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The impact of local social capital on different types of entrepreneurship

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The Impact of Local Social Capital on Different Types of Entrepreneurship

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ABSTRACT

In this paper, we develop a conceptual framework that links local social capital with different types of business start-ups (necessity and opportunity, low and high growth ambition, exporting and not, innovative and less innovative). We empirically test these relationships, utilising UK data, between 2018-2021. We gain unique insights at a granular spatial level on the diverse impact of local social capital on types of entrepreneurial activity. Our findings show that local social capital may be important in supporting less ambitious forms of entrepreneurship, particularly during crises.

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Keywords: entrepreneurship, social capital, Global Entrepreneurship Monitor, Community Wellbeing Index, United Kingdom, crisis.

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1. INTRODUCTION

The role of social capital in entrepreneurship is now well understood, with massive theoretical and empirical literature supporting the existence of the corresponding linkages (Kwon, Heflin & Ruef, 2013; Mickiewicz & Rebmann, 2020). Social capital has been found to be an important resource for nascent entrepreneurs, playing a role in determining the success of new venture creation and in supporting the vitality of regional and local entrepreneurial economies (Feldman & Zoller, 2016). The literature also highlights that social capital, sometimes undervalued during the normal times, may be mobilised to face adversity, including during crises such as the COVID-19 pandemic, and therefore plays an important role in business resilience (Hadjielias et al., 2022; Shepherd & Williams, 2022).

Yet, entrepreneurship remains a diversified phenomenon, and it is of interest, both from the research and the practical and policy point of view, to ask which forms of entrepreneurship are supported by local social capital? We intend to shape our contribution around proposing some tentative, partial answers to this broad research question.

Social capital relates to the norms and patterns of shared practices that support inter-human self-organisation, initiative, and cooperation (Malecki, 2012). While bonding social capital is an exclusive attribute based on specific group membership, bridging social capital is inclusive (Putnam, 2001), based for example on a simple attribute of living in an area (Sørensen, 2016). In this article we will focus on the latter type of social capital. Further, social capital is portable and is transferable between different social and economic domains; this idea can be traced back to Tocqueville (2003[1835]), who observed the congruence between social and economic domains in an emerging democracy. More specifically, Adler & Kwon (2002) describe social capital as ‘appropriable’: social linkages created in other domains can be transferred and utilised to support business and entrepreneurship.

Social capital may be measured at different levels – individual, organisational, regional, or societal (Barbi et al., 2023; Corradini, 2022; Guiso et al., 2004). In this article, we are interested in a spatially bounded dimension of social capital (Westlund & Bolton, 2003). When these spatial bounds are defined at a granular level of ‘place’, local communities, and neighbourhoods, the social capital may be viewed as a ‘community characteristic’ and referred to as *local* (Westlund & Bolton, 2003; Malecki, 2012; Ciarrapico et al., 2023) or *community social capital* (Kwon et al., 2013). However, our proposition is that the general claim that local social capital provides an enabling context to entrepreneurial activity is too simple and requires further calibration. We

therefore consider the heterogeneity of types of entrepreneurial new ventures, based on their 'quality' along with 'quantity' characteristics (Ye et al., 2022). The extant literature pays attention to the *quality* of entrepreneurship because arguably it 'dictates the technological change, structural transformation, and economic development' (Audretsch et al., 2022: 2026). First, scholars consider the differentiation between *necessity* and *opportunity entrepreneurship*, where necessity entrepreneurship is seen as driven by the lack of alternative employment prospects, that is by 'push factors' or low opportunity cost of entrepreneurial engagement (Estrin, Guerrero & Mickiewicz, 2024; Block et al., 2015), while opportunity entrepreneurship means that the individual is 'pulled' by market opportunities or other positive attributes of entrepreneurship, when entrepreneurs may have other attractive work options but still take entrepreneurial route (Audretsch et al., 2022; Yang et al., 2020). Second, compared to opportunity entrepreneurs, necessity-motivated entrepreneurs are likely to exploit *imitative* rather than *innovative* opportunities (Nakara et al., 2021; Vivarelli, 2004). Third, they tend to have lower *growth aspirations* (Calderon et al., 2017; Block & Wagner, 2010). Finally, less innovative start-ups tend to also be less *export-oriented* (Acs et al., 2008).

We will posit that more ambitious, opportunity-motivated, innovation-driven, and exporting-oriented entrepreneurs are less dependent on the local dimension of social capital compared to less ambitious, necessity-motivated, less innovative and non-export-oriented entrepreneurs. Yet, we will argue that the critical role the local social capital plays in supporting the forms of entrepreneurship seen as characterised by lesser 'quality' matters as well. This is because it creates paths for those who are underprivileged to reduce their poverty and provide a route to financial independence (Belitski et al., 2021), and likewise new firm formation decreases income inequality (Liu & Qian, 2023).

Our data comes from the UK, which we believe is an important context to consider social capital. In the seminal paper, Hall (1999) argues that unlike the US (Putnam, 2000), UK did not experience the gradual, historical erosion of social capital, the outcome he attributes to educational reforms and government policy. Given that, it is interesting to consider which effects the UK social capital may have on types of entrepreneurship. However, we will also address the question of generalizability.

In the remaining part of the paper, we will proceed in a standard way, first explaining our framework, propositions, and hypotheses, next the data and methods, before moving on to results, and to a final discussion and conclusions.

2. CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

2.1. Local social capital: density of social relations and social activism

The importance of local / community level as a basis for social capital is related to Coleman's notion of 'closure' of social structure (Coleman, 1988). The latter denotes horizontal interdependence and communication of all participants. Local, space-based social structures may be characterised by the conditions for closure, hence they may form the basis for social capital. In that sense, local social capital is underpinned by local factors that enable dense social relations and overcome social isolation, of those who are socially vulnerable in particular (Klinenberg, 2002).

Such social capital may be conceptualised as a 'community property' and a 'resource reflecting the character of social relations within a community' (Kwon et al, 2013: 982). Moreover, the social relations and networks formed within the place may be at the origin of individual opportunities, which would affect the (potential) entrepreneur (Westlund & Bolton, 2003).

However, the dense structure of social relations may alone not necessarily lead to 'positive', that is, 'entrepreneurship-facilitating' outcomes. Conditional on local norms they support, these dense social relations can also have 'negative', that is, an entrepreneurship-inhibiting influence (Westlund & Bolton, 2003). More specifically that happens when the corresponding local norms prioritise coherence over dynamism and change, imposing limitations and constraints on entrepreneurship (Light & Dana, 2013). Thus, we argue that alongside the 'structural' measure of density of social relations (and of factors supporting those), the substantive characteristics of the local norms of behaviour matter as well. In particular, we expect that norms that support common action and social activism will also be conducive to entrepreneurial initiatives. Emphasising this aspect implies focusing on civic engagement, in the tradition of Putnam (2001).

2.2. Necessity and opportunity entrepreneurs

In this research, we interpret entrepreneurship narrowly, as the occupational choice of engagement in new venture creation (Parker, 2018), and its motives are often summarised by the dichotomy between either pull-opportunity or push-necessity factors (Vivarelli, 2004; Estrin et al., 2024). Entry may come as a result of perceived opportunities for realising a unique, inimitable project that may generate a quasi-rent for the entrepreneur. It may also result from pursuit of independence associated with self-employment, or from a desire to realise personal

interests via a new business (Stephan et al., 2015). This corresponds to a group of 'pull' motives, even if the role of the perceived opportunity related to the new venture idea varies (Davidsson, 2016). We follow the terminology applied by Yang et al. (2020) and Estrin et al. (2024), labelling all these pull motives as opportunity-motivated entrepreneurship.

In contrast, venture creation may also be chosen predominantly because other labour market opportunities are limited, implying that the opportunity cost of engaging in entrepreneurship is low (Block et al., 2015). This corresponds to the push motive, or the necessity-motivated entrepreneurship. The latter is likely to be associated with imitation (Nakara et al., 2021); so that a type of activity and a business model are borrowed from other, already existing ventures. Nevertheless, such entry still creates a positive competitive pressure, even if it may mostly result in crowding out existing ventures, leading to limited economic net impact. Importantly, the necessity-motivated start-up is also likely to have no employees, becoming a sole trader (Reuschke & Zhang, 2022). But this may be underestimating the importance of necessity/push entrepreneurship for more than one reason.

Firstly, as argued by Alvarez & Barney (2007), it is not only that opportunities are discovered leading to entry decisions; they are also created later on, during the entrepreneurial process, as a result of 'iterative, inductive, incremental decision making' (*Ibid.*: 17). Thus, some opportunities are, therefore, endogenous to the entrepreneurial process, being initially unknown (Alvarez & Barney, 2020). This perspective implies that entrepreneurship is not only an act of arbitrage stemming from discovered, pre-existing opportunities as within Kirzner's (1973) perspective; rather, entrepreneurship is characterised by fundamental uncertainty (Knight, 2009[1921]) and opportunities emerge as they are created along the process of building and shaping the new venture.

We posit, therefore, that while necessity entrepreneurship implies being pushed into entrepreneurship, the entrepreneurs may still discover some attractive opportunities later, as a consequence of their ongoing engagement. Related to this, the entrepreneur's capabilities should not be assumed predetermined, and the entrepreneurial engagement with new project results in the learning process. Not only does it create a possibility that the new venture will become more efficient over time; it also implies that the knowledge gained will be preserved even if the new venture fails (Fuentelsaz et al., 2023). Thus, benefits from necessity-driven entrepreneurial process apply not only to the new venture but also to the entrepreneur. Regardless of the initial motivation, engagement in entrepreneurship may create beneficial knowledge-enhancing effects, which may be particularly important for those who are socially

disadvantaged. Unemployment, especially long-term unemployment has negative effects in destroying human capital; as a result, the chance of subsequent employment decreases over time. The same can be said of discouraged workers; those who had given up looking for work and remain economically inactive (Abraham et al., 2019). Entrepreneurship, even if motivated by necessity is an important way to avoid these effects. These considerations lead us to conclude that necessity entrepreneurship plays an important economic and social role, especially for those who are socially disadvantaged.

2.3. Local social capital and necessity entrepreneurs

Entrepreneurs need the co-operation of other stakeholders for their projects to succeed. That relates especially to the stakeholders who provide finance for the new venture (including family and friends), but also to people who engage with the new venture as partners or employees, in business-to-business relations, and as customers.

In the case of opportunity entrepreneurs, securing support may be simpler, based on the attractiveness of the initial business idea. Therefore, they stand a better chance to convince stakeholders to provide them with access to resources and support, especially needed in the initial stage, when the legitimacy of their new venture is yet to be established. In contrast, necessity entrepreneurs may struggle to acquire resources (Naiki & Ogane, 2022), because of the weaker initial opportunities they build upon. This is where local social capital may play a significant role. An environment both rich in social contacts and supporting the norm of being active may offer the necessity entrepreneur a more nourishing environment to operate within. The entrepreneur is likely to encounter more social support, and the stakeholders will be more receptive to listen, to be convinced, and to offer resources. Moreover, even if the project is launched without attractive opportunities, the knowledge embedded in the community around the entrepreneur may be instrumental in enabling the creation of some new opportunities in the business venture at a later date.

Importantly, reaching out beyond the close circle of family and friends (Klyver et al., 2020), the entrepreneur needs to secure cooperation in the wider social arena. Therefore, the propensity of the local community members to cooperate and to support action will affect the chances of a necessity entrepreneur to launch a new project. In a way, being a necessity entrepreneur may also be seen as an advantage by stakeholders: the lack of attractive labour market options other than self-employment may imply social perceptions of strong commitment, which in turn may help to secure co-operation in the local environment rich in social capital. Therefore, we posit:

Hypothesis 1: Local social capital will be associated with the individual's propensity to launch a necessity-motivated start-up.

2.4. Low versus high growth aspirations, and local social capital

The opportunity (pull) versus necessity (push) distinction is related, but not identical, to the distinction based on the entrepreneur's ambition (aspiration, or growth intention) related to the growth objectives of the new venture[1]. Positive perceptions of business opportunities are likely to be associated with high growth aspirations in contrast to necessity-motivated projects, yet there are other aspects that connect with high versus low growth aspirations.

How much dynamism and how much risk associated with growth the entrepreneur wishes to adopt for their new venture depends on personal characteristics, preferences, circumstances, and knowledge. For example, as already signalled above, alongside material gain, an objective of independence is popular among entrepreneurs (Stephan et al., 2015), yet there may be a tension between the objective to remain independent and the objective of growth, because the latter may require external finance, which in turn is a threat to independence. Another relevant factor is that for more than one reason, a family-embedded business is likely to take less risk and, therefore, is less likely to have high-growth aspirations. And more generally, individuals are either more or less ambitious because they differ in both their perceptions of self-efficacy (perceived locus of control; see Ajzen, 1988) and in the degree of loss aversion (Koudstaal et al., 2016).

To recapture this discussion, the distinction between high and low growth aspirations cannot be reduced to the pull-push axis discussed earlier. For example, the opportunity-motivated entry may be associated with little dynamism, if the entrepreneur lacks self-efficacy or is highly loss averse.

Low growth aspirations, small size start-ups, especially if solo-employed and/or part time are more likely to be operating on the fringes of the formal sector, being located below the radar of the regulatory agencies. Local social capital is likely to play a stronger role for the businesses with some aspects of informality. This is because the less the businesses are anchored in the formal system, the more they are anchored in informal institutions (Estrin et al., 2013). Social

[1] 'Aspirations' is the term used in the empirical literature and corresponds to the GEM-based operationalisation (Estrin et al., 2013; Capellaras et al., 2019), therefore we will stick to it. A term better associated with theory, and more specifically with the Theory of Planned Behaviour (Ajzen, 1988), will be 'growth intentions'. In turn, 'ambition' is the most general term that can be applied to more than one theory, aspect, and operationalisation.

capital is a prime example of the informal institution, as it relates to established patterns of cooperative behaviour, 'reinforced by social norms having sanctions attached … the most common sanction is the restriction of exchanges with the offending actor' (Coleman, 1994: 188). In turn, effectiveness of this enforcement mechanism is conditional on the density of local social relations, that is on 'closure' (Coleman, 1994), as discussed above. Thus, the reason why local social capital is especially important for a low growth aspiration start-up project is that the latter is likely to be anchored more in local informal institutions, compared to a high aspiration project, which may scale up via operating in wider markets, utilising formal institutions. Drawing on these arguments, we posit the following:

Hypothesis 2: Local social capital will be associated with the individual's propensity to launch a low growth aspiration start-up.

