepreneurship. In particular, we argue that the critical factor of local entrepreneurship is not just that the immigrants arrive with unique knowledge and skills that they utilise in their own newly created businesses, but also that they produce positive local spill-over effects. A similar logic applies to ethnic mix, albeit here the environmental effect is non-monotonic. What links our interpretation of these two effects is that we see them as operating through increased diversity and we explain this by building directly on Lee et al. (2004), yet complementing their reasoning with the social psychology argument.

The rest of the paper is structured as follows. The next section discusses the theory, including how this may help in explaining why immigrants show a higher propensity of becoming entrepreneurs than indigenous people, and how they may have an indirect positive local impact on entrepreneurship. In a similar manner, we discuss the effects of ethnicity. Then, we outline the methodology and present the database we drew upon. Following from this, we summarise the results of the logit random effects regressions, which correspond to the formal tests of the hypotheses. Finally, we offer a discussion and draw some policy implications.

THEORETICAL FRAMEWORK AND HYPOTHESES

We wish to explore the following set of questions. Why are immigrants more likely to become entrepreneurs that indigenous people? Why are the members of ethnic minorities more likely to become entrepreneurs? These two questions relate to individual effects on entrepreneurship. We supplement them with questions related to the contextual effects of factors operating at local level. Why might there be an effect of local ethnic diversity on individual entrepreneurship? Why might the local presence of immigrants have a positive effect upon individual entrepreneurship (of both immigrants and non-immigrants)? We will start with the individual level.

Immigrants as entrepreneurs

Immigrants can be attracted to entrepreneurship through both push and pull factors, and we will consider these in turn. Parker (2009) discusses the push factors that lead immigrants towards self-employment, combining them under the heading of ‘blocked mobility’ (p. 176). These factors include formal and informal barriers, due to which some labour market opportunities in paid employment are more difficult to realise for many immigrants, who are therefore likely to be pushed into self-employment. Here, formal barriers may include non-

validated foreign qualifications, or more radically not having a legal right to work altogether. In the latter case, self-employment remains an attractive form of work as it enables immigrants to escape detection by the authorities (Parker, 2009). Informal disadvantages that may close options in paid employment relate to language, cultural differences, prejudices and discrimination (Bolívar-Cruz et al., 2014). All these factors imply that some immigrants may start a business as a means of economic survival (Basu, 2006), but even more likely due to the lack of jobs corresponding to their level of qualifications (Levie, 2007; Ram, Theodorakopoulos and Jones, 2007).

However, in addition to the necessity motive, there may be a link between the capacity to spot and realise economic opportunities, and immigration. The decision to migrate may be seen as an entrepreneurial decision, which implies risk-taking. It is based on the expected realisation of economic gains from moving somewhere else, under conditions of limited knowledge and uncertainty. As argued by Parker, immigrants are 'self-selected risk takers by virtue of their willingness to leave their homeland to make their way in a foreign country' (Parker, 2009: p. 176; also: Neville et al., 2014). This is confirmed by Levie (2007) who found that in the UK, immigrants are characterised by different attitudes to risk than UK life-long residents and alongside that, by higher levels of confidence in their own skills.

The argument above focuses on what could be the perceived inherent characteristics of immigrants; characteristics that were already there before the actual act of moving abroad: immigrants may be seen as self-selected individuals who have the capacity to identify opportunities and possess the attitudes conducive to realising entrepreneurial opportunities. This stresses the role of subjective aspects in explaining the entrepreneurial propensity of immigrants. At the same time, however, it is also the objective situation of being an immigrant, of being somebody different to the natives, that itself triggers entrepreneurial opportunities. This advantage is explained by Bolívar-Cruz et al. (2014: p.32): 'migrants, having come from

elsewhere … see the world differently to life-long residents and as a result see a wider set of opportunities in their local area'. A similar argument is developed by Basu (2006), who posits that the higher opportunity recognition by immigrants is based on the involvement in dual cultures, on the radically different prior experience compared to non-immigrants, and on the higher creativity that results from it. Thus, an additional different pool of knowledge and worldviews may give immigrants an advantage in opportunity recognition.

We may also note, that once we emphasise that the advantage of immigrants relates to combining the knowledge they brought with them with the local knowledge they learn in the host country, the argument may be generalised, and also extended to non-immigrants. Namely, non-immigrants when exposed to immigrants in their neighbourhood may also be capable to source new knowledge and combine it with their own. This is an argument we will consider later on when discussing the impact of diversity in local areas.

Individual effects of ethnicity

Next, we turn to the individual effects of ethnicity. Separating the latter from immigration is important; yet, as argued by Basu (2006), business ownership among ethnic minorities is used interchangeably in the literature with the notion of immigrant entrepreneurship (see also: Ram et al., 2017). This leads to confusion. For example, in the context of Europe, and Britain as a destination country in particular, many immigrants may be culturally and ethnically close to the indigenous people.

More generally, ethnic minorities may or may not have equally strong linkages as immigrants to their countries of origin (Basu, 2006). Likewise, some of the ethnic minorities may already be well established with relatively strong within-country links, external to their community. In contrast, both types of links (weak within the host country, and strong with the country of origin) were the key factors we emphasized with respect to immigrants.

Moreover, we do not posit arguments that relate to specific characteristics of particular ethnic cultures, seen as a factor in self-selecting into entrepreneurial entry. Conceivably, the availability of some resources may be typical to various ethnic groups regardless of their specific identity (Bolívar-Cruz et al., 2014; Levie and Hart, 2013). It is found that ethnic minorities generally are characterised by higher entrepreneurship rates, even if the latter vary significantly amongst the different ethnic groups (Basu, 2006). This may follow from the fact that ethnic minorities may have strong in-group social capital (Ram et al., 2007). Both Aldrich and Kim (2007) and Light and Dana (2013) emphasise that typically, start-up teams are formed by relying on a close-knit social neighbourhood. The latter implies that these entrepreneurs can rely on a specific set of resources, such as'access to relatively inexpensive, reliable, trustworthy labour; access to finance from within the ethnic community – the trading experience of many migrant communities – and cultural features such as strong family structures' (*Ibid.*, p. 589). In addition, many of these start-ups address the needs of co-ethnic populations residing in the vicinity (Ram et al., 2007). Typically, these new ventures are not started on arrival; a more distinctive pattern is where the newcomers first work for existing ethnic businesses, only to start their own companies later on (Levie, 2007).

