

REGIONAL GRAPHIC



# Where do people want to become entrepreneurs? Mapping entrepreneurship potential across Great Britain

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## ABSTRACT

Promoting entrepreneurial activities is crucial for regions to facilitate innovation and economic development. Yet, becoming an entrepreneur is not aspired by all people, and regions may differ considerably in their entrepreneurship potential. Assessing and providing accurate estimates of the entrepreneurship potential across fine-grained spatial scales is thus crucial to inform regional policymakers, but it still remains a major challenge due to data availability. Here we used the lab data set from the British Broadcasting Corporation (BBC) covering 368,364 individuals and providing high-resolution data about their residences to map the entrepreneurship potential across 9271 postcode sectors in Great Britain. We used a novel mapping approach that relies on a spatial smoothing function based on distance weights to utilize the most fine-grained spatial level available in the data. Our detailed maps show substantial difference in entrepreneurship potential across postcode sectors in Great Britain and within the largest cities: London, Birmingham and Manchester.

## ARTICLE HISTORY

Received 3 May 2021; Accepted 28 July 2021

## KEYWORDS

entrepreneurship; entrepreneurial potential; cartography; spatial smoothing

## JEL

L26; O31; R12


## INTRODUCTION

Founding a business is a consequential and risky life decision, and not all people aspire to become entrepreneurs (Krueger & Brazeal, 1994). Previous research suggests that the share of people who want to become entrepreneurs considerably varies across countries and regions within the same country (Acs et al., 2017; Guzman & Stern, 2015; Reynolds et al., 2000; Sternberg, 2009). In other words, the entrepreneurial potential among the population (i.e., the share of people who want to become entrepreneurs) is much greater in some places than in others.


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 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/21681376.2021.1966319>.

This article has been corrected with minor changes. These changes do not impact the academic content of the article.

While previous research suggests that geographical differences in entrepreneurial potential exist, exactly pinpointing areas with high versus low entrepreneurial potential remains a challenge. That is because identifying entrepreneurial potential across regional and local populations requires the large-scale assessment of entrepreneurial aspirations for many people from many different places. Existing systematic, entrepreneurial surveys such as the Global Entrepreneurship Monitor (Reynolds et al., 2000) only provide data sufficient to measure entrepreneurial activities across coarse-grained geographical levels, such as countries, or large administrative units, such as NUTS-2 regions (Sternberg, 2009). Consequently, any variation within those geographical units remains hidden.

## DATA AND METHOD

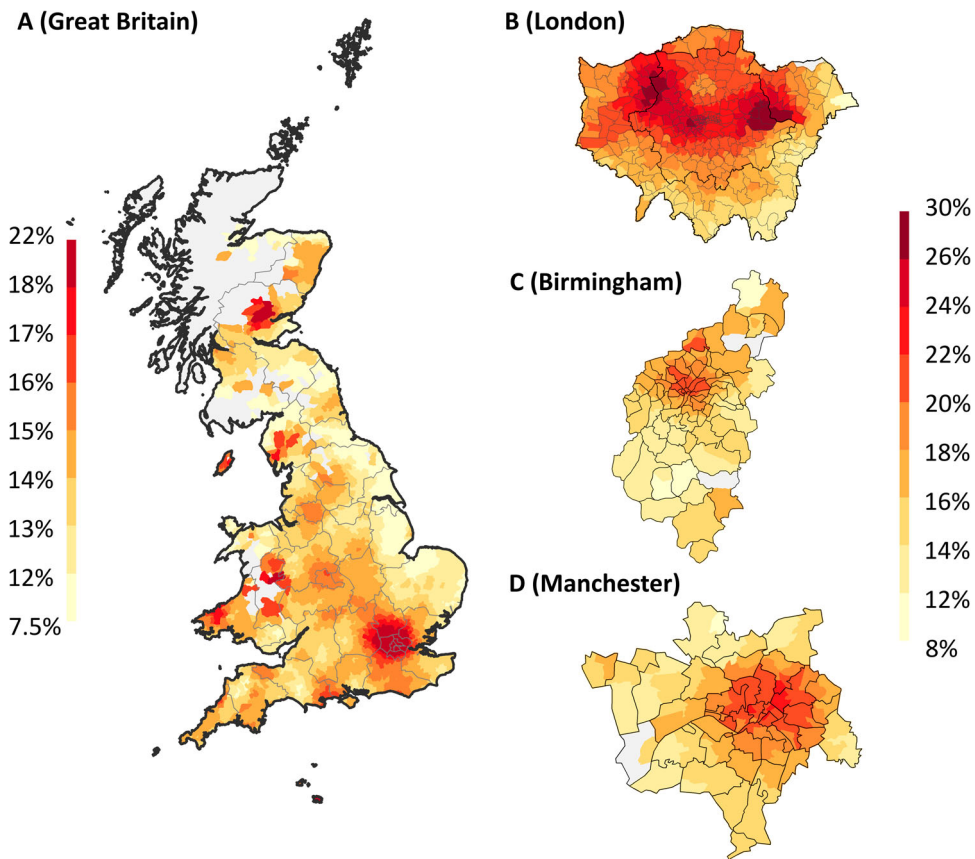
We used the BBC lab data set, a large-scale psychological survey that was collected in collaboration with the BBC between November 2009 and April 2011. Previous research suggests that these data represent the actual population of Great Britain (GB) reasonably well (for further information, see Rentfrow et al., 2015). The final data comprised 368,364 participants, who are not yet self-employed. We classified the 14.9% of participants as potential entrepreneurs that reported '*Owning my own business*' as an important goal in their life. Note that this item is not a direct measure of true entrepreneurial potential. That is because owning a business is not solely the result of aspirations but also of capabilities (Kor et al., 2007). Furthermore, not every person who owns a business can be regarded as an entrepreneur (Carland et al., 1984). Nevertheless, contemplating founding a business is a vital prerequisite for entrepreneurship (Reynolds et al., 2005). As such, our variable captures the crucial first step on peoples' path to become entrepreneurs.