2.5. Exporting versus non-exporting and local social capital

We next contrast new ventures oriented on exporting, with those that sell in the domestic and local markets. Local social capital may help with exporting if social connections mediate between the entrepreneurs and foreign markets, for example, for local immigrants who preserve linkages with their home countries. But even in that case, importing not exporting is a more likely outcome. At the same time, local social capital is likely to play a stronger role if new ventures are oriented on the local market. In that case, consumers are local, and the principle of appropriability of social capital applies (Portes, 1998; Adler & Kwon, 2002).

In contrast, new firms that target exporting increasingly do not require face-to-face exchanges for their business model to work. Progress in internet-based trade implies low transaction costs modes of operation for new exporters, who can rely on the World Wide Web for the marketing and sales of their products and (intangible) services. This makes them less sensitive to the local environment, unlike non-exporters. These arguments lead us to postulate the following:

Hypothesis 3: Local social capital will be associated with the individual's propensity to launch a non-exporting start-up.

2.6. Innovative versus non-innovative start-ups, and local social capital

Social and economic benefits of innovation are widely recognised (McCloskey, 2010). In entrepreneurship research, innovation is placed alongside exporting as the key indicator of 'strategic engagement', which is expected to enhance the value added of the new venture (Estrin et al., 2022). An entrepreneurial project that embeds an element of innovation from the very start will be more likely to secure co-operation and support from stakeholders, as they may perceive it as more attractive. In contrast, the project with no initial component of innovation, may face more hurdles. It is here again, where local social capital plays a role. As the propensity for co-operation will be higher, it may materialise even in the case of projects that initially bring less promise of value added. Moreover, such projects are still likely to draw on the socially embedded expertise or utilise local 'entrepreneurial capital' (seen as aspect of social capital; Audretsch & Keilbach, 2004), to improve their effectiveness, pushing them above the threshold that separates what is and what is not economically viable.

Another line of argument for a stronger link between local social capital with non-innovative compared to innovative start-ups draws upon Coleman (1988, p. S105): "Effective norms in an area can reduce innovativeness in an area, not only deviant actions that harm others but also deviant actions that can benefit everyone." That is, the aspect of social capital related to dense social relations may imply high degree of social cohesiveness, which in turn maybe be undermined by innovativeness, hence a potential tension between the two. Compiling the arguments, we posit:

Hypothesis 4: Local social capital will be associated with the individual's propensity to launch a start-up with no initial innovation component.

2.7. Local social capital and startups during a crisis

We discussed the effects of local social capital on the propensity to engage in various types of start-up activities without considering how these effects may be either amplified or attenuated during times of crisis. However, benefits from access to social capital may vary with the adversity of the economic environment, which in turn will differ between the crisis and the 'good times'. During the crisis access to resources will be more difficult, and local social capital with dense social contacts combined with local norms supporting initiative and activism will become particularly important.

More generally, crises have ambiguous effects on small business, entrepreneurship, and new firm creation. On the one hand, small businesses are more affected by the crisis, with high rates of closures. As a result, unemployment rates rise (Belitski et al., 2022). On the other hand, unemployment generates conditions for push/necessity types of business entry, even if this effect was moderated during the latest COVID-19 pandemic by the unprecedented scale of government financial support in many countries, including the UK. Finally, in some specific branches, crises create new opportunities encouraging entry. For example, during the pandemic, production of health-related goods, and digital services increased (Batjargal et al., 2023). While all these aspects are important, there is consensus that entrepreneurs face "difficulties in mobilizing resources in an environment that rapidly became hostile" (*Ibid.*: 1). This is why the beneficial effects of local social capital on start-up activities will be particularly important during the time of crises, which leads us to propose the following:

Hypothesis 5 (a-d): All types of entrepreneurial activities we hypothesised above will be enhanced by local social capital during the time of a crisis.

2.8. Summary

We considered eight types of start-ups: necessity and opportunity motivated entrepreneurship, those with low and high aspirations, non-exporting versus exporting, with initial innovation component versus with no initial innovation component. While in each case the first category of start-ups is often considered inferior to the second one, we argue that within the more dynamic, process-oriented perspective, the distinction becomes less clear cut. At the same time, we hypothesised that the local social capital plays a more important role in supporting the first set of start-up activity (**H1**-**H4**). We also argued that local social capital will play an especially important role during the time of the crisis (**H5a-d**). Building on this, we will now turn to empirical testing and evaluate the evidence we assembled.

3. DATA AND METHODS

3.1. Data sets

Data used in this paper comes from two different sources. Firstly, to measure eight types of start-up entrepreneurial activity, we follow an example of Mickiewicz et al. (2019) and use the Global Entrepreneurship Monitor[2] (GEM) UK dataset. It comes in the form of the annual Adult Population Survey (APS). Respondents are asked about their attitudes towards entrepreneurship, and whether they are involved in some form of entrepreneurial activity, as defined by specific actions taken towards the creation of new firms, and, if so, about the growth aspirations for their (nascent) businesses. The dataset also contains demographic information on the individuals, such as migration status, ethnicity, education, gender, and age. The sample is constructed to be representative of the UK population.

Second, to measure local social capital, we use the Co-op's Community Wellbeing Index (CWI) which employs a place-based approach to community, focusing on shared resources and relationships and defining community wellbeing as 'more than the sum of people's individual wellbeing; it is the relationships between people and with place' (Hill-Dixon et al., 2018: 7). The CWI contains nine domains. The domains are constructed based on a series of underlying geo-localised data from different sources, including the Co-op's own customer data. One particularity of the data is that it is available at a geographic unit of analysis (locale) which was designed to capture the local area corresponding to what people would call a 'neighbourhood' rather than an administrative unit. This choice of geography provides more than 28,000 locales, representing a granular, sub-local-authority level[3]. Therefore, this data suits perfectly to analyse local social capital in the UK.

The datasets were matched using postcodes. The final combined dataset contains information on individual's entrepreneurial activity and her/his personal characteristics, as well as proxies for local social capital and other control variables corresponding to the area where s/he lives. The time period is 2018-2021, covering both 'normal' times and a crisis period in the UK.

2 GEM UK is one of the very few country teams that implement sampling wider than the minimum required 2,000, enabling good regional coverage. For example, in 2020, 9,453 adults aged 18 to 80 participated in the survey.

[3] This figure can be compared to the number of full postcodes in the UK, which is 1.79 million. In the UK, full postcodes are very detailed with one postocode unit typically encompassing about 15 adresses. (https://www.ons.gov.uk/methodology/geography/ukgeographies/postalgeography, accessed on the 2nd of September 2024).

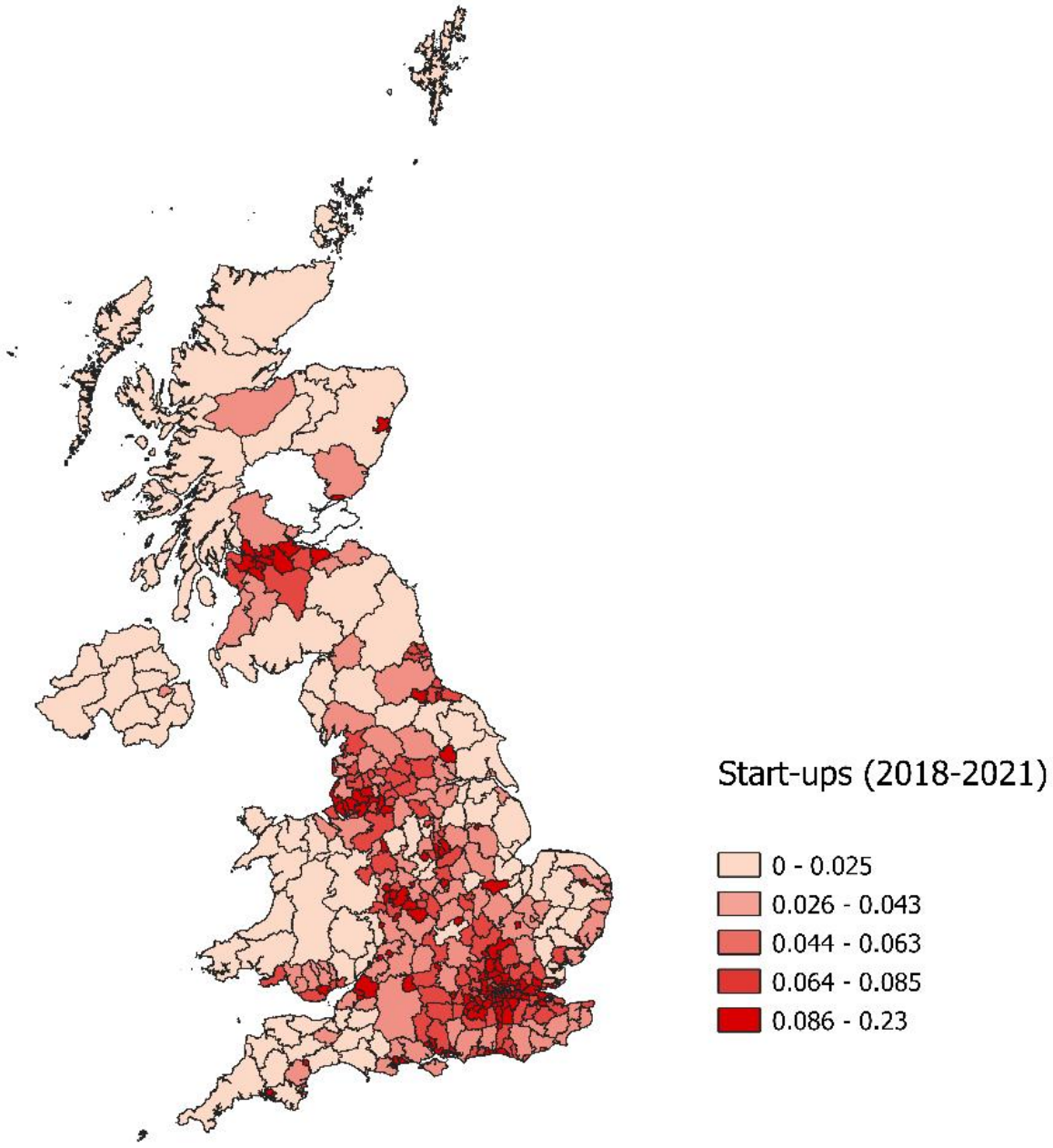
3.2. Dependent variables

We use four sets of dependent variables to explore how local social capital affects individual start-up entrepreneurial activity by contrasting (a) necessity and opportunity motivated entrepreneurial start-ups[4]; (b) low and high growth aspiration start-ups; (c) non-exporting and exporting start-ups; (d) start-ups without and with initial innovation component. We construct these dependent variables as categorical. Not being involved in start-up activity is always our benchmark category, assigned the value of 0 in each of the four sets of variables we consider. In turn, the value of 1 is assigned if the respondent is involved in start-up activity for (a) necessity motive, (b) with low aspirations, (c) non-exporting, (d) without initial innovation, correspondingly. The variables take the value of 2 if the respondent is involved in start-up activity for (a) other than necessity motives; (b) with high aspirations; (c) exporting; (d) innovating[5] (Table A1 in the Appendix). Growth aspirations are defined as high if entrepreneur aspires to increase employment by 50% or more over the next five years and will employ 10 people or more, and low otherwise. The corresponding variable comes directly from the GEM dataset, as this is the operationalisation adopted by the GEM team.

We illustrate the spatial composition of nascent start-up activity in Figure 1. It is most intensive along the main South-North axis of England, plus the East-West axis linking Edinburgh and Glasgow in Scotland.

[4] Opportunity relates to all non-necessity motives; please see discussion in Section 2.3 above.
[5] See comments in Appendix regarding the operationalisation of *Opportunity* and *Innovation*.

Figure 1. Nascent start-up rates



Note: Local level data was aggregated up to LAU2 level to create the map. The average of locales in a LAU2 area was calculated. Map of Great Britain and Northern Ireland showing the density of start-ups in 2018-2021. The highest density is in the area of England stretching from London to Manchester and Liverpool, and in the area of Scotland between Glasgow and Edinburgh.

3.3. Independent variables

In our models we include all nine CWI domains (described in Table A1, in the online Appendix). The construction of CWI is such that the data has been normalised over localities in each year, and each domain corresponds to an index taking the value in a range between 0 and 1. The higher the index, the better the locality is rated compared to others.