Environmental effects of ethnic diversity: ethnic pluralism versus ethnic polarisation

We now move from the individual to consider contextual effects. While an ethnic minority may support its members with social and other resources conducive to entrepreneurship, it may also have beneficial external effects, increasing local diversity. Where this ethnic diversity persists, it becomes associated with what Hansen and Niedomysl (2009) see as a good 'people's climate': a space characterised by tolerance, respect for diversity and open-mindedness or, put another way, a cosmopolitan flair (Figueira et al., 2016). Diversity becomes self-sustained,

resulting in neighbourhoods that attract/retain a high number of ethnic minorities who look, think and act differently. Tolerance and inclusiveness becomes embedded, which makes a neighbourhood or region more attractive; as a result, it draws and retains a large number of talented individuals with diverse cultural backgrounds. In turn, these individuals contribute to the reproduction of diversity, creating a virtuous circle. Mixing the different perspectives, they contribute to a climate where innovative, entrepreneurial ideas are easily accepted and supported, which in turn leads to the creation of new businesses.

To anchor this argument in theory, we follow Mickiewicz, Stephan and Sauka (2016), emphasising the value perspective on entrepreneurship. Drawing on Schwartz's theory of human values (Schwartz, 1990, 1992, 2009), one can map values in order to consider which ones associate most closely with entrepreneurial behaviour, both directly and indirectly, via their patterns of conflict and compatibility. Schwartz's theory points to an important aspect of individualism: openness to change (contrasted with conservation) that in turn drives independence, proactiveness, novelty, and risk-seeking behaviour, all of which are associated with entrepreneurship. Next, drawing on the results from social psychology research discussed by Pettigrew (1998), we posit that it is the experience of exposure to diversity that leads to a shift in values. Over time, this in turn converts into the local culture, which becomes conducive to entrepreneurship and innovation (Feldman, 2001).

Regular face-to-face contacts with representatives of different cultures, as for example contacts resulting from common participation in the local educational system by both pupils and parents, may diminish prejudice and 'lead to a less provincial view of outgroups in general' (Pettigrew 1998: p. 72). This, in turn, results in the 'generalisation from the immediate outgroup to other outgroups'; that is, participation in intergroup leads to 'greater acceptance of minorities of many types' (Pettigrew 1998: p. 75). Therefore, experience of ethnic pluralism is a precedent of social norms that generalise into the approval of non-standard behaviour,

experimentation and innovation. Stephan and Uhlaner (2010) argue that the presence of those supportive social norms leads to higher levels of entrepreneurial activity.

The value perspective we emphasise here complements more traditional lines of reasoning that stress the significance of knowledge diversity. The local presence of diverse knowledge is associated with the identification of entrepreneurial opportunities. This knowledge can be created in various regionally-embedded organisations - such as universities, trade associations, local innovative firms, and other stakeholders that offer technical, financial and networking services (Feldman, 2001). Yet, the quantity and quality of the entrepreneurship-relevant knowledge also depends on the regional composition of the adult population, with diversity being an important dimension (Lee et al., 2004). Diversity implies that there are more opportunities to combine elements of knowledge to create new insights. Thus, the entrepreneurial process is facilitated by spatial proximity of diverse knowledge owners and diverse potential users (Florida, 2002).

However, the values and the knowledge perspectives on diversity are difficult to separate; as Estrin, Mickiewicz and Stephan's (2016) argue, what and from whom we learn is strongly associated with values we attach to different sources of knowledge. The sources of knowledge we value are those that we pay attention to. Once we appreciate ethnically-defined outgroups, we are ready to learn something novel.

Taking stock, all this could lead us to conclude that entrepreneurship is always facilitated by the sustained presence of an ethnically diverse population in the locality. However, this optimistic conclusion may be simplistic. Efendic et al. (2015) moves this discussion forward by distinguishing between two types of diversity: one representing local ethnic pluralism and another one corresponding to ethnic polarisation (fractionalisation), and find entrepreneurship correlated with the former but not with the latter. Here, it is the ethnic pluralism, not just any form of diversity, which corresponds to the values of tolerance supporting experimentation, a

broader knowledge base, and more generally wider access to resources - human capital in particular.

As already argued, a diverse ethnic mix may bring together various abilities, different experiences and ways of thinking related to a variety of cultures; this in turn may lead individuals towards innovation, experimentation and creativity (Alesina and La Ferrara 2005; Florida 2002, 2005; Lee et al. 2004; Smallbone et al. 2010). Thus, the conditions of diversity are conducive to a larger and more diversified pool 'of underexploited knowledge useful for commercialisation of new ideas' (Marino et al. 2012). Yet, at the same time, to transform an environment into one that supports entrepreneurship, diversity also has to come with low communication barriers, which makes access to this knowledge and its utilisation relatively easy (Audretsch et al. 2010; Efendic et al. 2015; Lee et al. 2004; Marino et al. 2012; Smallbone et al. 2010).

Here, the distinction introduced by Efendic et al. (2015) may also help explain why the existing literature finds that ethnic diversity may have both positive and negative effects (Ram et al. 2013): co-existence of different ethnic groups in one locality may in some cases be associated with ethnic polarisation or fractionalisation, instead of ethnic pluralism. Different communities may live alongside each other with little inter-ethnic communication, so that gains from exchange of knowledge are not realised. Individuals belonging to a homogenous ethnic majority or minority group in an ethnically fragmented local environment may face a relatively narrow knowledge base[iv]; and this is likely to affect the entrepreneurial attitudes negatively.

The key question, however, is how to distinguish between ethnic pluralism and ethnic fragmentation. Efendic et al. (2015) rely on survey data, and direct, subjective distinction by the respondents, but this method imposes constraints on the size of the sample, unlike objective indicators. The latter imply drawing some inferences from the ethnic composition in the local area and this is the direction we follow. At the one end of the spectrum we see communities

characterised by the presence of many ethnic groups, of which none plays a dominant role. Frequent, longer term experience of cross-group relations leads to recategorization: seeing others as members of a larger group, and less as members of outgroups (Pettigrew, 1998). Local potential for co-operation and cross-learning increases, and likewise values accepting non-standard behaviour and experimentation become embedded. This situation is what may be labelled ’ethnic pluralism‘.

Next, we face a situation where the number of ethnic groups gets smaller; the ethnic composition becomes concentrated, but yet not dominated by any ethnic group. It is here that the risk of ethnic fractionalisation or polarisation emerges. A smaller number of ethnic groups may facilitate residential segregation, which in turn is associated with less contact (Fairchild, 2009).

Finally, further along the axis of concentrated ethnic structure we arrive at a situation where one ethnic group dominates the local ethnic composition. This may be associated with strong ‘in-group’ social capital, which now covers the whole locality, even if advantages from diversity are lost.

Taking stock, our argument here implies a U-shaped relationship between entrepreneurship and the degree of concentration in the local ethnic structure.

Environmental effects of immigration

Immigrants come with new knowledge that they can commercially exploit via entrepreneurship. Yet, this knowledge may also be commercially exploited by others through starting new businesses. Although some empirical analyses indicates that immigrants as a group proportionately create more new firms than the indigenous population (Boschma and Fritsch 2009; Kalantaridis and Bika 2006; Lee et al. 2004; Levie 2007; Levie and Hart 2013), others found no support for this proposition (Hansen and Niedomysl 2009; Stuetzer et al. 2014).