We used these data to map entrepreneurial potential focusing on (1) regional differences across GB as well as (2) local differences within the three largest cities: London, Birmingham and Manchester. We used the most-fine grained spatial information in our data (i.e., in which of the 9271 UK postcode sectors a person resides) as the spatial unit of analysis. Specifically, we explored geographical differences across postcode sectors using *actor-based clustering* (Brenner, 2017) – a spatial smoothing technique that allows one to depict distributional patterns without imposing any prefixed higher level spatial boundaries (for methodological details and a comparison of actor-based clustering versus conventional mapping at the NUTS-2 level, see the supplemental data online).

## RESULTS

Figure 1 highlights the merits of our mapping approach by showing that there occurs variation within and across administrative units and political boundaries (such as NUTS-2 regions; see the grey borders in Figure 1, A) which would be disguised when aggregating data to higher levels. Most importantly, the map reveal that the share of potential entrepreneurs greatly varies across GB, ranging from 7.5% to 22%. While in some areas in GB every fifth person aspires to become an entrepreneur, in other areas this is only the case for every 13th person.

Furthermore, the maps reveal that entrepreneurial potential is not randomly distributed in space but occurs geographically clustered. Specifically, London features the highest shares of potential entrepreneurs across GB. In addition, we find an extensive belt of high entrepreneurial potential spanning from the South of England, via London, Birmingham and the English Midlands, up to Greater Manchester. By contrast, comparatively lower entrepreneurial potential was found along the Eastern Coastline and in Northern England. Interestingly, these regional differences cannot be explained by simple urban–rural differences. In fact, high and low entrepreneurial potential are found in urban (e.g., London) and rural (e.g., Cornwall) places. Likewise, comparatively low entrepreneurial potential is found in urban (e.g., Norwich) as well as in rural (e.g., Lincolnshire) places.



**Figure 1.** The share of potential entrepreneurs across postcode sectors in Great Britain and the three largest cities, London, Manchester and Birmingham.

Note: Grey borders in (A) depict NUTS-2 regions. Shares were calculated based on a spatial smoothing approach. Data were too scarce to produce reliable estimates in postcode sectors coloured in grey.

Finally, we adjusted the weighting scheme underlying our mapping approach (see the supplemental data online) and zoomed in on local differences within the three largest cities, London, Birmingham and Manchester. We find strong variation in entrepreneurial potential within these cities (Figure 1, B–D). Within London, shares range between 11% in pockets of Outer London and 28.5% in pockets of Inner London. Birmingham and Manchester showed similar (but less pronounced) spatial distributions, with the city cores featuring higher shares of potential entrepreneurs than the peripheries.

## CONCLUSIONS

We presented here a detailed map of entrepreneurship potential across GB including maps for the three largest cities of London, Birmingham and Manchester. The uncovered geographical variation suggests that larger spatial units usually employed in regional research (such as NUTS-2 regions) hide much of the relevant geographical variation. The fact that regions differ so greatly in the prevalence of people with entrepreneurial aspirations is (1) relevant to understand the geography and spatial scale of entrepreneurial ecosystems (Acs et al., 2017); and (2) calls

future research to understand where these regional differences come from (Obschonka et al., 2018). Finally, our results also bear relevance for policymakers when tailoring place-based policies that rely on entrepreneurial discovery processes to explore regional potentials (Foray, 2014): while regional policies in high-potential places can focus on efficiently exploiting existing entrepreneurial potential, low-potential places may need to create and stimulate entrepreneurial potential in the first place.

## ACKNOWLEDGEMENTS

We would like to thank two anonymous reviewers and the handling editor, Dr Jen Nelles, for their comments that significantly helped improve the paper.

## DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

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