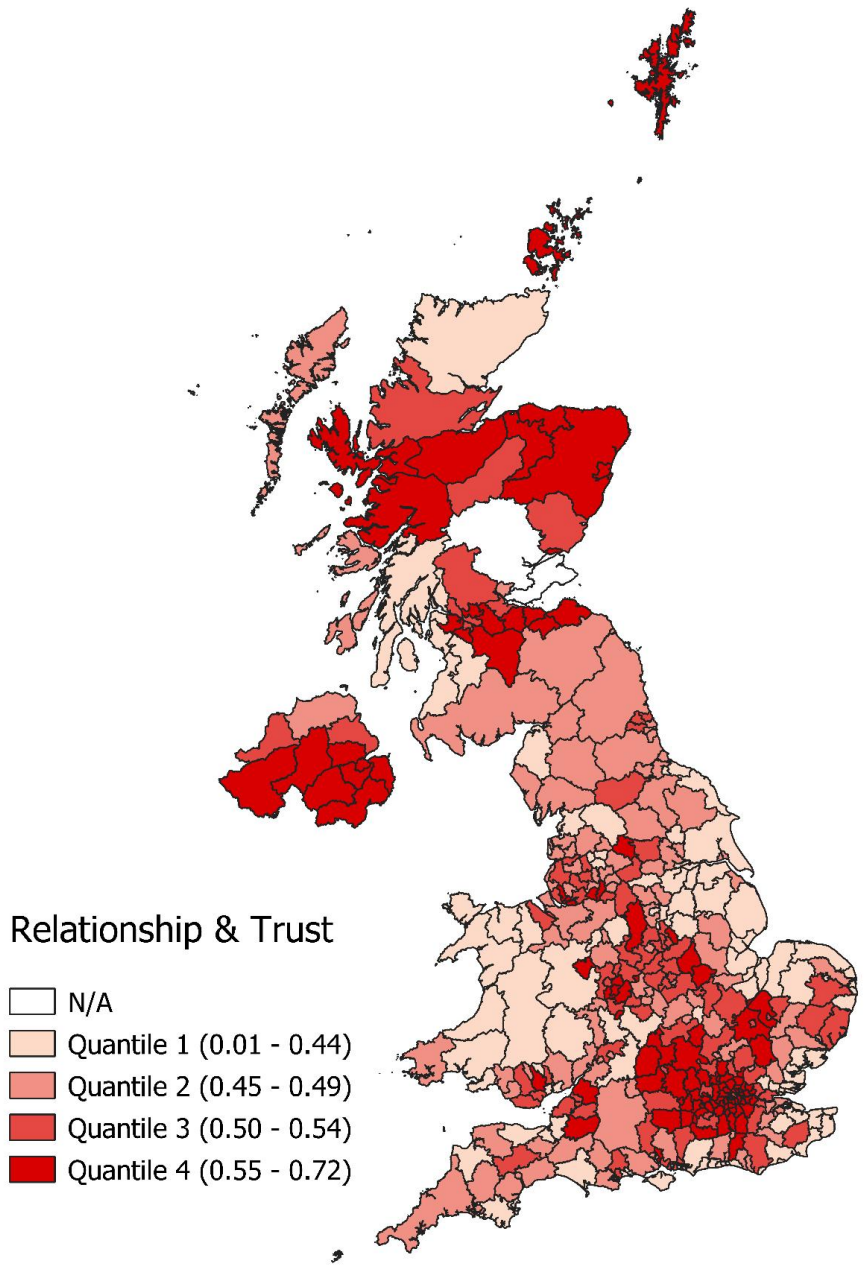
We choose two CWI indicators as proxies for local social capital: Relationship and Trust (RT) and Voice and Participation (VP). RT corresponds to the first aspect of social capital we discussed above that is the density of social relationships. However, it is difficult to measure directly, therefore the indicator proxies for it by including a battery of factors that facilitate social contacts. The first cluster of factors relates to social infrastructure (Klinenberg, 2018) and include distance to nearest community centre, playground, café, and pub (with reverse signs). The second cluster of factors includes the prevalence of crime (Churchill et al., 2023; Klinenberg, 2002), both in the community and in the nearest town centre (again, reversing signs), and the number of supporters engaged in neighbourhood watch per 10,000 population. Next come two indicators related to housing that may either facilitate or inhibit local contacts: average proximity of home to work, and household churn (the latter with reversed sign, as not staying long in the area may have negative impact on building social relationships). Finally, the RT index also includes relevant demographic characteristics: percentage of children aged less than 14 (facilitating contacts), presences of one-person households aged 50+ (likely to increase isolation; Klinenberg, 2002), and local prevalence rates of long-term illness (making contacts more challenging).

The second index, VP, captures the extent of social and political self-organisation and activity that is the civic engagement, corresponding to the Putnam's (1995; 2001) interpretations of social capital. It includes number of people signing petitions per 1,000 population, general and local election turnout, and the proportion of Co-op members who have selected a social cause through the local community fund.

To illustrate the geographical variation of the proposed operationalisation of the two aspects of local social capital, Figures 2 and 3 show their geographical spread across the UK. Figure 2 shows the RT rates. They are clearly high in the South around London, in much of Scotland and in Northern Ireland. In turn, rates are lower in the North-East England and in Wales, indicating spatial heterogeneity in structural conditions for local social relationships. Figure 3 shows the VP

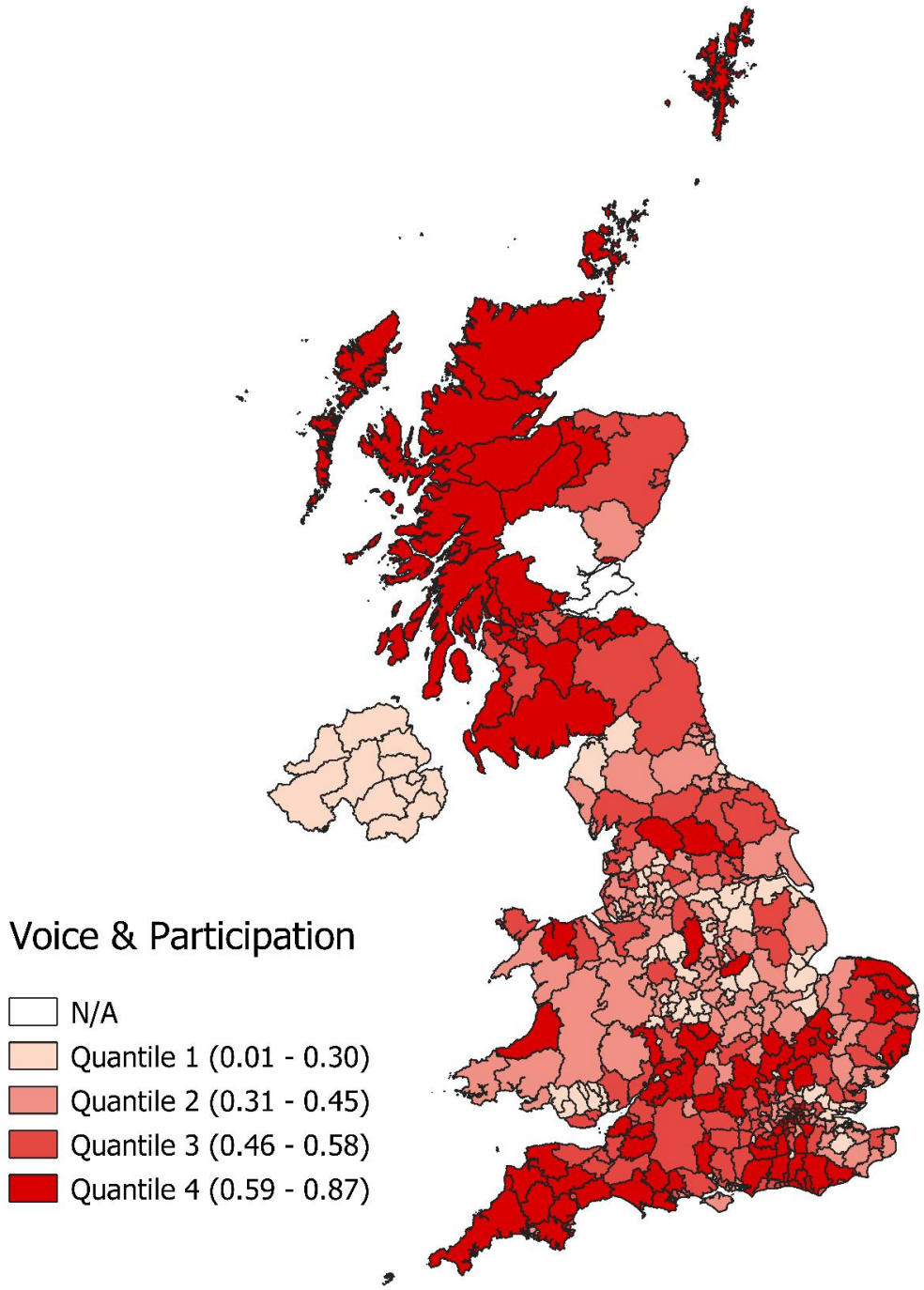
rates. Scotland and the south of England show high levels of VP. Northern Ireland shows low levels of VP throughout.

Figure 2.Relationship and Trust



Note: Local level data was aggregated up to LAU2 level to create the map. The average of locales in a LAU2 area was calculated. This relates to all data available using the CWI data matched with 2018 GEM data, thus two areas are missing as these were not covered in the GEM 2018 study. Map of Great Britain and Northern Ireland showing the level of the Relationship and Trust index. The highest level is in the area of England around London and West Midlands, much of Scotland, and Northern Ireland.

Figure 3. Voice and Participation



Note: Local level data was aggregated up to LAU2 level to create the map. The average of locales in a LAU2 area was calculated. This relates to all data available using the CWI data matched with 2018 GEM data, thus two areas are missing as these were not covered in the GEM 2018 study.Map of Great Britain and Northern Ireland showing the level of the Voice and Participation index. The highest level is in Southern England, Yorkshire, and in Scotland.

Alongside the CWI indexes, we also include two other local level control variables. The first one is population density, as we wish to isolate the impact of urbanisation and larger local market size that are seen as associated with entrepreneurship (Sato et al., 2012). The second variable is second-home ownership by the residents (from CWI) which can be seen as indicator of local affluence. The latter may be associated with entrepreneurship by alleviating liquidity constraints and facilitating access to finance (Hurst & Lusardi, 2004).

Additionally, we use the GEM measure of annual household income. This may or may not correspond to the respondent's own income, however if we follow the conceptualisation of start-up decisions as based on the household circumstances (Sutter et al., 2017), this becomes a relevant measure. Given that the corresponding GEM UK survey question asks about annual income, it is likely to be interpreted by respondents as related to past income.

For individual level controls, we use demographic information from GEM. This includes gender, age, education, ethnicity, and migrant status.

3.4. Econometric strategy

As a preliminary step before addressing different types of entrepreneurial entry, we run logistic regressions modelling the probability of an individual to start-up a business depending on local social capital in the area where s/he lives. To evaluate if the social capital's coefficients are robust to specification, we present a battery of models, in which variables are sequentially added.

The choice of methodology for the analysis is based on the categorical nature of the dependent variables, as presented in Table A1. A multinomial logistic regression model is applied, assessing the likelihood of being engaged in a start-up activity of different types. Thus, the model is:

$$ln\left(\frac{P(startup = i)}{P(startup = 0)}\right) = b_0 + b_1(CWI\ \ ) + b_2(Controls\ \ ) + \in$$

where $i = (1\ or\ 2)$ represents the type of entrepreneurial activity as described in 3.2 and *CWI* denote indexes representing the nine CWI domains, including local social capital proxies RT and VP. For all models the base category is no start-up activity. Hypotheses 1 to 4 anticipate that local social capital measured by the two indexes discussed above will have significant impact on the likelihood of the individual to be engaged in necessity driven (low aspiration / non exporting / non innovating), which is compared to opportunity driven (high aspiration / exporting / innovating)

start-up. Controls relate to the variables discussed in the previous section. First, we run models for the whole period 2018-2021. Then, to account for the differences in role of local social capital during the crisis time corresponding to H5, we separately focus on the pandemic crisis period (2020-2021) and will also run the same model on the pre-pandemic period (2018-2019) for comparison. Due to this normalisation process, and to the fact that there were annual changes in methodology, the CWI data is not comparable year on year and thus we use 2018 and 2020 CWI data only, in these two sets of models. However, there is no large variation in the dimensions from year to year.

We focus on average marginal effects, to improve interpretability and relevance. Furthermore, as argued by Mood (2010), for logit models, both coefficients and odds ratios are particularly sensitive to omitted variables, and by construction absorb the impact of the latter.

We investigated two diagnostic issues. First, we run a Wald test for combining alternative outcome categories. The corresponding χ^2 was highly significant, with a probability below 0.001 threshold, therefore, we have strong support for distinguishing within our pairs of alternative start-up types. Second, we run a range of Hausman tests to investigate if the assumption of independence of irrelevant alternatives (IIA) holds for our models. Namely, we compared coefficients obtained from full models with coefficients obtained from models where one of the alternatives was dropped. The corresponding χ^2 was either insignificant, or in few cases negative, giving us no reason to reject the IIA assumption. Results of all these tests are available on request. Tables A2 and A3 in the online Appendix present correlation coefficients for the variables.

Finally, we need to declare that because the GEM sample is a combination of annual cross-sectional subsamples, we could not apply longitudinal panel data techniques that would produce more robust results. We aimed to partly compensate for this with multiple additional tests discussed in Section 4.2 below.

4. RESULTS

4.1. Main results

Table 1 presents the average marginal effects from the logistic regression models, with engagement in nascent start-up activity as dependent, without the split into the types of entry. Here, VP measure of social capital performs better, with significant positive impact on entry in all models, regardless of the set of control variables included. Effects of RT are insignificant.

Table 1. Results of logit models: probability of involvement in nascent start-up activity

	(1)	(2)	(3)	(4)	(5)
Community Wellbeing Index 2018					
CWI3 Voice & Participation	0.011*		0.010*	0.014*	0.015*
	(0.005)		(0.005)	(0.006)	(0.007)
CWI1 Relationship & Trust		0.010	0.010	0.014	0.016
		(0.010)	(0.010)	(0.013)	(0.014)
CWI2 Equality					0.004
					(0.013)
CWI4 Economy Work & Employment					0.008
					(0.015)
CWI5 Health 2018					0.001
					(0.009)
CWI6 Education & Learning					-0.022**
					(0.008)
CWI7 Culture Heritage & Leisure					0.007
					(0.014)
CWI8 Housing Space & Environment					0.005
					(0.012)
CWI9 Transport Mobility & Connectivity					-0.004
					(0.014)
Second home ownership				-0.029***	-0.029***
				(0.007)	(0.008)
Population density in th per sqkm				-0.002***	-0.002*
				(0.001)	(0.001)
Female				-0.020***	-0.021***
				(0.003)	(0.003)
Age. Benchmark 18-24yrs					
25-34yrs				0.015*	0.015*
				(0.007)	(0.007)
35-44yrs				-0.001	-0.001
				(0.007)	(0.007)
45-54yrs				-0.025***	-0.026***
				(0.007)	(0.007)

55-65yrs				-0.035***	-0.035***
				(0.007)	(0.007)
65-80yrs				-0.059***	-0.060***
				(0.006)	(0.006)
Education. Benchmark No formal qualifications					
Other qualifications				-0.012	-0.012
				(0.014)	(0.014)
Vocational qualifications				0.008	0.007
				(0.014)	(0.014)
GCSE/O-level or CSE				-0.008	-0.008
				(0.013)	(0.013)
A-level or equivalent				0.003	0.002
				(0.013)	(0.013)
Bachelor Degree or equivalent				0.006	0.006
				(0.013)	(0.013)
Masters Degree or equivalent				0.017	0.017
				(0.014)	(0.014)
A Doctorate or equivalent				0.002	0.002
				(0.016)	(0.016)
Income. Benchmark up to GBP 11499					
Income GBP 11500-17499				0.008	0.008
				(0.007)	(0.007)
Income GBP 17500-GBP29999				0.006	0.006
				(0.006)	(0.006)
Income GBP 30000-49999				0.005	0.005
				(0.005)	(0.006)
Income GBP 50000-99999				0.007	0.007
				(0.006)	(0.006)
Income GBP 100000 or more				0.015*	0.015+
				(0.008)	(0.008)
Migrant status. Benchmark UK born life-long residents					
UK born regional in-migrants never lived abroad				0.008*	0.008*
				(0.004)	(0.004)
UK born but has lived abroad				0.019***	0.019***
				(0.005)	(0.005)
Born abroad				0.019**	0.018**
				(0.006)	(0.007)
Ethnicity. Benchmark White					
Mixed				0.059***	0.058***
				(0.013)	(0.013)
Asian				0.036***	0.035***
				(0.009)	(0.009)
Black				0.092***	0.090***
				(0.018)	(0.018)
Year of survey. Benchmark 2018					

2019	0.008**	0.009**	0.008**	0.012**	0.011**
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
2020	0.036***	0.036***	0.036***	0.034***	0.034***
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
2021	0.043***	0.043***	0.043***	0.044***	0.044***
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Observations	*34612*	*34612*	*34612*	*26110*	*26110*
X^2 (likelihood ratio)	*242*	*239*	*243*	*799*	*807*
Log likelihood	*-7223*	*-7225*	*-7223*	*-5451*	*-5447*
Pseudo R^2 (McFadden)	*0.016*	*0.016*	*0.017*	*0.068*	*0.069*
Akaike information criterion	*14456*	*14460*	*14457*	*10965*	*10971*

Notes: Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Turning to our main results, Table 2 shows the average marginal effects from the multinomial estimation over 2018-2021. The two local social capital dimensions have slight variations in their positive impact on the less ambitious forms of entrepreneurship, with VP marginal effects significant for all models; for low growth aspirations (2a) and for low innovation (4a), and for necessity (1a) and no exporting (3a) entrepreneurship. RT effects are positive but again weaker than those for VP; they are marginally significant for all less ambitious forms of entrepreneurship except necessity-motivated. The marginal effects of VP and RT for more ambitious forms of entrepreneurship are all insignificant, except a surprising negative effect of VP for high aspiration startups. However, this effect is relatively small compared to the positive effect for low aspiration startups. Overall, results suggest that the local social capital is particularly important for less ambitious forms of entrepreneurship.