However, the ambiguity of empirical findings may relate first to potential displacement effects caused by immigration, and second to not being able to distinguish between the individual level and the environmental effects of immigration. Indeed, arguments related to the knowledge spill-over effects of entrepreneurship (Audretsch and Keilbach 2007) can be applied to the spill-over effects resulting from the presence of immigrants. We expect, therefore, that a higher share of immigrant population in the neighbourhood – indicating a wider knowledge base within the community – will have a positive effect on an individual's likelihood to engage in start-up activities.

Moreover, again we may see the presence of immigrants as a parallel indicator of diversity, corresponding, therefore, not only to a rich pool of knowledge and ideas, but also coming with the potential to amplify values conducive to entrepreneurship, recalling the line of argument already presented above. To consider the share of immigrants as indicative of diversity and therefore associated with entrepreneurship is not a novel argument; it has been already articulated by Lee et al. (2014), who consider the share of immigrants as an indicator of the 'melting pot', a term that is not far from our concept of 'pluralism' we already discussed. However, we prefer the label of 'pluralism', as it signals the complexity of social structures that support inter-group cooperation without supressing specific, decentralised pools of knowledge. From the entrepreneurship perspective, these original pools of knowledge retain value when they do not melt.

Hypotheses

The discussion so far can now be brought together into four hypotheses, which correspond to the four factors of entrepreneurship considered above, first with respect to the individual level and next with respect to the locality. Thus, we posit:

H1: Individual immigrants are characterised by a higher propensity to engage in nascent start-up activity.

H2: Members of ethnic minority groups are characterised by a higher propensity to engage in nascent start-up activity.

H3: Individuals living in localities with a higher share of immigrants are characterised by a higher propensity to engage in nascent start-up activity.

H4: The relationship between ethnic diversity in a locality and the individual propensity to engage in nascent start-up activity is non-linear, U-shaped.

DATASET AND METHODS

In this section, we discuss the datasets used in our empirical analysis including the variables representing individual and regional characteristics. Following on from this, we describe our estimation strategy.

The individual level data is drawn from the 2003 to 2013 pooled Global Entrepreneurship Monitor (GEM) UK database based on the annual adult population surveys. It consists of random samples, stratified by region, of the working age (16 to 64 years) population. It was compiled via a CATI telephone survey using random dialling techniques of fixed and mobile numbers by a professional marketing company (Bosma et al., 2012). Accounting for

incompleteness of data in the variables we use, our effective sample size varied from 97,371 to 97,854 usable cases, depending on the model (see Table 2 below).

Individual level: dependent variable and predictors

Our dependent variable is nascent engagement in setting up a new business venture activity, which we take as our empirical proxy for entrepreneurship. It denotes individuals who have taken some action towards creating a new firm in the past year, expect to own at least a share of the new business and have not paid any salaries and wages for a period exceeding three months. These are the standardized criteria specified by GEM (Bosma et al., 2012).

To test Hypothesis 1, following Levie (2007) and Levie and Hart (2011), we define immigrants using a dummy variable for which the value of one refers to those born abroad. Parallel to this, internal regional migrants (in-migrants), are 'those who re-located home from another region of the UK': (Levie, 2007: 143). Life-long residents are in turn treated as a benchmark category.[v]

Ethnic affiliation of the respondent is based on the self-reported statement answering the GEM survey question, which distinguishes between fifteen ethnic categories as defined by the Office for National Statistics in the UK. However, some of these come with low frequencies that lead to difficulties in estimation. For that reason, we combined a few categories, including mixed ethnic, and some Asian ethnic groups, resulting in eight categories as will be described below. We will consider 'White British' as the benchmark category, representing majority ethnic membership; the contrasts with this category will be utilised to test Hypothesis 2.

Finally, in the literature on entrepreneurship, age, gender, education, (initial) employment status, income, and current business ownership and management have all been shown to affect an individual's propensity to engage in entrepreneurial activity.[vi] These variables may also be associated with immigrant versus non-immigrant status, and with ethnicity, and hence there is

a need to control for them in order to isolate the independent effect of immigration and of ethnic minority status on the probability to engage in start-up activity.

Regional level predictors

In our specifications, we include three dimensions, following the Hypotheses 3 and 4 we presented in the theoretical section above. These are: (i) the Ethnic Herfindahl index, (ii) mean presence of individuals born outside the UK in the local authority area, and – as a control – likewise (iii) the mean of internal migrants (in-migrants) - those born in another region within the UK. We will discuss all three measures in turn. Other unobserved regional characteristics are captured by regional effects included in our multilevel estimations, as presented below.

The Herfindahl Index is constructed in a standard way by adding the squares of shares of fifteen ethnic categories in any local authority area. Its possible values vary from 0.067 for regions with equal shares of all possible ethnic categories, to 1 for regions with only one ethnic group present. The mean value for our sample is around 0.8. Accounting for our priors as discussed above, we include both the linear and the square term of the index; consistent with Hypothesis 4, we expect a U-shaped relationship with the likelihood of individual nascent start-up.

In addition, two other neighbourhood characteristics that we include are: the average number of immigrants in the neighbourhood (for Hypothesis 3) and internal migrants (both as defined above). In addition, we include random effects related to the territorial units (at the local authority level). Last but not least, we also include annual time dummies.

Table 1 below shows the description of variables used in this study; Table 2 presents the correlation matrix; and Figure 1 (online appendix) maps averages of our dependent variable (nascent entrepreneurship rates) across Local Authority Districts (LADs).

{Table 1a and 1b; Table 2}

Estimation strategy

We apply a logit estimator to predict the probability of an individual to engage in start-up activity. In order to get a more consistent estimator we augment the model with the local authority (random) effects, resulting in multi-level design. Denoting i as related to individual characteristics and *j* as referring to regional characteristics, the model has the following general structure (see e.g.: Greene and Hensher, 2010):

$$y_{ij}^{*} = \gamma x_{ij} + v_{ij} + u_{i},$$

$$y_{ij} = 1 \; if \; y_{ij}^{*} > 0, and \;\; 0 \; otherwise.$$

Here *y* represents observed entrepreneurial entry, a dummy variable, for which 1 corresponds to being engaged in nascent start-up activity. In turn, *y** is the unobserved utility of entrepreneurial entry with mean at zero. Regarding explanatory and control variables denoted as matrix *x* that comes with a vector of coefficients *γ*, we use all the variables listed in Table 1 above. The term *u* corresponds to unobserved, individual specific heterogeneity (error term), which is assumed as unrelated to *x*, and *v* corresponds to random effect at the local authority area level. Assuming that a cumulative distribution of the error term is logistic delivers the logit estimator that we use.

Our primary interest is in how the likelihood of individual start-up activity correlates with immigration and ethnicity, both at the individual level and at the level of the locality. As there

may be collinearity between the two, we first estimate a model with the immigration variable included and ethnicity excluded, and next the model that is designed the other way around. The third model includes both immigration and ethnicity variables, and in the fourth model we add the interaction effects between these two types of variables. In the final model, we include our structural indicator of local ethnic composition, the Ethnic Herfindahl Index.