Table 2. Probability of involvement in different types of start-up activity 2018-2021

	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)
CWI3 Voice & Participation 2018	0.011*	0.003	0.020**	-0.006*	0.012*	0.002	0.015**	0.001
	(0.005)	(.005)	(0.006)	(0.003)	(0.005)	(0.004)	(0.006)	(0.005)
CWI1 Relationship & Trust 2018	0.015	0.001	0.021+	-0.005	0.020+	-0.005	0.019+	-0.003
	(0.011)	(.009)	(0.013)	(0.006)	(0.011)	(0.009)	(0.011)	(0.009)
CWI2 Equality 2018	0.002	0.002	0.006	-0.001	-0.007	0.011	-0.001	0.002
	(0.010)	(.008)	(0.012)	(0.005)	(0.010)	(0.008)	(0.010)	(0.008)
CWI4 Economy, Work & Empl. 2018	0.012	-0.003	-0.002	0.010	0.005	0.001	0.004	0.004
	(0.012)	(.010)	(0.014)	(0.007)	(0.011)	(0.009)	(0.012)	(0.010)
CWI5 Health 2018	-0.004	0.005	-0.003	0.005	-0.004	0.008	-0.005	0.006
	(0.007)	(.006)	(0.009)	(0.004)	(0.007)	(0.006)	(0.007)	(0.006)
CWI6 Education & Learning 2018	-0.013*	-.009+	-0.024**	0.003	-0.007	-0.012*	-0.005	-.016**
	(0.006)	(.005)	(0.007)	(0.004)	(0.006)	(0.005)	(0.006)	(0.005)
CWI7 Culture Heritage & Leis. 2018	-0.012	0.019*	0.009	-0.002	-0.001	0.005	0.006	0.002
	(0.011)	(.009)	(0.013)	(0.006)	(0.010)	(0.009)	(0.011)	(0.009)
CWI8 Housing Space & Envir. 2018	0.000	0.005	0.015	-0.008	0.017+	-0.005	0.004	0.001
	(0.009)	(.008)	(0.011)	(0.005)	(0.009)	(0.007)	(0.009)	(0.008)
CWI9 Transport Mobility & Con. 2018	0.004	-0.007	-0.011	0.009	-0.010	0.005	-0.005	0.000
	(0.011)	(.010)	(0.013)	(0.006)	(0.011)	(0.009)	(0.011)	(0.009)
Second home ownership 2018	-.02***	-0.006	-0.018*	-0.01**	-0.014*	-0.013*	-0.017**	-0.011*
	(0.006)	(.005)	(0.007)	(0.004)	(0.006)	(0.005)	(0.006)	(0.005)
Population density	-0.001	-.001*	-0.002**	0.000	-0.001*	-0.000	-0.001*	-0.001
	(0.001)	(.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)
Female	0.002	0.002	0.006	-0.001	-0.007	0.011	-0.001	0.002
	(0.010)	(.008)	(0.012)	(0.005)	(0.010)	(0.008)	(0.010)	(0.008)
Age. Benchmark 18-24yrs								
25-34yrs	0.006	0.009+	0.016*	-0.001	0.017**	-0.000	0.018***	-0.002
	(0.006)	(.005)	(0.007)	(0.003)	(0.005)	(0.005)	(0.006)	(0.005)
35-44yrs	0.001	-0.002	0.000	-0.002	0.008	-0.005	0.005	-0.006
	(0.005)	(.005)	(0.006)	(0.003)	(0.005)	(0.005)	(0.005)	(0.005)
45-54yrs	-.014**	-.011**	-0.019**	-0.007*	-0.004	-.017***	-0.014**	-0.011*
	(0.005)	(.004)	(0.006)	(0.003)	(0.005)	(0.004)	(0.005)	(0.005)
55-65yrs	-.02***	-.02***	-0.026***	-.009**	-0.010*	-.018***	-0.013*	-.020***
	(0.005)	(.004)	(0.006)	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)
65-80yrs	-.04***	-.02***	-0.049***	-.011***	-0.025***	-.027***	-.031***	-.027***
	(0.005)	(.004)	(0.006)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)
Education. Benchmark No formal qualifications								
Other qualifications	-0.019	0.001	-0.007	-0.006	-0.004	-0.010	-0.001	-0.014

	(0.015)	(0.009)	(0.013)	(0.007)	(0.012)	(0.008)	(0.011)	(0.010)
Vocational qualifications	-0.003	0.003	0.014	-0.008	0.006	-0.003	0.009	-0.002
	(0.015)	(0.008)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
GCSE/O-level or CSE	-0.014	-0.000	-0.005	-0.004	-0.001	-0.009	-0.000	-0.009
	(0.015)	(0.007)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
A-level or equivalent	-0.004	-0.000	0.006	-0.004	0.004	-0.003	0.005	-0.003
	(0.015)	(0.007)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
Bachelor Degree or equivalent	-0.004	0.003	0.008	-0.003	0.001	0.001	0.010	-0.005
	(0.015)	(0.007)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
Masters Degree or equivalent	0.005	0.006	0.014	0.002	0.005	0.008	0.014	0.003
	(0.015)	(0.008)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
A Doctorate or equivalent	-0.014	0.009	0.005	-0.003	-0.008	0.004	-0.002	0.005
	(0.016)	(0.010)	(0.014)	(0.007)	(0.012)	(0.010)	(0.011)	(0.011)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.005	0.003	0.001	0.006*	0.014**	-0.005	-0.002	0.011*
	(0.006)	(0.004)	(0.006)	(0.002)	(0.005)	(0.005)	(0.005)	(0.004)
Income GBP 17500-GBP29999	0.003	0.004	0.002	0.004*	0.010*	-0.005	0.001	0.006+
	(0.005)	(0.003)	(0.005)	(0.002)	(0.004)	(0.004)	(0.005)	(0.003)
Income GBP 30000-49999	-0.003	0.009**	0.002	0.003*	0.012**	-0.007+	0.003	0.003
	(0.004)	(0.003)	(0.005)	(0.002)	(0.004)	(0.004)	(0.005)	(0.003)
Income GBP 50000-99999	-0.009+	.016***	-0.005	0.011***	0.009*	-0.001	-0.001	0.008*
	(0.005)	(0.004)	(0.005)	(0.002)	(0.004)	(0.004)	(0.005)	(0.003)
Income GBP 100000 or more	-0.009	.022***	-0.003	0.016***	0.010+	0.004	0.006	0.010*
	(0.006)	(0.005)	(0.007)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Migrant status. Benchmark UK born life-long residents								
UK born migrants never lived abroad	0.006*	0.001	0.006+	0.002	0.005+	0.002	0.002	0.004+
	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)
UK born but has lived abroad	0.012**	0.007+	0.014**	0.005*	0.007+	0.010**	0.008+	0.011**
	(0.004)	(0.004)	(0.005)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)
Born abroad	0.013*	0.006	0.013*	0.005+	0.003	0.014**	0.011*	0.006
	(0.005)	(0.004)	(0.006)	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)
Ethnicity. Benchmark White								
Mixed	.040***	0.018*	0.038**	0.018**	0.043***	0.015*	0.018+	0.035***
	(0.011)	(0.009)	(0.012)	(0.006)	(0.012)	(0.007)	(0.009)	(0.010)
Asian	.028***	0.005	0.024**	0.010**	0.032***	0.007	0.021**	0.014*
	(0.007)	(0.005)	(0.008)	(0.004)	(0.008)	(0.005)	(0.007)	(0.006)
Black	0.039**	.053***	0.075***	0.016*	0.050***	0.029**	0.058***	0.034**
	(0.012)	(0.015)	(0.017)	(0.007)	(0.015)	(0.010)	(0.015)	(0.012)
Year of survey. Benchmark 2018								
2019	.015***	-0.003	0.007*	0.004*	0.016***	-0.006*	0.002	0.009***
	(0.002)	(0.003)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
2020	.041***	-0.007*	0.030***	0.004*	0.027***	0.002	0.015***	0.017***

	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
2021	.043***	0.002	0.038***	0.006***	0.035***	0.005*	0.025***	0.017***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
Observations	26110	26110	26110	26110	25985	25985	26079	26079
X^2 (likelihood ratio)	*1107*		*2205.716*		*2075.832*		*2084.312*	
Log likelihood	*-6346*		*-4715.381*		*-4690.718*		*-4981.92*	
Pseudo R^2 (McFadden)	*0.08*		0.190		0.181		*0.173*	
Akaike information criterion	*12847*		*9598.762*		*9549.435*		*10131.83*	

Notes: Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Hypothesis 1 relates to the influence of local social capital on necessity motivated start-up activity. The results suggest that the VP index, which captures civic engagement and propensity of people to express themselves and take collective action to improve the local community and beyond, is positively and significantly associated with necessity-motivated entrepreneurship. Hypothesis 2 relates to the influence of local social capital on low growth aspiration entrepreneurship. It is supported by both VP, and (marginally) RT indices. Hypothesis 3 on the importance of local social capital for non-exporting start-ups is again supported (but marginally for RT), and Hypothesis 4 on innovation is again supported by VP and marginally by RT.

Results related to the pandemic crisis period are presented in Table 3. Here, the pattern of marginal effects corresponds closely to that reported for the overall period in Table 2, however the size of the marginal effects is now much higher, and so are significance levels despite using only half of the sample. This supports Hypothesis 5. The most remarkable change relates to the non-innovative startups: the size of the positive effect of VP is now three times higher and significant, and the size of the effect of RT increases by over 50% and is now significant. In contrast, local social capital is not significantly associated with start-up activity in the non-crisis period (the corresponding results are reported in the Appendix, Table A4). All the coefficients are close to zero and insignificant.

Table 3. Probability of involvement in different types of start-up activity 2020-2021

	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)
Voice & Participation 2020	0.031**	0.005	0.036**	-0.001	0.029*	0.002	0.045***	-0.006
	(0.012)	(0.009)	(0.013)	(0.006)	(0.014)	(0.008)	(0.010)	(0.010)
Relationship & Trust 2020	0.020	0.003	0.027	-0.003	0.026+	0.002	0.031**	-0.006
	(0.016)	(0.012)	(0.018)	(0.008)	(0.015)	(0.011)	(0.011)	(0.015)
Equality 2020	0.003	0.014	0.012	0.006	0.004	0.010	0.016	-0.004
	(0.016)	(0.012)	(0.018)	(0.008)	(0.015)	(0.012)	(0.013)	(0.014)
Economy Work & Emp '20	-0.043+	-0.010	-0.065**	0.010	-0.018	-0.033+	-0.036	-0.018
	(0.022)	(0.017)	(0.025)	(0.012)	(0.021)	(0.019)	(0.026)	(0.019)
Health 2020	0.009	0.010	0.014	0.005	0.002	0.017+	-0.002	0.021*
	(0.011)	(0.008)	(0.012)	(0.006)	(0.010)	(0.009)	(0.010)	(0.009)
Education & Learning '20	-0.008	-0.010	-0.016	-0.002	0.001	-0.019+	0.007	-0.026*
	(0.014)	(0.010)	(0.016)	(0.008)	(0.013)	(0.010)	(0.012)	(0.012)
Culture Heritage & L 2020	-0.003	0.018	0.015	0.001	-0.008	0.021+	0.001	0.015
	(0.017)	(0.013)	(0.019)	(0.009)	(0.018)	(0.012)	(0.013)	(0.014)
Housing Space & Env '20	0.010	-0.005	0.019	-0.012+	0.013	-0.003	0.002	0.002
	(0.013)	(0.010)	(0.015)	(0.007)	(0.010)	(0.011)	(0.012)	(0.009)
Transport Mobil & Con '20	-0.009	0.000	-0.014	0.007	-0.022	0.010	-0.006	-0.002
	(0.018)	(0.013)	(0.020)	(0.009)	(0.016)	(0.012)	(0.014)	(0.014)
Second home ownership	-0.028**	-0.003	-0.016	-0.014**	-0.020*	-0.011+	-0.024**	-0.007
	(0.009)	(0.007)	(0.011)	(0.005)	(0.010)	(0.007)	(0.008)	(0.007)
Population density	-0.001	-0.001*	-0.003**	-0.000	-0.001	-0.001	-0.002*	-0.001+
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Female	0.003	0.014	0.012	0.006	0.004	0.010	0.016	-0.004
	(0.016)	(0.012)	(0.018)	(0.008)	(0.015)	(0.012)	(0.013)	(0.014)
Age. Benchmark 18-24yrs								
25-34yrs	0.014+	0.005	0.024**	-0.004	0.019*	0.002	0.024**	-0.002
	(0.008)	(0.006)	(0.009)	(0.004)	(0.008)	(0.007)	(0.008)	(0.007)
35-44yrs	0.004	-0.005	0.003	-0.004	0.006	0.000	0.008	-0.009
	(0.008)	(0.006)	(0.009)	(0.004)	(0.008)	(0.006)	(0.008)	(0.007)
45-54yrs	-0.015*	-0.011*	-0.017*	-0.010*	-0.004	-0.014*	-0.009	-0.015*
	(0.008)	(0.006)	(0.008)	(0.004)	(0.008)	(0.006)	(0.006)	(0.007)
55-65yrs	-0.021**	-0.013*	-0.023**	-0.012**	-0.009	-0.015*	-0.006	-.025***
	(0.008)	(0.006)	(0.008)	(0.004)	(0.008)	(0.006)	(0.007)	(0.007)
65-80yrs	-0.048***	-0.021***	-0.055***	-0.014***	-0.032***	-.025***	-.031***	-.034***
	(0.007)	(0.005)	(0.008)	(0.004)	(0.006)	(0.006)	(0.006)	(0.007)
Education. Benchmark No formal qualifications								
Other qualifications	-0.079	0.024***	-0.063	0.007*	0.033***	-0.095	-0.075	0.016***
	(0.096)	(0.006)	(0.096)	(0.004)	(0.007)	(0.616)	(0.599)	(0.005)
Vocational qualifications	-0.054	0.025***	-0.035	0.004*	0.045***	-0.084	-0.059	0.031***

	(0.096)	(0.004)	(0.096)	(0.002)	(0.005)	(0.615)	(0.599)	(0.004)
GCSE/O-level or CSE	-0.068	0.020***	-0.057	0.010***	0.039***	-0.092	-0.069	0.021***
	(0.096)	(0.003)	(0.096)	(0.002)	(0.004)	(0.615)	(0.600)	(0.003)
A-level or equivalent	-0.053	0.023***	-0.041	0.011***	0.045***	-0.080	-0.060	0.031***
	(0.096)	(0.003)	(0.096)	(0.002)	(0.004)	(0.615)	(0.600)	(0.003)
Bachelor Degree or equival	-0.055	0.023***	-0.042	0.011***	0.041***	-0.079	-0.056	0.025***
	(0.096)	(0.002)	(0.096)	(0.001)	(0.003)	(0.615)	(0.600)	(0.002)
Masters Degree or equival	-0.042	0.030***	-0.032	0.019***	0.048***	-0.068	-0.050	0.039***
	(0.096)	(0.004)	(0.096)	(0.003)	(0.005)	(0.615)	(0.600)	(0.004)
A Doctorate or equivalent	-0.067	0.035***	-0.045	0.016**	0.029***	-0.071	-0.075	0.048***
	(0.096)	(0.008)	(0.096)	(0.005)	(0.008)	(0.616)	(0.601)	(0.011)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.010	0.001	0.004	0.007*	0.021**	-0.007	-0.007	0.018***
	(0.008)	(0.005)	(0.008)	(0.003)	(0.006)	(0.006)	(0.007)	(0.005)
Income GBP 17500-29999	0.010	0.002	0.006	0.007**	0.014*	-0.002	0.001	0.011**
	(0.007)	(0.004)	(0.007)	(0.002)	(0.006)	(0.005)	(0.006)	(0.004)
Income GBP 30000-49999	0.002	0.010*	0.007	0.004+	0.017**	-0.005	0.007	0.004
	(0.006)	(0.004)	(0.007)	(0.002)	(0.006)	(0.005)	(0.006)	(0.004)
Income GBP 50000-99999	-0.004	0.015***	-0.002	0.012***	0.014*	-0.002	-0.001	0.011**
	(0.006)	(0.004)	(0.007)	(0.003)	(0.006)	(0.005)	(0.006)	(0.004)
Income GBP ≥100000	-0.008	0.023**	-0.009	0.020***	0.011	0.003	0.006	0.009
	(0.009)	(0.008)	(0.010)	(0.005)	(0.008)	(0.008)	(0.009)	(0.007)
Migrant status. Benchmark UK born life-long residents								
UK born never lived abroad	0.011**	0.004	0.012*	0.003	0.009*	0.005+	0.006	0.008*
	(0.004)	(0.003)	(0.005)	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)
UK born has lived abroad	0.015*	0.004	0.017*	0.003	0.006	0.011*	0.009+	0.009*
	(0.006)	(0.004)	(0.007)	(0.003)	(0.005)	(0.005)	(0.006)	(0.005)
Born abroad	0.015*	0.011*	0.023**	0.004	0.006	0.016***	0.017**	0.006
	(0.007)	(0.006)	(0.008)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Ethnicity. Benchmark White								
Mixed	0.059***	0.023*	0.056***	0.023**	0.058***	0.024*	0.027*	0.048***
	(0.016)	(0.011)	(0.017)	(0.008)	(0.016)	(0.011)	(0.011)	(0.013)
Asian	0.037***	0.008	0.033**	0.012*	0.041***	0.012+	0.027**	0.018**
	(0.010)	(0.006)	(0.011)	(0.005)	(0.011)	(0.006)	(0.010)	(0.006)
Black	0.059**	0.036*	0.078***	0.019*	0.055**	0.033***	0.056***	0.043**
	(0.018)	(0.014)	(0.021)	(0.009)	(0.018)	(0.012)	(0.015)	(0.014)
Year of survey. Benchmark 2020								
2021	0.001	0.008***	0.008*	0.002	0.008**	0.004	0.009**	0.000
	(0.003)	(0.002)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
Observations	*16153*	*16153*	*16153*	*16153*	*16048*	*16048*	*16124*	*16124*

X^2 (Likelihood ratio)	*584*	*628*	*5228*	*1898*
Log likelihood	*-4638*	*-4390*	*-4332*	*-4587*
Pseudo R^2 (McFadden)	*0.059*	*0.067*	*0.059*	*0.059*
Akaike information criterion	*9424*	*8929*	*8812*	*9323*

Notes: Baseline category: not involved in start-up. Average marginal effects reported. In Innovation and Exporting models, the variance was estimated using bootstrapping with 100 replications. *** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

4.2 Robustness checks and extensions

We took a closer look at our social capital proxies. First, while the two Co-op's indices used for our main results were constructed for the complete UK dataset, we recalculated both using only the datapoints for the underlying dimensions that match the location of our entrepreneurship data. We verified that it did not result in any substantive changes to the results we reported above.

Second, we explored to what extent the results are driven by some single underlying dimension. For that we run a battery of regressions where the two social capital indices were replaced by their underlying individual components. It turned out that, for the Voice and Participation index, the most important factor is participation in elections. This is consistent with the tradition that can be traced back to Putnam et al. (1993), who interpret electoral turnout as the key indicator of 'civic involvement and sociability' (*Ibid.*: 148). In turn, decomposition of the Relationship and Trust index into its subcomponents sheds some light on why the RT index performs less well compared to VP in our main set of results. In particular, one underlying assumption of the RT index is that longer average distance between home and work implies less scope for local contacts, as work contacts remain outside local community. While this seems to be a plausible assumption on factors of social capital, the variable may also correlate positively with propensity to engage in startup. Long commuting distances may push people to seek self-employment, the effect we think that the positive sign on this sub-indicator we obtained captures. That introduces noise in the effects of the RT index. For illustration, we report some of these results in Table A5 in the Appendix.

Based on these experiments, we conclude that the Co-op's indices perform better than their individual components, so that the former capture some substitution effects in their underlying indicators and/or alleviate measurement errors in individual components. Despite the problems mentioned above, we also verified that the two indices are consistent as the measures. When we replicated construction of indices utilising our subsample, we obtained Cronbach Alpha of 0.66 for VP, and 0.64 for RT.

The next issue we consider is the impact of COVID-18. Utilising Nomis data from the Office for National Statistics we calculated deaths/population ratio for 2018 and deaths/population ratio for 2020. The natural logarithm of the ratio of the latter to the former is our proxy for the local impact of COVID-19 (at the Local Authority District level). We added this variable to the specifications

we used in multinomial logit models reported in Table 3. The results are reported in Table A6 in Appendix. The marginal effects for the COVID-19 impact variable are positive (but insignificant in some models). Therefore, we suspect the reverse causation: higher local start-up rates could be associated with more social contacts leading to a higher impact of the pandemic. We do not have instrumental variables to solve this issue. In addition, while the results for VP are unaffected, the results of RT are further weakened. This is because of a significant positive correlation between COVID-19 impact proxy variable and the RT measure. This makes sense: the latter variable captures density of social contacts, a factor that was also likely to lead to faster spread of the virus.

While we used COVID-19 impact variable in logarithm form to improve its distribution we also experimented with using this ratio untransformed. It made no substantive difference to the results. Overall, we conclude that COVID-19 impact variable turned out to be problematic in explaining entrepreneurial outcomes during the pandemic, because it can be endogenous towards both the start-ups and one of our social capital measures. Moreover, it was not the pandemic itself, but COVID-19 restrictions that were the main channel affecting business activity. Yet these restrictions had limited variation over space compared to variation over time. Hence, we conclude that the comparison of pre-pandemic and pandemic years, while crude, is a more appropriate measure of the crisis impact, as in Estrin et al. (2024).

Given that our locality level variables are time invariant, adding dummies at that level would make estimating of the corresponding social capital effects impossible. However, we experimented with adding regional level dummies, yet they came jointly insignificant (chi2=15.2; p=0.17). Likewise, the Akaike Information Criterion is lower for the model without regional dummies. Therefore, we continue to use more parsimonious models. It appears that our locality-level variables are sufficient controls absorbing much of the regional effects. The comparison of the baseline equation with and without regional effects is reproduced as Table A7 of the Appendix.

Another, related robustness test we performed was to aggregate the social capital measures up to local authority district level (LAD). The results are reported in the Appendix, Tables A8 and A9, and are consistent with our main results. One interesting issue is (again) a negative and significant effect of VP on high growth aspirations nascent projects. However, in absolute terms, the (positive) effect of VP on low growth aspirations business start-up is larger by about 50%. It

follows that the overall effect of VP is associated with a change of composition of start-up towards low aspiration projects.

Critics of the social capital theory argue that the positive effects of social capital may be conditional on social characteristics, and on gender in particular (Arneil, 2006). Following that, we replicated Table 2 results, now split by gender. This is reported in the Appendix, Tables A10 and A11. We now use about half of original sample size for each gender and we should expect the level of significance to drop (unless this effect is counterbalanced by the effect of having more homogeneity in subsamples). We find that the effects of social capital (VP) are positive for both genders as hypothesised, however they are weaker and insignificant for women. The gender differences in the size of the effects are quite dramatic as can be seen in Tables A10 and A11. This calls for further inquiry, as we will highlight again in our concluding section.

Finally, the data used so far are for the period 2018-2021, as we are limited by the availability of the Community Wellbeing Indices. Arguably this may be a very specific time, and COVID-19 pandemics may not be representative for other major crises. To shed some light on generalisability of our results we run additional estimations utilising GEM UK data for an earlier period namely 2006-2017. For this period, we have available the proxy of social activism, general election participation rates. The final two tables in the Appendix report first the results of both the logit and the multinomial logit models for the whole period (Table A12), and next the results for the Global Financial Crisis period (2008-2009) only (Table A13). For the whole period, local social activism is highly significant for general measure of engagement in start-up activity. For the corresponding multinomial models, results for both low versus high growth aspirations, and for low and high innovation are as expected: effects of social participation are highly significant and positive for the first categories and insignificant for the second ones. For exporting, local social participation effects are similar and significant for both categories. For opportunity versus necessity, again, we have significant effects for both categories, however the ranking of magnitude is reversed: effects on opportunity entry are stronger.

We now turn to the final table, which presents results for the Global Financial Crisis period. Election participation effect is again significant in the logit model. Likewise, for growth aspirations and innovation models the pattern remains the same. We now also have the expected pattern for necessity versus opportunity startup contrast: effect for necessity startup activity is higher and significant. But local social activism has no effect for the exporting versus non-exporting start-up categories during the crisis.

5. DISCUSSION AND CONCLUSIONS

The key element of the present-day debate on the role of social capital relates to Putnam's (2000) argument on long-term gradual erosion of social capital in the US. This thesis triggered both widespread appreciation, and criticism (Arneil, 2006), which we have no space to review here. However, one important aspect of criticism comes from an observation that the US may not be a representative case, and in particular the UK did not experience the long-term erosion of social capital, an outcome which Hall (1999) attributes to educational reform, government policy, and the transformation of the class structure. It seems however that this positive assessment may not be carried over to the more recent UK post-Global Financial Crisis context, as documented by Bolet (2021). Despite that, our results for the most recent period are stronger not weaker. This can be explained. Our estimations emphasise heterogeneity over space, and regardless of general trends in social capital over time, it is the extent of spatial variation that makes the results hold. It is not by chance that Putnam et al. (1993) found strong effects of social capital for Italy, the country with large regional heterogeneity, which Putnam et al. (1993), and Banfield (1958), attribute to political and social history. In contrast, we would not expect significant results for the countries that are homogenous in terms of distribution of social capital over space.

Accounting for our robustness checks, we may conclude that the results support the hypotheses that start-ups that do not innovate, and with low growth aspirations benefit from local social capital, especially that related to social activism (Putnam et al. 1993; Putnam 1995; 2001). The contrast in effects for those non-exporting versus exporting is only significant in the recent period. We would speculate that the change over time may be driven by technology: sales over internet made an instantaneous shift to exporting easy, and less dependent on local support. Finally, for necessity versus opportunity contrast, the expected effects are robust for the crisis periods.

The social capital VP measure is significant for all core models, showing the importance of social activism that shape patterns of social co-operation, and can be appropriated, forming support for 'marginal' types of start-ups, during the time of the COVID-19 crisis in particular. RT is associated with start-ups that do not export, and have low aspirations, suggesting that dense structures of local social relations also play a role.

The results are consistent with the literature that recognizes the value of local social capital for entrepreneurship (Westlund & Bolton, 2003), but our contribution is to consider its value for different types of start-up activity. While the entrepreneurship literature focus on the ambitious,

or ‘strategic’ types of entrepreneurship (e.g. Estrin et al., 2022), we posit that low growth ambition and other related types of entrepreneurship matter for two reasons.

Firstly, motives that drive the entrepreneurial entry and its initial characteristics should be to some extent separated from the predictions about the subsequent path that the new venture takes. Adopting the process perspective on entrepreneurship leads us to emphasise that opportunities are created continuously once the business is created. For that reason, what starts as a necessity project encapsules potentialities that may be successfully realised later. We, therefore, call for the wider rethinking of the concept and the implications of necessity entrepreneurship. If the necessity-motivated ventures fail, it is often because of inadequate access to resources, even if they would have potential, which could unravel along their entrepreneurial journey later-on.