ESTIMATION RESULTS

The estimation results are presented in Table 3 below. For the ease of interpretation, instead of logit coefficients we report odd ratios. When interpreting these, it is worth remembering that odds ratios higher than one represent positive effects; those lower than one represent negative effects.

{Table 3}

With respect to immigration, we see positive results both for the individual and for the local environmental level variables. The odd ratios for the two types of variables cannot be directly compared; both represent an effect of a unit increase in a variable, yet while for local environmental effects the variables are continuous and defined as shares, for individual effects these are dummies and therefore the odds ratios directly measure a difference resulting from being an immigrant.

We can, however, compare the individual effects of being an immigrant with that of being an in-migrant, and likewise the two environmental effects. For the individual effects, the odds ratio for being an immigrant is higher than for being a regional migrant, while both are positive and significant. Thus, we found strong support for Hypothesis 1.

The pattern is more complicated for environmental effects. In the model with migration only, the positive environmental effects of an immigrant population are stronger than those of a regional in-migrant population in the local area. However, as ethnicity is correlated with immigration, adding the former to the models makes the environmental effect of immigrant population weaker. In model five, with Ethnic Herfindahl Index, the environmental effect of immigrant population becomes insignificant. We may, therefore, argue that we have partial support for Hypothesis 3. This is consistent with the results that Lee et al. (2004) obtained for the US: their 'melting pot' variable, an analogy of what we use here, was insignificant.

Turning now to ethnicity, we see that for most of the ethnic minority groups, the individual effects are positive and significant, consistent with Hypothesis 2. Based on Models 2 and 3, we find the strongest propensity for entrepreneurial activity among Black respondents, consistent with the results obtained earlier by Levie and Hart (2013), and likewise for US by Koellinger and Minniti (2006).

It is also interesting to look at the interactions between the ethnic variables and immigration; for each ethnic group these interactions represent the within contrast between immigrants and ethnic minority members born inside the UK. For a number of ethnic minorities, we find that (within those groups) immigrants are actually less entrepreneurial: this refers specifically to Black, Indian, and individuals of mixed ethnicity. We do not see this effect, however, with respect to White Irish and White Others, where the latter category captures the recent inflow of immigrants from the (enlarged) European Union, Poland in particular; these new European immigrants come across as entrepreneurial.

Last but not least, in Model 5 we add the ethnic Herfindahl Index as described above. The effects we obtain are significant and consistent with the theory we discussed earlier and with Hypothesis 4. Within diverse ethnic communities that we labelled as characterised by 'ethnic pluralism', the environment is conducive to start-up activities. As these communities become

less diverse, the propensity to engage in entrepreneurial activity weakens, as we move towards 'ethnic polarisation'. Finally, however, in the most homogeneous communities, the propensity to engage in entrepreneurship increases again, albeit at a lower level compared to that of the situation of diversity outlined above (thus, more a J-curve than a U-curve pattern). These effects are illustrated by Figure 2 (online appendix).

We obtain some additional interesting results related to our controls. Higher education increases the likelihood of being engaged in nascent start-up activity and so does higher income: human and financial resources facilitate entrepreneurship. The pattern related to occupational status is noteworthy as well. Compared with individuals in full time employment, we see two groups that are more likely to engage in nascent start-up activity: the unemployed (representing push-factors entrepreneurship) and part-time employees. The latter combine flexibility with the security that comes with an income stream from employment; this enables them to experiment with new projects, as discussed by Folta et al. (2010).

Similarly to being in full time employment, managing an existing young business comes with opportunity cost, and makes engaging in a start-up less likely. However, this effect fades away as the existing business matures: for owner-managers of existing businesses the effect becomes insignificant.

As in other GEM-based studies (e.g. Estrin and Mickiewicz, 2011) we find females less likely to engage in nascent start-up activity. In addition, individuals over the age of 45 become less entrepreneurial.

Last but not least, the pattern over time remains consistent with macroeconomic trends. There are some (borderline significant) effects of lower entrepreneurial activity in the aftermath of the global financial crisis of 2008-2009, and a strong indication of recovery in entrepreneurial activity from 2011 onwards. The magnitude of these effects may be specific to

the UK: Hundt and Sternberg (2014) who investigate how regional entrepreneurship responded to crisis, emphasise the differences between Germany and the UK. In addition, Congregado, Golpe and van Stel's (2012) results suggest some nonlinearities in the effects of the crisis.

We did a few robustness checks to explore our results further. When we effectively isolated the impact of being in Inner London on the results by adding a corresponding dummy, the results on being an immigrant and on being the member of ethnic minority still hold. The result on Ethnic Herfindahl Index also remains significant, but that of having immigrants in the locality becomes mostly insignificant.

Similarly, with regard to the impact of the Ethnic Herfindahl Index, we explored if there are nonlinear effects of presence in a neighbourhood of both immigrants and regional migrants. For the presence of regional migrants, both the linear and the square term turned out insignificant. For the presence of immigrants in the neighbourhood, the linear term was positive and insignificant, while the squared term positive and significant. Both terms were actually jointly significant, yet this model does not come as superior to the linear specification as reported in Table 3, so we opted for the latter as the simpler one.

In addition, for ethnicity, we explored if the local population share of the ethnic group to which a given respondent belongs has an effect on his/her propensity to become an entrepreneur. It turned out not to matter. This is an interesting finding, as it suggests it is diversity and not having support from specific ethnic groups that matters across a locality.

Finally, due to multicollinearity concerns, we conducted multiple experiments, adding and removing the variables we have in our specifications, in order to see if some of the effects are sensitive to specifications related to the controls we used. It turned out they are not, again increasing our confidence in the final models we present.

CONCLUSIONS

Extant literature highlights the importance of a region's socio-economic environment for entrepreneurship (Fritsch and Storey, 2014; Sternberg, 2009; Bosma, 2009; Kalantaridis 2010). Yet, we still do not fully understand which environmental factors matter and why.

The role of both economic structures of production and economic diversity, and that of knowledge base is well understood. Our argument in this paper, however, is to stress a different and underexplored dimension: that of values, both as represented by an individual, and as embedded in local culture. Here we bring in social psychology we learned from Schwartz (1990; 1992; 2009) and Pettigrew (1998) and argue that there is a link between local social values and entrepreneurship. In particular, we emphasise social diversity as a factor leading to a sustained change in values towards those supporting entrepreneurship; we posit this works via acceptance of non-standard behaviour.

In turn, individually-held values related to risk taking, novelty and experimentation make entrepreneurial behaviour, and specifically being engaged in a nascent start-up, more likely. At the same time, however, the impact of these individual predispositions will be attenuated, if the prevailing local social norms are not conducive to entrepreneurship; that is, where 'supportive cultural capital' (Light and Dana, 2013) is missing. Under such conditions, an individual considering engaging in a new start-up will not receive social support and will not secure cooperation, which may mitigate against the move from considering a new venture to starting a new venture.