This leads us to the second point related to the ‘so what’ question. Marginal forms of entrepreneurship are not associated with affluent individuals, as coefficients on high income strata indicate. Instead, they present opportunities for the socially underprivileged to escape from the poverty trap and seek financial independence. This is why thinking about what supports these forms of entrepreneurship matters. Our reasoning and empirical results suggest that local social capital, especially civic engagement (Putnam, 1995; 2001), plays an important role. As documented by Klinenberg (2002), poor neighbourhoods exhibit a wide heterogeneity in the strength of social capital, and this has significant implications for the social and economic outcomes and the way these neighbourhoods can evolve and develop, including the role of local entrepreneurship, and especially at the time of crisis.

This also implies further direction for research. If local social capital supports ‘marginal’ types of entrepreneurship, then the next question is on the determinants of the former. An important research line, which can be traced back to Jacobs (1991[1961]), suggests that the character of space may be less or more conducive to local social capital, and ‘social infrastructure’ may play a critical role here. It is defined broadly as the ‘physical conditions that determine whether social capital develops’ (Klinenberg, 2018:5). Safe local places where people meet, exchange ideas, come with common projects, learn how to cooperate locally bring direct benefits to their welfare (Tomaney et al., 2024). However, because social capital is appropriable for other purposes (Adler and Kwon, 2002), it also brings important indirect benefits, supporting one important route out of social dependency and poverty traps, which is entrepreneurship. While we do not consider entrepreneurship and self-employment as a panacea for economic and social deprivation, there is empirical evidence that it generates social mobility out of poverty (Frankish et al., 2014), and

its advantage is that it is ‘a low hanging fruit’, which, of course, needs to be coupled with sustainable long term local development strategies.

Our results on crisis versus non-crisis period have implications for further research. These results may suggest the reconceptualisation of social capital, based on the distinction between stock and flows, as argued by Krishna (2000). The intensity with which social capital stock is activated and efficiently used varies with circumstances. In particular, ‘[d]emand leads to its own supply.’ (*Ibid.*: 74). During the crisis, a sense of essential, common social purpose, and demand for response may lead to intensive use of latent local social capital, and this is what we probably observe.

Last but not least, one result stands out as calling for further research. We found strong gender differences in the size of positive effect of social capital on ‘less ambitious’ forms of entrepreneurship. This is consistent with Arneil’s (2006) criticism of social capital theory, as she argues that the effects of social capital differ by gender and may therefore amplify some inequalities. It is something that is worth exploring further.

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ANNEX

Operationalisation of Opportunity and Innovation variables

GEM introduced important changes in the questionnaire in 2019 implying a change in coding for *Opportunity* and *Innovation* variables:

- *Opportunity*: the question "Are you involved in this start-up to take advantage of a business opportunity or because you have no better choices for work" and corresponding variables SUBNEC and SUBOPP were replaced by the question on start-up motivations "Please tell me the extent to which the following statements reflect the reasons you are trying to start a business. You can strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree or strongly disagree" with the following response options: 'to make a difference in the world', 'to build great wealth or a very high income', 'to continue a family tradition', 'to earn a living because jobs are scarce'. Therefore, from 2019 onwards, the variable *Opportunity* takes value of 1 if respondent identified as nascent entrepreneur 'strongly agree' or 'somewhat agree' with the statement 'to earn a living because jobs are scarce' and value of otherwise. To check whether this change in methodology affects the results, we run additional estimations excluding 2018, and obtained sensibly similar results.

- For 2019-2021, Innovation variable is based on GEM variables SUNEWPROD (Are any of your products or services new to people in the area where you live, or new to people in your country, or new to the world?) and SUNEWPROC (Are any of the technologies or procedures used for your products or services new to people in the area where you live, or new to people in your country, or new to the world?). These variables being introduced in 2019 only, for 2018 we use variables SUNEWCST ('Will all, some, or none of your potential customers consider this product or service new and unfamiliar?'), SUCOMPET (Right now, are there many, few, or no other businesses offering the same products or services to your potential customers?) and SUNEWTEC ('How long have the technologies or procedures used for this product or service been available? Less than a year, between one and five years or longer than five years?'). To check whether this change in methodology affects the results, we run additional estimations excluding 2018 and with alternative coding for *Innovation* variable based only on product innovation, and obtained sensibly similar results.

Table A1. Variables and descriptive statistics

	No of obs.	Mean	St. dev.	Minimum	Maximum
Global Entrepreneurship Monitor, Adult Population Survey based variables (individual level), 2018-2021					
Dependent variables					
Involved in nascent start-up activity	22757	0.0604	0.2382	0	1
Opportunity vs. necessity motive	22757	0.0865	0.3622	0	2
0 - not involved	22757	0.9396	0.2382		
1 - involved in necessity-motivated start-up	22757	0.0343	0.1819		
2 - involved in opportunity-motivated start-up	22757	0.0261	0.1594		
Innovative vs. non-innovative start-up	22736	0.0833	0.3519	0	2
0 - not involved	22736	0.9405	0.2366		
1 - involved in non-innovative start-up	22736	0.0358	0.1857		
2 - involved in innovative start-up	22736	0.0238	0.1523		
High vs. low growth aspirations start-up	22757	0.0711	0.2958	0	2
0 - not involved	22757	0.9396	0.2382		
1 - involved in low-aspiration start-up	22757	0.0497	0.2172		
2 - involved in high-aspiration start-up	22757	0.0107	0.1030		
Exporting vs. non-exporting startup	22651	0.0788	0.3437	0	2
0 - not involved	22651	0.9440	0.2299		
1 - involved in non-exporting start-up	22651	0.0332	0.1792		
2 - involved in exporting start-up	22651	0.0228	0.1492		
Explanatory variables					
Female	22736	0.5028	0.5000	0	1
Age of respondent	22757	3.8369	1.5970	1	6
18-24yrs	22757	0.0849	0.2787		
25-34yrs	22757	0.1620	0.3685		
35-44yrs	22757	0.1719	0.3773		
45-54yrs	22757	0.1964	0.3973		
55-65yrs	22757	0.1821	0.3860		
65-80yrs	22757	0.2027	0.4020		
Education	22757	3.9543	1.5594	0	7
No formal qualifications	22757	0.0304	0.1716		
Other qualifications	22757	0.0469	0.2114		
Vocational qualifications	22757	0.0924	0.2896		
GCSE/O-level or CSE	22757	0.1914	0.3934		
A-level or equivalent	22757	0.2096	0.4070		
Bachelor Degree or equivalent	22757	0.2891	0.4534		
Masters Degree or equivalent	22757	0.1173	0.3218		
A Doctorate or equivalent	22757	0.0229	0.1497		
Income	22757	3.6790	1.3654	1	6
Income up to GBP 11499	22757	0.0930	0.2905		
Income GBP 11500-17499	22757	0.1016	0.3021		
Income GBP 17500-GBP29999	22757	0.2161	0.4116		
Income GBP 30000-49999	22757	0.2771	0.4476		
Income GBP 50000-99999	22757	0.2471	0.4313		
Income GBP 100000 or more	22757	0.0651	0.2467		
Migrant status	22757	1.6385	0.8724	1	4
UK born life-long residents	22757	0.5719	0.4948		

UK born regional in-migrants never lived abroad	22757	0.2725	0.4453		
UK born but has lived abroad	22757	0.1008	0.3011		
Born abroad	22757	0.0548	0.2275		
Ethnicity	22757	1.1137	0.4830	1	4
White	22757	0.9411	0.2354		
Mixed	22757	0.0156	0.1238		
Asian	22757	0.0319	0.1756		
Black	22757	0.0115	0.1065		
Co-op, Community Wellbeing Index ('seamless locale' level), 2018 (2020 for models based on 2020-2021 data)					
CWI3 Voice & Participation 2018 (index of social activism in the local area)*	22757	0.5216	0.1224	0.13	0.98
CWI1 Relationship & Trust 2018 (index of density of social relationships proxied by factors facilitating social contacts)*	22757	0.6066	0.1604	0	1
CWI2 Equality 2018 (index describing equality in the local area reflecting challenges that people can face, including economic, social, cultural and political inequality)*	22757	0.4228	0.2352	0	0.98
CWI4 Economy Work & Employment 2018 (index describing availability and quality of work, as well as presence of sustainable and diverse economy supporting local community)*	22757	0.5296	0.1203	0.04	0.92
CWI5 Health 2018 (index describing health services and infrastructure available to support physical and mental health)*	22757	0.5823	0.1920	0.06	1
CWI6 Education & Learning 2018 (index describing access to learning opportunities, formal and informal, across all age groups)	22757	0.7684	0.1951	0.03	1
CWI7 Culture Heritage & Leisure 2018 (index describing access to arts, entertainment, and places of religious cult)*	22757	0.6618	0.1609	0.02	1
CWI8 Housing Space & Environment 2018 (index describing quality and affordability of local housing, access to community and green spaces)*	22757	0.5440	0.1375	0	0.94
CWI9 Transport Mobility & Connectivity 2018 (index describing access to transport and technology)*	22757	0.6824	0.1490	0.01	1
Share of second home ownership in the locale*	22757	0.6810	0.2299	0.01	1.00
Population density in the locale (in th per sqkm)	22757	1.9899	2.3427	0.0003	21.3746
Year dummies					
2018	22757	0.2430	0.4289	0	1
2019	22757	0.1724	0.3778	0	1
2020	22757	0.2781	0.4481	0	1
2021	22757	0.3065	0.4611	0	1

Notes:
GEM = Global Entrepreneurship Monitor, Annual Population Survey
CWI = Community Wellbeing Index
*Normalised (using percentile category method) score for each 'seamless locale' varying from 0 to 1 based on a series of underlying indicators (see Hill-Dixon, A. et al. (2018) for the details).

Table A2. Spearman rank correlation coefficients

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Necessity	1.00																		
2	Exporting	1.00	1.00																	
3	Innovation	1.00	1.00	1.00																
4	Growth asp.	1.00	1.00	1.00	1.00															
5	CWI3 Voice & Participation 2018	0.01	0.01	0.01	0.01	1.00														
6	CWI1 Relationship & Trust 2018	0.01	0.01	0.01	0.01	0.01	1.00													
7	CWI2 Equality 2018	-0.03	-0.03	-0.03	-0.03	-0.09	0.05	1.00												
8	CWI4 Economy Work & Employment 2018	-0.01	-0.01	-0.01	-0.01	0.36	0.26	-0.10	1.00											
9	CWI5 Health 2018	0.01	0.01	0.01	0.01	0.35	0.32	-0.10	0.21	1.00										
10	CWI6 Education & Learning 2018	-0.01	-0.01	-0.01	-0.01	0.18	0.15	0.06	0.24	0.17	1.00									
11	CWI7 Culture Heritage & Leisure 2018	0.02	0.02	0.02	0.02	0.25	0.02	-0.47	0.18	0.29	0.31	1.00								
12	CWI8 Housing Space & Environment 2018	-0.01	-0.01	-0.01	-0.01	0.11	-0.08	-0.03	0.30	-0.13	0.12	0.08	1.00							
13	CWI9 Transport Mobility & Connectivity 2018	0.02	0.02	0.02	0.02	0.26	0.07	-0.18	0.25	0.38	0.37	0.60	0.07	1.00						
14	CWI3 Voice & Participation 2020	0.01	0.01	0.01	0.02	0.76	0.13	-0.24	0.39	0.45	0.30	0.45	0.08	0.46	1.00					
15	CWI1 Relationship & Trust 2020	0.01	0.01	0.01	0.01	0.03	0.86	0.01	0.25	0.38	0.08	0.00	-0.13	0.06	0.13	1.00				
16	CWI2 Equality 2020	-0.03	-0.03	-0.03	-0.03	0.29	0.04	0.88	0.18	0.32	0.06	0.51	0.00	0.32	0.41	0.09	1.00			
17	CWI4 Economy Work & Employment 2020	0.01	0.01	0.01	0.01	0.39	0.29	-0.18	0.68	0.41	0.30	0.42	0.17	0.41	0.47	0.32	-0.30	1.00		
18	CWI5 Health 2018	0.02	0.02	0.02	0.02	0.36	0.31	-0.08	0.20	0.86	0.21	0.30	-0.11	0.39	0.45	0.36	-0.30	0.40	1.00	
19	CWI6 Education & Learning 2020	0.00	0.00	0.00	0.00	0.11	0.21	-0.01	0.17	0.25	0.61	0.47	0.07	0.60	0.33	0.13	-0.15	0.32	0.27	1.00
20	CWI7 Culture Heritage & Leisure 2020	0.02	0.02	0.02	0.02	0.26	0.05	-0.42	0.18	0.32	0.34	0.94	0.07	0.61	0.46	0.03	-0.49	0.42	0.33	0.52
21	CWI8 Housing Space & Environment 2020	-0.02	-0.02	-0.02	-0.02	0.15	-0.15	0.22	0.18	-0.23	0.11	-0.19	0.76	-0.21	-0.03	-0.19	0.21	0.06	-0.19	-0.05
22	CWI9 Transport Mobility & Connectivity 2020	0.01	0.01	0.01	0.01	0.23	0.05	-0.15	0.23	0.33	0.34	0.58	0.07	0.94	0.41	0.03	-0.30	0.36	0.34	0.57
23	Second home ownership	-0.01	-0.01	-0.01	-0.01	0.14	0.37	0.32	0.33	0.28	0.19	0.05	0.14	0.32	0.20	0.35	0.20	0.35	0.27	0.25
24	Population density	0.01	0.01	0.01	0.01	0.02	0.12	-0.22	0.11	0.27	0.35	0.60	0.14	0.72	0.29	0.06	-0.27	0.28	0.27	0.62
25	Female	-0.04	-0.04	-0.04	-0.04	-0.01	0.00	0.03	-0.01	-0.01	-0.01	-0.03	-0.01	-0.03	-0.01	0.00	0.02	-0.01	-0.01	-0.02
26	Age	-0.11	-0.11	-0.10	-0.11	0.04	-0.06	0.03	0.02	-0.05	-0.01	-0.04	-0.04	-0.07	0.00	-0.05	0.03	-0.01	-0.05	-0.06
27	Education	0.04	0.04	0.04	0.04	0.06	0.07	-0.12	0.06	0.09	0.06	0.11	-0.01	0.06	0.11	0.07	-0.13	0.10	0.09	0.06
28	Income	0.03	0.03	0.03	0.03	0.08	0.10	-0.07	0.13	0.10	0.03	0.06	0.01	0.06	0.11	0.10	-0.09	0.14	0.10	0.03
29	Migrant status	0.03	0.03	0.03	0.03	0.11	-0.01	-0.15	0.04	0.07	-0.03	0.09	0.01	0.03	0.12	0.00	-0.14	0.05	0.05	-0.02
30	Ethnicity	0.09	0.09	0.09	0.09	-0.04	0.09	-0.14	-0.01	0.10	0.00	0.15	-0.05	0.14	0.07	0.10	-0.14	0.04	0.09	0.11

		20	21	22	23	24	25	26	27	28	29
20	CWI7 Culture Heritage & Leisure 2020	1.00									
21	CWI8 Housing Space & Environment 2020	-0.16	1.00								
22	CWI9 Transport Mobility & Connectivity 2020	0.58	-0.22	1.00							
23	Second home ownership	0.05	-0.02	0.32	1.00						
24	Population density	0.60	-0.18	0.68	0.26	1.00					
25	Female	-0.03	0.02	-0.03	-0.01	-0.03	1.00				
26	Age	-0.03	0.09	-0.07	-0.04	-0.11	-0.04	1.00			
27	Education	0.11	-0.03	0.05	0.01	0.06	0.02	-0.20	1.00		
28	Income	0.06	-0.02	0.04	0.10	0.01	-0.11	-0.23	0.35	1.00	
29	Migrant status	0.08	-0.02	0.02	-0.04	0.02	-0.02	0.13	0.18	0.03	1.00
30	Ethnicity	0.15	-0.16	0.14	0.04	0.23	-0.03	-0.18	0.09	0.02	0.11

Table A3. Pearson correlations between the pairs of continuous variables

		1	2	3	4	5	6	7	8	9	10
1	Relationship & Trust	1									
2	Equality	0.0387	1								
3	Voice & Participation	0.0296	-0.1212	1							
4	Economy Work & Employment	0.2738	-0.1309	0.3512	1						
5	Health	0.3234	-0.1649	0.3475	0.1888	1					
6	Education & Learning	0.149	0.0756	0.1409	0.231	0.1531	1				
7	Culture Heritage & Leisure	0.0111	-0.4816	0.2267	0.2288	0.2828	0.3069	1			
8	Housing Space & Environment	-0.0573	0.0035	0.1741	0.363	-0.0908	0.1593	0.1415	1		
9	Transport Mobility & Connectivity	0.0647	-0.1824	0.2308	0.2842	0.3571	0.3952	0.6363	0.1791	1	
10	Second home ownership	0.3601	0.2934	0.1093	0.3262	0.2767	0.2318	0.115	0.17	0.3709	1
11	Population density	0.1453	-0.4275	0.0857	0.0818	0.2867	0.1599	0.5313	0.0226	0.5031	0.1435

Note: For CWI indices, this is based on 2018 values.

Table A4. Probability of involvement in different types of start-up activity 2018-2019

	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CWI3 Voice & Participation 2018	0.002	-0.007	0.007	-0.013*	0.004	-0.008	-0.002	-0.001
	(0.005)	(0.008)	(0.008)	(0.005)	(0.006)	(0.007)	(0.007)	(0.007)
CWI1 Relationship & Trust 2018	-0.001	-0.008	0.006	-0.015	-0.002	-0.008	-0.004	-0.005
	(0.010)	(0.015)	(0.016)	(0.009)	(0.014)	(0.013)	(0.014)	(0.014)
CWI2 Equality 2018	0.005	-0.008	-0.003	0.002	-0.015	0.011	-0.017	0.012
	(0.009)	(0.014)	(0.015)	(0.008)	(0.010)	(0.012)	(0.011)	(0.011)
CWI4 Economy Work & Employment 2018	0.008	0.002	-0.008	0.020*	0.003	0.004	-0.015	0.026*
	(0.010)	(0.016)	(0.017)	(0.010)	(0.012)	(0.014)	(0.015)	(0.012)
CWI5 Health 2018	-0.005	0.007	-0.006	0.009	-0.006	0.010	0.005	-0.005
	(0.007)	(0.010)	(0.011)	(0.006)	(0.009)	(0.008)	(0.009)	(0.008)
CWI6 Education & Learning 2018	-0.015*	-0.012	-0.023*	-0.005	-0.011	-0.011	-0.020*	-0.008
	(0.006)	(0.009)	(0.010)	(0.005)	(0.007)	(0.008)	(0.010)	(0.007)
CWI7 Culture Heritage & Leisure 2018	-0.003	0.032*	0.022	0.009	0.015	0.012	0.022	0.009
	(0.010)	(0.016)	(0.016)	(0.009)	(0.011)	(0.011)	(0.015)	(0.012)
CWI8 Housing Space & Environment 2018	-0.005	0.024+	0.028*	-0.008	0.017+	-0.000	0.016	0.002
	(0.009)	(0.013)	(0.014)	(0.007)	(0.010)	(0.011)	(0.011)	(0.011)
CWI9 Transport Mobility & Connect. 2018	0.006	-0.016	-0.006	-0.002	0.004	-0.008	-0.002	-0.009
	(0.010)	(0.016)	(0.017)	(0.009)	(0.013)	(0.013)	(0.015)	(0.013)
Second home ownership 2018	-0.004	-0.011	-0.010	-0.005	-0.003	-0.009	-0.004	-0.009
	(0.006)	(0.009)	(0.009)	(0.005)	(0.008)	(0.008)	(0.009)	(0.008)
Population density in th per sq km	-0.000	-0.001	-0.001	0.000	-0.002	0.000	-0.002+	0.001
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Female	-0.003	-.02***	-.010**	-.01***	-0.007*	-.01***	-0.011**	-.007*
	(0.002)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)
Age. Benchmark 18-24yrs								
25-34yrs	-0.005	0.016*	0.006	0.005	0.014*	-0.002	0.011	0.001
	(0.006)	(0.008)	(0.009)	(0.004)	(0.007)	(0.008)	(0.008)	(0.006)
35-44yrs	-0.002	0.006	0.001	0.003	0.013+	-0.009	0.002	0.002
	(0.006)	(0.008)	(0.009)	(0.004)	(0.007)	(0.009)	(0.008)	(0.007)
45-54yrs	-0.012*	-0.009	-0.019*	-0.001	-0.002	-0.019*	-0.019**	-0.001
	(0.006)	(0.007)	(0.008)	(0.004)	(0.006)	(0.008)	(0.007)	(0.006)
55-65yrs	-0.016**	-0.016*	-.03***	-0.004	-0.009	-.021**	-0.021**	-.010+
	(0.006)	(0.007)	(0.008)	(0.003)	(0.006)	(0.008)	(0.007)	(0.006)
65-80yrs	-0.018**	-.02***	-.04***	-0.005	-0.012+	-.03***	-.029***	-.011+
	(0.006)	(0.007)	(0.008)	(0.004)	(0.006)	(0.008)	(0.007)	(0.006)
Education. Benchmark No formal qualifications								
Other qualifications	0.007	-0.003	0.007	-0.002	-0.001	0.007	0.016	-0.010
	(0.008)	(0.012)	(0.012)	(0.008)	(0.030)	(0.014)	(0.016)	(0.036)
Vocational qualifications	0.006	0.003	0.013	-0.005	0.006	0.000	0.011	-0.002
	(0.006)	(0.010)	(0.010)	(0.006)	(0.009)	(0.009)	(0.010)	(0.009)

GCSE/O-level or CSE	-0.002	-0.000	-0.000	-0.003	-0.005	-0.000	0.003	-0.006
	(0.004)	(0.009)	(0.008)	(0.006)	(0.007)	(0.009)	(0.008)	(0.008)
A-level or equivalent	0.001	-0.005	0.001	-0.005	-0.001	-0.004	0.001	-0.005
	(0.004)	(0.009)	(0.008)	(0.006)	(0.008)	(0.008)	(0.008)	(0.008)
Bachelor Degree or equivalent	0.003	0.005	0.009	-0.001	-0.001	0.006	0.008	0.000
	(0.005)	(0.009)	(0.008)	(0.006)	(0.007)	(0.009)	(0.008)	(0.008)
Masters Degree or equivalent	0.005	0.002	0.008	-0.002	-0.002	0.006	0.009	-0.002
	(0.005)	(0.009)	(0.009)	(0.006)	(0.009)	(0.009)	(0.008)	(0.008)
A Doctorate or equivalent	-0.004	0.001	0.008	-0.008	-0.008	0.000	0.009	-0.011
	(0.006)	(0.013)	(0.014)	(0.006)	(0.046)	(0.034)	(0.015)	(0.036)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	-0.007	0.008	-0.003	0.006	0.001	-0.002	0.012	-0.004
	(0.009)	(0.008)	(0.011)	(0.005)	(0.008)	(0.011)	(0.013)	(0.007)
Income GBP 17500-GBP29999	-0.017*	0.008	-0.008	0.000	0.003	-0.012	-0.002	-0.003
	(0.008)	(0.006)	(0.009)	(0.003)	(0.007)	(0.008)	(0.009)	(0.006)
Income GBP 30000-49999	-0.019*	0.007	-0.012	0.001	0.002	-0.013+	-0.006	-0.000
	(0.008)	(0.006)	(0.009)	(0.003)	(0.006)	(0.007)	(0.009)	(0.006)
Income GBP 50000-99999	-0.022**	0.017**	-0.012	0.008*	0.000	-0.003	-0.004	0.004
	(0.008)	(0.006)	(0.009)	(0.003)	(0.007)	(0.007)	(0.009)	(0.006)
Income GBP 100000 or more	-0.018*	0.023**	-0.004	0.009*	0.004	0.001	0.003	0.007
	(0.008)	(0.008)	(0.010)	(0.004)	(0.007)	(0.009)	(0.011)	(0.007)
Migrant status. Benchmark UK born life-long residents								
UK born migrants never lived abroad	-0.002	-0.004	-0.004	-0.002	-0.001	-0.003	-0.003	-0.002
	(0.002)	(0.004)	(0.004)	(0.002)	(0.004)	(0.003)	(0.004)	(0.003)
UK born but has lived abroad	0.008	0.013+	0.011	0.010*	0.011+	0.009	0.007	0.013*
	(0.005)	(0.007)	(0.007)	(0.005)	(0.007)	(0.006)	(0.007)	(0.007)
Born abroad	0.008	-0.006	-0.005	0.008	-0.004	0.010	-0.002	0.004
	(0.006)	(0.007)	(0.007)	(0.006)	(0.005)	(0.009)	(0.007)	(0.007)
Ethnicity. Benchmark White								
Mixed	0.006	0.001	0.002	0.004	0.017	-0.006	-0.002	0.010
	(0.012)	(0.014)	(0.015)	(0.008)	(0.049)	(0.057)	(0.049)	(0.079)
Asian	0.020+	-0.007	0.005	0.005	0.022	-0.004	0.005	0.007
	(0.011)	(0.008)	(0.011)	(0.006)	(0.017)	(0.023)	(0.011)	(0.009)
Black	0.007	0.106**	0.100**	0.007	0.057+	0.028	0.070*	0.032
	(0.012)	(0.039)	(0.038)	(0.011)	(0.033)	(0.025)	(0.032)	(0.025)
Year of survey. Benchmark 2018								
2019	.014***	-0.003	0.008*	0.004*	.016***	-0.006*	0.002	.01***
	(0.002)	(0.003)	(0.004)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)
Observations	9957	9957	9957	9957	9937	9937	9955	9955
X^2 (likelihood ratio)	*306*		*260*		*1135*		*961*	
Log likelihood	*-1664*		*-1657*		*-1635*		*-1707*	
Pseudo R^2 (McFadden)	*0.084*		*0.073*		*0.076*		*0.068*	
Akaike information criterion	*3475*		*3463*		*3418*		*3563*	

Notes:
Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Table A5. Probability of involvement in different types of start-up activity 2020-2021

	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
General Election Turnout	0.010+	0.004	0.017**	-0.004	0.008	0.005	0.018**	-0.003
	(0.005)	(0.004)	(0.006)	(0.003)	(0.007)	(0.004)	(0.006)	(0.005)
Workers working over 30km from home	0.012	0.007	0.015+	0.003	0.010	0.009	0.015*	0.003
	(0.008)	(0.006)	(0.009)	(0.004)	(0.007)	(0.006)	(0.007)	(0.006)
CWI2 Equality 2020	-0.009	0.011	-0.001	0.003	-0.008	0.008	0.002	-0.005
	(0.017)	(0.011)	(0.017)	(0.010)	(0.015)	(0.012)	(0.013)	(0.014)
CWI4 Economy Work & Employment 2020	-0.046*	-0.015	-0.071**	0.010	-0.016	-0.043*	-0.039	-0.020
	(0.020)	(0.019)	(0.024)	(0.011)	(0.023)	(0.019)	(0.028)	(0.020)
CWI5 Health 2020	0.013	0.010	0.016	0.006	0.007	0.015+	0.002	0.021*
	(0.011)	(0.008)	(0.011)	(0.006)	(0.010)	(0.009)	(0.010)	(0.009)
CWI6 Education & Learning 2020	-0.009	-0.012	-0.016	-0.004	0.001	-0.021*	0.008	-0.028*
	(0.012)	(0.010)	(0.015)	(0.007)	(0.014)	(0.010)	(0.013)	(0.012)
CWI7 Culture Heritage & Leisure 2020	0.003	0.019	0.022	0.000	-0.005	0.023+	0.008	0.014
	(0.017)	(0.013)	(0.018)	(0.010)	(0.018)	(0.012)	(0.013)	(0.013)
CWI8 Housing Space & Environment 2020	0.007	-0.007	0.013	-0.011	0.010	-0.006	-0.003	0.003
	(0.013)	(0.009)	(0.015)	(0.007)	(0.010)	(0.011)	(0.012)	(0.009)
CWI9 Transport Mobility & Connect. 2020	-0.010	0.000	-0.015	0.007	-0.024+	0.010	-0.007	-0.002
	(0.016)	(0.013)	(0.020)	(0.009)	(0.014)	(0.012)	(0.013)	(0.013)
Second home ownership 2020	-0.024*	-0.003	-0.012	-.013***	-0.015	-0.011+	-0.019*	-0.008
	(0.010)	(0.006)	(0.010)	(0.004)	(0.009)	(0.006)	(0.008)	(0.007)
Population density in th per sq km	-0.001	-0.002*	-0.003**	-0.000	-0.002	-0.001+	-0.002*	-0.001+
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Female	-0.012***	-0.010***	-0.014***	-.009***	-0.015***	-0.008**	-0.010**	-.013***
	(0.004)	(0.002)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Age. Benchmark 18-24yrs								
25-34yrs	0.013	0.005	0.024**	-0.004	0.019*	0.002	0.023**	-0.003
	(0.009)	(0.006)	(0.009)	(0.004)	(0.008)	(0.007)	(0.008)	(0.007)
35-44yrs	0.003	-0.005	0.002	-0.004	0.006	-0.000	0.008	-0.009
	(0.008)	(0.006)	(0.009)	(0.004)	(0.008)	(0.006)	(0.008)	(0.007)
45-54yrs	-0.015*	-0.012+	-0.017*	-0.010*	-0.004	-0.015*	-0.010	-0.015*
	(0.007)	(0.006)	(0.008)	(0.004)	(0.008)	(0.006)	(0.006)	(0.007)
55-65yrs	-0.021**	-0.013*	-0.023**	-0.012**	-0.009	-0.015*	-0.006	-.025***