It is again here where social diversity plays a role. It may transform a locality into one that becomes more tolerant of new ideas and non-standard behaviour, building a local culture of experimentation. This is the social environment we labelled 'pluralism' and contrasted with both social segregation and with social homogeneity.

We see our main contribution in this paper as shifting the emphasis from the concept of diversity that accentuates wider and richer pools of knowledge, towards the one that stresses that sustained diversity goes hand in hand with transformation of attitudes. This shift in attitudes towards a more open local society, when embedded, becomes a factor supporting innovation and entrepreneurship. This way we add a new idea to the concept of local 'entrepreneurship capital' (Audretsch & Keilbach, 2004; 2005): we put forward a proposition about what type of local social structures may be conducive to attitutes supporting entrepreneurship and why.

At the same time, there are limitations to our work. The logic of our argument drives us beyond what can be directly supported by our data. While we assume attitudes as a transmission mechanism between social structures and entrepreneurship, we cannot test this mechanism directly. This leads us to an obvious call for further research. We posit that values and culture not only at the national level, but also at the local level should be taken seriously, and its linkages with entrepreneurship should be explored further.

Turning to immigration, based on our tests we find support for the notion that alongside ethnic pluralism, immigration is also good for entrepreneurship. With respect to immigration, applying a multi-level design, we were able to find support for the idea that the impact of immigration is twofold: immigrants are more entrepreneurial compared to indigenous respondents, and also their presence in the local environment increases the likelihood of entrepreneurial entry, albeit the latter effect remains sensitive to specification. As our dependent variable relates to individual effect, this alleviates our concerns on the environmental effects being driven by simultaneity (endogeneity).

Finally, with respect to ethnicity, it appears that individuals from ethnic minorities are more entrepreneurial. This is a strong effect especially for blacks, despite the literature's bleak portrayal of this ethnic group on both sides of the Atlantic (Gold 2016; Fairlie and Robb 2010, 2012; Ram, Theodorakopoulos & Jones, 2007). Moreover, again, ethnicity affects the propensity for entrepreneurship as much via individual effect as via environmental local effect. Conceivably, the latter is a complex one; as just argued we hope that our work helps to address the ambiguity found in earlier literature. We argue that it is ethnic pluralism as a characteristic of a locale with multiple ethnic groups that is most conducive to entrepreneurship. This is easy to see when noticed that the curve in Figure 2 (online appendix) can be extrapolated much further to the left than to the right; that is, it is (reversed) J-shaped not U-shaped as we originally assumed. Yet, on the right-hand side of the graph, the ethnically homogeneous environments are actually performing better than polarised ethnic local areas. Thus, importantly, it is not the overall share of minorities that matters but rather the structural arrangements.

Generally, we find that some people are more entrepreneurial than others but also that people in some places tend to be more entrepreneurial: entrepreneurship is not space-blind and the local environment matters, as already emphasised by Jacobs (1961) in her seminal work on US cities. We find the positive effects of social diversity, as represented both by the share of immigrants as in Lee at el. (2004) and by the Herfindahl Index of Ethnicity we utilise. Entrepreneurship is about creating novel organisations, which to survive and flourish need to have some innovative elements. These in turn, come from those who place innovation high in their value set, and are supported in their locality by others that hold similar values. Such locality implies an environment that is open and inclusive.

There is a policy lesson here for the UK and beyond: remaining open to immigration and promoting pluralist environments that enhance inter-group cohesion is what makes the

economy more entrepreneurial and stimulates growth. But that leads to further question beyond this paper: we do not intend to promote a view of the world that is simplistic. Promoting openness successfully implies understanding and addressing concerns and fears of local people. This is another way of restating the theme of the local versus the global that makes regional studies an interesting and complex field.

Our final word is on the lessons of this research for the future direction of business support policy. Across England, many of the strategic economic plans of the 38 Local Enterprise Partnerships (LEPs) and their associated Growth Hubs embrace similar principles yet they struggle to embed these within the current range of policy initiatives designed to promote entrepreneurial activity. Recent research undertaken by the Centre for Research in Ethnic Minority Entrepreneurship in partnership with Citizens UK and the NatWest bank and funded by the Greater Birmingham and Solihull LEP demonstrates the importance of building an inclusive culture of business support for old and new immigrant groups[vii]. Lessons point to the need to understand the context for many immigrant entrepreneurs, the challenges it creates for building sustainable business ventures, and, consistent with our own argument, the recognition that connecting these businesses to wider business networks also means connecting to the communities in which they operate.

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Table 1a: Description of categorical variables (all at the individual level)

Variable	Description	Percentage
Dependent variable (Entrepreneurial entry)		
Start-up	1= if respondent is engaged in start-up activity	2.3
	0 = if respondent is not engaged in start-up activity	97.7
Predictors		
Foreign born	1= born outside the UK	6.4
	0 = otherwise	93.6
Internal migrant	1 = born in a different UK region	42.8
	0 = otherwise	57.2
Ethnicity	White British (benchmark, omitted category)	86.0
	White Irish	5.6
	White other	3.6
	Indian	1.1
	Bangladeshi and Pakistani	0.8
	Asian other	0.7
	Black	1.2
	Mixed	0.9
Controls		
Age	18-24 years (benchmark, omitted category)	8.0
	25-34 years	17.8
	35-44 years	25.2
	45-54 years	24.9
	55-64 years	24.1
Income	Head of household income:	
	up to 11,499 (benchmark, omitted category)	18.9
	11,500 to 17,499	15.5
	17,500 to 29,999	24.8
	30,000 to 49,999	23.6
	50,000 to 99,999	14.1
	100,000 or more	3.0
Female	1 = if respondent is female	58.4
	0 = if respondent is male	41.6
Higher education	1 = if respondent has higher education qualification i.e. post graduate degree and above	27.7
	0= otherwise	72.3
Occupational status	Working 30 hours or more per week (benchmark)	47.4
	Working 8-29 hours per week	15.8
	Homemaker or full time carer	5.4
	Not working; retired, sick, or disabled	24.0
	Not working; student	3.1
	Not working; unemployed	4.3
	1= if respondent has knowledge, skills and experience required to start a new business	31.83
Owner-manager of young business	1 = owner-manager of business less than 12 month old	2.2
	0 = otherwise	97.8
Owner-manager of established business	1 = owner-manager of business over 42 months old	4.9
	0 = otherwise	95.1

Table 1b: Description of continuous variables (all at the regional level)

Variable	Description	Mean	St.dev.	Range
Share of internal migrants	Born in a different region (local prevalence rate; based on local authority mean)	0.45	0.12	0.21-1.00
Share of foreign born	Born outside the UK (local prevalence rate; based on local authority mean)	0.09	0.08	0.00-0.48

Table 2. Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	Nascent startup	1.00																													
2	Immigrant	0.03	1.00																												
3	Regional migrant	0.02	-0.24	1.00																											
4	Immigrant avg	0.03	0.28	-0.05	1.00																										
5	Reg migrant avg	0.02	-0.06	0.23	-0.20	1.00																									
6	White Irish	0.00	0.06	-0.07	0.06	-0.02	1.00																								
7	White other	0.01	0.30	-0.07	0.13	0.01	-0.05	1.00																							
8	Indian	0.01	0.24	-0.06	0.15	-0.08	-0.03	-0.02	1.00																						
9	Bangladeshi & Pak	0.01	0.21	-0.05	0.09	-0.03	-0.02	-0.02	-0.01	1.00																					
10	Asian other	0.01	0.21	-0.05	0.09	-0.03	-0.02	-0.02	-0.01	1.00	1.00																				
11	Black	0.03	0.26	-0.06	0.22	-0.08	-0.03	-0.02	-0.01	-0.01	-0.01	1.00																			
12	Mixed	0.02	0.11	-0.02	0.10	-0.03	-0.02	-0.02	-0.01	-0.01	-0.01	-0.01	1.00																		
13	Herfindahl Eth Index	-0.03	-0.27	0.08	-0.94	0.33	-0.06	-0.11	-0.17	-0.09	-0.09	-0.23	-0.11	1.00																	
14	Higher education	0.05	0.12	0.15	0.10	0.05	0.02	0.07	0.06	0.05	0.05	0.03	0.02	-0.08	1.00																
15	Income 11.5-17.5k	-0.01	0.00	-0.02	-0.02	-0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.10	1.00															
16	Income 17.5-30.0k	0.00	-0.01	-0.01	-0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.02	-0.19	1.00														
17	Income 30.0-50.0k	0.01	0.00	0.02	-0.01	0.03	-0.01	0.00	0.00	0.00	0.00	-0.01	0.00	0.02	0.12	-0.18	-0.24	1.00													
18	Income 50.0k-100k	0.03	0.01	0.06	0.03	0.05	-0.01	0.01	0.01	0.00	0.00	-0.01	0.00	-0.01	0.23	-0.13	-0.18	-0.17	1.00												
19	Income 100k-	0.03	0.02	0.04	0.05	0.05	-0.01	0.01	0.01	0.00	0.00	-0.01	0.01	-0.03	0.12	-0.06	-0.08	-0.08	-0.06	1.00											
20	Works part time	0.02	-0.01	0.00	-0.02	0.04	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00	0.02	-0.02	0.02	0.02	0.00	-0.02	-0.01	1.00										
21	Homemaker, carer	-0.02	0.02	-0.01	0.02	0.00	0.01	0.00	0.01	0.01	0.01	0.00	0.00	-0.02	-0.06	0.02	-0.01	-0.05	-0.03	0.01	-0.10	1.00									
22	Retired, disabled	-0.07	-0.06	0.06	-0.07	0.00	-0.01	-0.02	-0.04	-0.03	-0.03	-0.04	-0.03	0.06	-0.13	0.05	-0.09	-0.18	-0.16	-0.06	-0.24	-0.13	1.00								
23	Student	-0.01	0.04	-0.06	0.07	-0.03	0.01	0.01	0.04	0.05	0.05	0.05	0.05	-0.07	-0.03	-0.01	-0.03	-0.03	-0.02	0.00	-0.08	-0.04	-0.10	1.00							
24	Unemployed	0.03	0.02	-0.03	0.04	-0.04	0.01	0.01	0.01	0.01	0.01	0.03	0.02	-0.05	-0.04	0.00	-0.04	-0.06	-0.05	-0.02	-0.09	-0.05	-0.12	-0.04	1.00						
25	Owns young bus.	0.03	0.01	0.02	0.01	0.03	-0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.04	-0.02	0.00	0.02	0.04	0.04	0.02	-0.03	-0.08	-0.02	-0.03	1.00					
26	Owns estab. bus.	0.01	-0.01	0.02	-0.01	0.07	0.00	0.00	-0.01	-0.01	-0.01	-0.02	-0.01	0.02	0.03	-0.03	-0.01	0.01	0.06	0.09	0.02	-0.05	-0.12	-0.04	-0.04	-0.03	1.00				
27	Female	-0.06	-0.01	0.01	-0.01	0.00	0.00	-0.01	-0.02	-0.01	-0.01	0.00	0.00	0.01	-0.04	0.01	-0.04	-0.05	-0.05	-0.04	0.22	0.18	0.01	0.00	-0.03	-0.06	-0.11	1.00			
28	Age 25-34	0.03	0.08	-0.06	0.08	-0.05	0.02	0.03	0.05	0.03	0.03	0.03	0.03	-0.08	0.13	-0.01	0.04	0.08	0.03	-0.01	0.00	0.06	-0.22	-0.02	0.02	0.03	-0.05	0.01	1.00		
29	Age 35-44	0.03	0.02	-0.01	0.02	0.00	0.01	0.01	0.01	0.01	0.01	0.02	0.01	-0.01	0.04	-0.02	0.03	0.08	0.07	0.03	0.08	0.07	-0.26	-0.06	0.01	0.04	0.02	0.02	-0.22	1.00	
30	Age 45-54	0.01	-0.01	0.02	-0.03	0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.02	0.03	0.01	-0.02	0.01	0.05	0.07	0.04	0.04	0.00	-0.19	-0.08	0.01	0.01	.	0.01	-0.21	-0.26	1.00
31	Age 55-64	-0.02	-0.04	0.06	-0.05	0.02	-0.02	-0.01	-0.03	-0.02	-0.02	-0.03	-0.03	0.06	-0.05	0.03	0.00	-0.06	-0.05	-0.02	0.01	-0.04	0.18	-0.09	-0.02	-0.02	0.05	-0.01	-0.21	-0.26	-0.26

Table 3. Estimation results: models explaining likelihood of nascent startup activity

	(1)	(2)	(3)	(4)	(5)
Foreign born	1.581***		1.154†	1.477**	1.158†
	(0.105)		(0.0951)	(0.193)	(0.0956)
Internal migrants	1.380***		1.366***	1.372***	1.366***
	(0.0629)		(0.0625)	(0.0629)	(0.0625)
Foreign born: LA mean	3.088***		2.030**	1.968*	0.753
	(0.786)		(0.539)	(0.521)	(0.750)
Internal migrants: LA mean	2.322***		2.606***	2.576***	2.885***
	(0.469)		(0.537)	(0.529)	(0.664)
White Irish		0.911	0.886	0.800	0.890
		(0.174)	(0.171)	(0.199)	(0.172)
White other		1.363***	1.358**	1.063	1.364**
		(0.127)	(0.146)	(0.201)	(0.147)
Indian		1.194	1.221	1.533*	1.214
		(0.155)	(0.170)	(0.287)	(0.170)
Bangladeshi & Pakistani		2.007***	2.080***	2.327***	2.093***
		(0.252)	(0.276)	(0.410)	(0.280)
Asian other		1.396*	1.432*	1.543	1.431*
		(0.224)	(0.242)	(0.433)	(0.243)
Black		2.680***	2.615***	3.070***	2.594***
		(0.253)	(0.280)	(0.431)	(0.280)
Mixed		2.063***	2.007***	2.276***	2.008***
		(0.246)	(0.249)	(0.324)	(0.250)
Foreign x White Irish				1.040	
				(0.421)	
Foreign x White other				1.103	
				(0.274)	
Foreign x Indian				0.532*	
				(0.152)	
Foreign x Bangladeshi & Pakistani				0.644	
				(0.176)	
Foreign x Asian other				0.713	
				(0.258)	
Foreign x Black				0.606*	
				(0.133)	
Foreign x Mixed				0.544*	
				(0.158)	
Ethnic Herfindahl Index					0.0591*
					(0.0732)
Ethnic Herfindahl Index squared					6.431**
					(4.523)
Higher education	1.451***	1.547***	1.437***	1.438***	1.440***
	(0.0636)	(0.0665)	(0.0633)	(0.0634)	(0.0634)

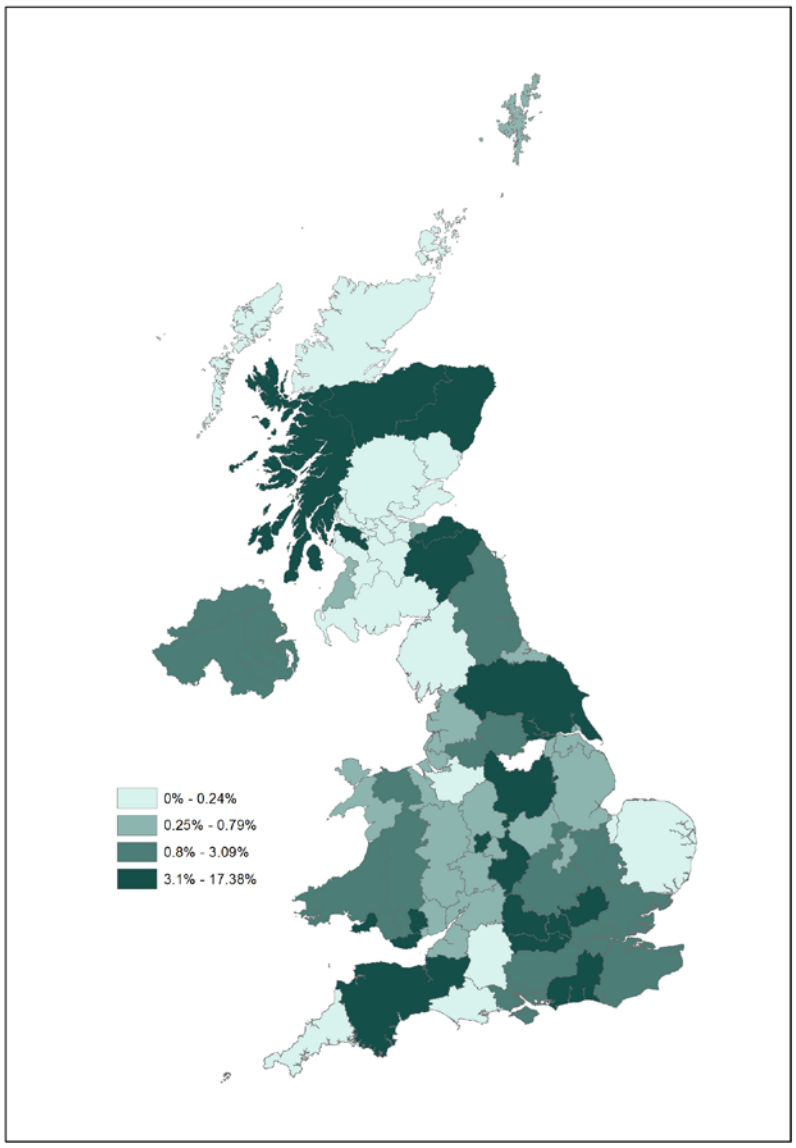
Income 11.5k–17.5k	0.995	1.022	1.010	1.008	1.009
	(0.0834)	(0.0860)	(0.0853)	(0.0851)	(0.0852)
Income 17.5k–30k	0.987	1.047	1.028	1.022	1.027
	(0.0750)	(0.0800)	(0.0787)	(0.0783)	(0.0787)
Income 30k–50k	0.909	1.008	0.974	0.967	0.975
	(0.0706)	(0.0788)	(0.0764)	(0.0758)	(0.0765)
Income 50k–100k	0.970	1.119	1.056	1.047	1.060
	(0.0803)	(0.0932)	(0.0883)	(0.0876)	(0.0887)
Income 100k or more	1.276*	1.503***	1.392**	1.373**	1.407**
	(0.133)	(0.158)	(0.146)	(0.145)	(0.148)
Working part time	1.554***	1.562***	1.558***	1.557***	1.557***
	(0.0851)	(0.0856)	(0.0855)	(0.0855)	(0.0855)
Homemaker or carer	0.783*	0.822†	0.796†	0.795*	0.798†
	(0.0911)	(0.0954)	(0.0929)	(0.0928)	(0.0930)
Retired or disabled	0.523***	0.539***	0.538***	0.538***	0.537***
	(0.0605)	(0.0624)	(0.0623)	(0.0623)	(0.0622)
Student	0.422***	0.414***	0.408***	0.407***	0.410***
	(0.0851)	(0.0835)	(0.0824)	(0.0823)	(0.0828)
Unemployed	2.058***	2.104***	2.076***	2.080***	2.076***
	(0.165)	(0.169)	(0.167)	(0.168)	(0.167)
Owner-manager: young business	1.434***	1.448***	1.423***	1.420***	1.421***
	(0.128)	(0.130)	(0.128)	(0.128)	(0.128)
Owner-manager: est. business	1.019	1.036	1.027	1.027	1.024
	(0.0844)	(0.0857)	(0.0852)	(0.0852)	(0.0850)
Female	0.474***	0.477***	0.474***	0.471***	0.474***
	(0.0207)	(0.0208)	(0.0208)	(0.0206)	(0.0208)
Age 25-34 years	1.045	1.070	1.051	1.058	1.052
	(0.0886)	(0.0902)	(0.0894)	(0.0902)	(0.0896)
Age 35-44 years	0.987	1.043	1.008	1.020	1.009
	(0.0819)	(0.0860)	(0.0841)	(0.0853)	(0.0842)
Age 45-54 years	0.778**	0.858†	0.816*	0.830*	0.815*
	(0.0666)	(0.0730)	(0.0703)	(0.0718)	(0.0703)
Age 55-64 years	0.542***	0.619***	0.582***	0.592***	0.582***
	(0.0515)	(0.0585)	(0.0557)	(0.0568)	(0.0557)
Year 2004	0.997	0.944	0.990	0.991	0.993
	(0.0906)	(0.0860)	(0.0904)	(0.0905)	(0.0906)
Year 2005	1.006	0.948	0.999	1.000	1.007
	(0.0856)	(0.0809)	(0.0853)	(0.0854)	(0.0860)
Year 2006	1.064	0.987	1.053	1.054	1.061
	(0.0848)	(0.0785)	(0.0842)	(0.0843)	(0.0849)
Year 2007	0.987	0.896	0.966	0.966	0.972
	(0.0784)	(0.0712)	(0.0771)	(0.0771)	(0.0776)
Year 2008	0.919	0.846*	0.909	0.907	0.915
	(0.0787)	(0.0722)	(0.0781)	(0.0779)	(0.0786)
Year 2009	0.964	0.864†	0.939	0.936	0.948
	(0.0837)	(0.0749)	(0.0820)	(0.0818)	(0.0828)
Year 2010	1.094	0.969	1.077	1.074	1.082

	(0.142)	(0.127)	(0.140)	(0.140)	(0.141)
Year 2011	1.370*	1.280†	1.336*	1.330*	1.346*
	(0.197)	(0.184)	(0.193)	(0.192)	(0.195)
Year 2012	1.796***	1.631***	1.755***	1.747***	1.759***
	(0.206)	(0.187)	(0.203)	(0.202)	(0.203)
Year 2013	1.392**	1.220	1.359*	1.355*	1.361*
	(0.179)	(0.156)	(0.176)	(0.175)	(0.176)
Constant	0.0197***	0.0330***	0.0175***	0.0174***	0.0498***
	(0.00305)	(0.00394)	(0.00275)	(0.00274)	(0.0312)
Variance in random effect	0.0191***	0.0407***	0.0216***	0.0208***	0.0188***
	(0.00943)	(0.0124)	(0.00967)	(0.00962)	(0.00935)
Number of observations	97,701	97,854	97,371	97,371	97,371
Number of local authorities	325	325	325	325	325

Notes: Random effects logit estimator.
Odd ratios reported in place of coefficients.
Standard errors in parantheses
*** significant at 0.001 level; ** significant at 0.01 level; * significant at 0.05 level; † significant at 0.10 level.

Appendix

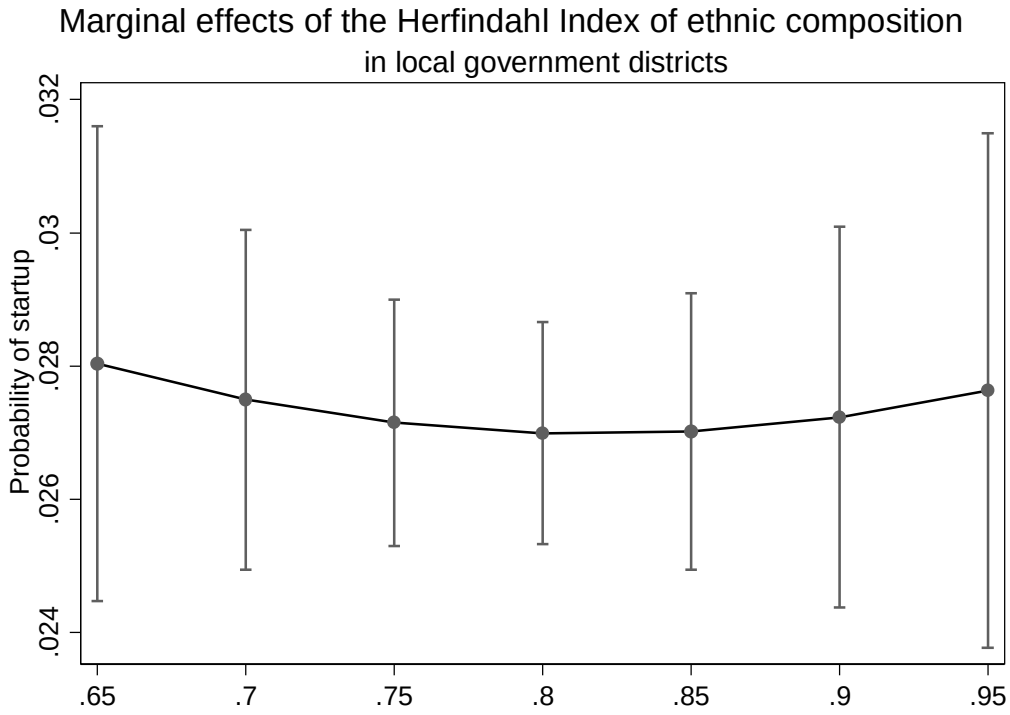
Figure 1. Mean nascent start-up rates across local government districts, UK, 2003-2013



Source: Global Entrepreneurship Monitor UK data.

The map presents the spatial distribution of the dependent variable. While in the regressions it is left at the individual level, for the sake of illustration, it is aggregated at the level of local government districts. It shows considerable variation in entrepreneurship across Britain and Northern Ireland.

Figure 2



The potential range of Herfindahl Index runs from zero to one, where zero (on the left) represents more diversity and one (one the right) represents less diversity. The graph is constructed so that is shows variation in a range of one standard variation below and above the mean value that is where the estimates are the most credible. And while the graph cannot be extrapolated much on the right hand side, it can be extrapolated considerably on the left hand side. This indicates that the probabilities of the startup are much higher where diversity is high.

[i] When the offspring of immigrants are also classified as immigrants, the distinction between ethnic minorities and immigrants becomes blurred. In contrast, we distinguish between both. For the discussion of definitional issues, see: Ram, Jones and Villares-Varela (2017).

[ii] For an informative, thorough overview of themes in regional entrepreneurship research, see: Sternberg (2009) and a recent update by Fritsch and Storey (2014).

[iii] See, however, Bosma (2009).

[iv] However, the distinction between (country defined) ethnic majority and minority remains important, regardless of what constitutes local majority or minority; for example, the national level distinction still implies different access to resource base via external links. We are grateful to the anonymous referee for this point.

[v] For lack of space, we do not discuss the literature on the role of regional migrants in entrepreneurship. Please see: Levie (2007); Levie and Hart (2011); Reuschke (2015) and more. In addition to mobility of people, within-country mobility of firms is also an important research direction (Egeln, Gottschalk, and Rammer, 2004; Andreson and Klepper 2013). Also, a limitation of our data is that we cannot identify returning migrants, see: Li et al. (2012); Wehba and Zenou (2012).

[vi] For a comprehensive discussion of factors of entrepreneurship, see Parker (2009).

[vii] https://blog.bham.ac.uk/business-school/2017/10/02/providing-inclusive-business-support-in-disadvantaged-areas/