	(0.008)	(0.006)	(0.009)	(0.004)	(0.008)	(0.006)	(0.007)	(0.006)
65-80yrs	-0.048***	-0.021***	-0.055***	-.014***	-0.032***	-.026***	-0.032***	-.034***
	(0.007)	(0.006)	(0.008)	(0.004)	(0.006)	(0.006)	(0.006)	(0.006)
Other qualifications	-0.083	0.024***	-0.066	0.007	0.032***	-0.098	-0.078	.016***
	(0.554)	(0.006)	(0.552)	(0.011)	(0.007)	(0.629)	(0.609)	(0.005)
Vocational qualifications	-0.057	0.025***	-0.038	0.005	0.045***	-0.086	-0.062	.031***
	(0.554)	(0.004)	(0.552)	(0.007)	(0.005)	(0.628)	(0.609)	(0.004)
GCSE/O-level or CSE	-0.071	0.020***	-0.060	0.010***	0.038***	-0.095	-0.072	.021***
	(0.554)	(0.003)	(0.553)	(0.002)	(0.004)	(0.628)	(0.609)	(0.003)
A-level or equivalent	-0.056	0.023***	-0.043	0.011***	0.045***	-0.083	-0.063	.031***
	(0.553)	(0.003)	(0.551)	(0.002)	(0.004)	(0.628)	(0.609)	(0.003)
Bachelor Degree or equivalent	-0.058	0.023***	-0.044	0.011***	0.041***	-0.082	-0.058	.025***
	(0.553)	(0.002)	(0.552)	(0.002)	(0.003)	(0.628)	(0.609)	(0.002)
Masters Degree or equivalent	-0.045	0.030***	-0.034	0.019***	0.048***	-0.071	-0.053	.039***
	(0.554)	(0.004)	(0.552)	(0.003)	(0.005)	(0.628)	(0.609)	(0.004)
A Doctorate or equivalent	-0.069	0.035***	-0.047	0.015*	0.030***	-0.074	-0.077	.048***
	(0.552)	(0.008)	(0.553)	(0.006)	(0.008)	(0.629)	(0.611)	(0.011)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.009	0.001	0.003	0.007*	0.021**	-0.007	-0.008	.018***
	(0.008)	(0.004)	(0.009)	(0.003)	(0.006)	(0.006)	(0.007)	(0.005)
Income GBP 17500-GBP29999	0.010+	0.002	0.005	0.007**	0.013*	-0.003	0.001	0.011**
	(0.006)	(0.004)	(0.007)	(0.002)	(0.006)	(0.005)	(0.006)	(0.004)
Income GBP 30000-49999	0.002	0.010*	0.008	0.004+	0.017**	-0.005	0.007	0.004
	(0.005)	(0.004)	(0.006)	(0.002)	(0.006)	(0.005)	(0.006)	(0.004)
Income GBP 50000-99999	-0.004	0.016***	-0.001	0.013***	0.014*	-0.002	-0.001	0.011**
	(0.006)	(0.004)	(0.008)	(0.003)	(0.006)	(0.005)	(0.006)	(0.004)
Income GBP 100000 or more	-0.007	0.023**	-0.008	0.020***	0.012	0.003	0.008	0.009
	(0.009)	(0.007)	(0.010)	(0.006)	(0.009)	(0.008)	(0.009)	(0.007)
UK born migrants never lived abroad	0.011**	0.004	0.012**	0.004+	0.009**	0.005+	0.006	0.008*
	(0.004)	(0.003)	(0.005)	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)
UK born but has lived abroad	0.015*	0.004	0.017*	0.003	0.007	0.011*	0.009+	0.009*
	(0.006)	(0.004)	(0.007)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Born abroad	0.016*	0.011*	0.023**	0.004	0.006	0.016***	0.017**	0.007
	(0.006)	(0.006)	(0.008)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Ethnicity. Benchmark White								
Mixed	0.011**	0.004	0.012**	0.004+	0.009**	0.005+	0.006	0.008*
	(0.004)	(0.003)	(0.005)	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)
Asian	0.015*	0.004	0.017*	0.003	0.007	0.011*	0.009+	0.009*

	(0.006)	(0.004)	(0.007)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Black	0.016*	0.011*	0.023**	0.004	0.006	0.016***	0.017**	0.007
	(0.006)	(0.006)	(0.008)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Year of survey. Benchmark 2020								
2021	0.002	0.009***	0.008*	0.002	0.008**	0.004	0.009**	0.000
	(0.003)	(0.002)	(0.004)	(0.001)	(0.003)	(0.003)	(0.003)	(0.002)
Observations	*16153*	*16153*	*16153*	*16153*	*16048*	*16048*	*16124*	*16124*
X^2 (likelihood ratio)	*3537*		*2454*		*5539*		*2146*	
Log likelihood	*-4639*		*-4389*		*-4333*		*-4590*	
Pseudo R^2 (McFadden)	*0.059*		*0.067*		*0.059*		*0.059*	
Akaike information criterion	*9425*		*8927*		*8814*		*9327*	

Notes:
Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Table A6. Probability of involvement in different types of start-up activity 2020-2021

	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
COVID impact	0.074*	0.051*	0.064+	0.055**	0.052+	0.071**	0.057	0.069**
	(0.034)	(0.025)	(0.038)	(0.018)	(0.030)	(0.024)	(0.035)	(0.025)
General Election Turnout	0.035*	0.015	0.043*	0.008	0.044**	0.000	0.053**	0.001
	(0.017)	(0.012)	(0.018)	(0.009)	(0.016)	(0.012)	(0.018)	(0.012)
Workers working over 30km from home	-0.008	0.001	0.019	-0.025*	0.018	-0.020	0.022	-0.029
	(0.022)	(0.017)	(0.025)	(0.011)	(0.021)	(0.019)	(0.022)	(0.020)
CWI2 Equality 2020	0.009	0.027+	0.027	0.011	0.027	0.008	0.016	0.015
	(0.023)	(0.014)	(0.023)	(0.013)	(0.022)	(0.017)	(0.021)	(0.018)
CWI4 Economy Work & Employment 2020	-0.009	-0.005	-0.034	0.016	0.002	-0.012	-0.022	0.011
	(0.030)	(0.021)	(0.030)	(0.015)	(0.029)	(0.025)	(0.028)	(0.023)
CWI5 Health 2020	0.008	0.004	0.005	0.007	-0.003	0.012	-0.006	0.018+
	(0.012)	(0.009)	(0.012)	(0.007)	(0.012)	(0.010)	(0.012)	(0.010)
CWI6 Education & Learning 2020	0.024	-0.012	0.009	0.005	0.017	0.002	0.039+	-0.028+
	(0.019)	(0.014)	(0.018)	(0.011)	(0.020)	(0.013)	(0.020)	(0.015)
CWI7 Culture Heritage & Leisure 2020	-0.017	0.019	0.005	-0.006	-0.007	0.008	-0.010	0.013
	(0.023)	(0.017)	(0.025)	(0.014)	(0.024)	(0.016)	(0.020)	(0.019)
CWI8 Housing Space & Environment 2020	-0.006	-0.015	-0.003	-0.016+	-0.005	-0.011	-0.007	-0.012
	(0.017)	(0.014)	(0.019)	(0.010)	(0.018)	(0.015)	(0.018)	(0.013)
CWI9 Transport Mobility & Connect. 2020	-0.045+	-0.004	-0.039	-0.007	-0.053*	-0.001	-0.034	-0.014
	(0.024)	(0.017)	(0.027)	(0.013)	(0.023)	(0.018)	(0.022)	(0.018)
Second home ownership 2020	-0.032**	-0.006	-0.024+	-0.012*	-0.026*	-0.010	-0.029**	-0.011
	(0.010)	(0.009)	(0.013)	(0.006)	(0.012)	(0.009)	(0.011)	(0.009)

Population density in th per sq km	-0.002*	-0.002**	-0.004***	-0.000	-0.002*	-0.002*	-0.002**	-0.002*
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Female	-0.013**	-0.011***	-0.015***	-.009***	-0.016***	-0.009**	-0.009*	-.014***
	(0.004)	(0.003)	(0.004)	(0.002)	(0.004)	(0.003)	(0.004)	(0.003)
Age. Benchmark 18-24yrs								
25-34yrs	0.013	0.011+	0.026*	-0.002	0.021*	0.001	0.023**	0.005
	(0.009)	(0.006)	(0.010)	(0.005)	(0.008)	(0.008)	(0.009)	(0.009)
35-44yrs	0.001	0.001	0.004	-0.003	0.012	-0.006	0.011	-0.007
	(0.010)	(0.005)	(0.010)	(0.005)	(0.009)	(0.008)	(0.008)	(0.007)
45-54yrs	-0.017+	-0.006	-0.013	-0.010	-0.003	-0.016*	-0.010	-0.009
	(0.010)	(0.006)	(0.010)	(0.006)	(0.007)	(0.008)	(0.007)	(0.008)
55-65yrs	-0.020*	-0.011+	-0.022*	-0.010+	-0.005	-0.018*	-0.008	-0.020*
	(0.010)	(0.006)	(0.010)	(0.006)	(0.008)	(0.008)	(0.008)	(0.008)
65-80yrs	-0.049***	-0.017**	-0.053***	-0.014*	-0.030***	-.028***	-0.032***	-.029***
	(0.009)	(0.006)	(0.009)	(0.006)	(0.006)	(0.007)	(0.007)	(0.008)
Education. Benchmark No formal qualifications								
Other qualifications	0.028**	0.020*	0.039***	0.009	0.031***	0.013*	0.024*	0.017*
	(0.009)	(0.010)	(0.009)	(0.022)	(0.009)	(0.007)	(0.010)	(0.007)
Vocational qualifications	0.058***	0.025***	0.075***	0.007	0.048***	0.025***	0.049***	.034***
	(0.007)	(0.006)	(0.009)	(0.010)	(0.007)	(0.005)	(0.007)	(0.006)
GCSE/O-level or CSE	0.041***	0.021***	0.050***	0.011***	0.039***	0.018***	0.036***	.023***
	(0.004)	(0.004)	(0.005)	(0.003)	(0.005)	(0.003)	(0.005)	(0.003)
A-level or equivalent	0.050***	0.025***	0.063***	0.012***	0.045***	0.024***	0.044***	.030***
	(0.005)	(0.003)	(0.005)	(0.002)	(0.004)	(0.003)	(0.005)	(0.004)
Bachelor Degree or equivalent	0.044***	0.023***	0.057***	0.010***	0.039***	0.022***	0.043***	.022***
	(0.003)	(0.003)	(0.004)	(0.001)	(0.003)	(0.003)	(0.004)	(0.003)
Masters Degree or equivalent	0.060***	0.030***	0.066***	0.022***	0.049***	0.034***	0.050***	.039***
	(0.007)	(0.004)	(0.007)	(0.004)	(0.007)	(0.005)	(0.006)	(0.005)
A Doctorate or equivalent	0.045**	0.017+	0.051***	0.011	0.026**	0.033*	0.021*	0.041**
	(0.014)	(0.009)	(0.015)	(0.022)	(0.009)	(0.014)	(0.010)	(0.015)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.013	-0.003	0.003	0.007	0.019*	-0.004	-0.009	0.020*
	(0.009)	(0.007)	(0.010)	(0.004)	(0.009)	(0.006)	(0.007)	(0.009)
Income GBP 17500-GBP29999	0.010	-0.003	0.001	0.006+	0.011	-0.001	-0.002	0.009
	(0.008)	(0.005)	(0.008)	(0.003)	(0.008)	(0.005)	(0.007)	(0.006)
Income GBP 30000-49999	0.011	0.008	0.014+	0.004	0.016*	0.005	0.013+	0.006
	(0.007)	(0.005)	(0.008)	(0.003)	(0.007)	(0.005)	(0.007)	(0.006)
Income GBP 50000-99999	-0.002	0.007	-0.006	0.011**	0.007	0.002	-0.004	0.008
	(0.007)	(0.006)	(0.008)	(0.004)	(0.007)	(0.006)	(0.007)	(0.006)
Income GBP 100000 or more	-0.002	0.015	-0.012	0.020**	0.005	0.011	0.007	0.006
	(0.011)	(0.009)	(0.011)	(0.007)	(0.009)	(0.009)	(0.012)	(0.008)
Migrant status. Benchmark UK born life-long residents								

UK born migrants never lived abroad	0.008*	0.000	0.004	0.004+	0.005	0.005	0.003	0.003
	(0.004)	(0.003)	(0.005)	(0.002)	(0.004)	(0.003)	(0.004)	(0.004)
UK born but has lived abroad	0.011	0.003	0.010	0.004	0.005	0.008	0.005	0.007
	(0.007)	(0.005)	(0.008)	(0.003)	(0.006)	(0.005)	(0.007)	(0.006)
Born abroad	0.021*	0.008	0.024*	0.005	0.002	0.021**	0.024**	0.002
	(0.009)	(0.007)	(0.010)	(0.004)	(0.007)	(0.007)	(0.008)	(0.006)
Ethnicity. Benchmark White								
Mixed	0.071***	0.028*	0.070***	0.027**	0.069***	0.027*	0.032*	.059***
	(0.019)	(0.013)	(0.021)	(0.009)	(0.019)	(0.013)	(0.016)	(0.016)
Asian	0.041***	0.008	0.037**	0.011+	0.041***	0.014+	0.025*	0.023*
	(0.011)	(0.008)	(0.013)	(0.006)	(0.012)	(0.007)	(0.010)	(0.009)
Black	0.068**	0.043*	0.095***	0.019	0.065**	0.037**	0.059***	0.055**
	(0.022)	(0.020)	(0.028)	(0.013)	(0.024)	(0.014)	(0.018)	(0.021)
Year of survey. Benchmark 2020								
2021	0.005	0.009**	0.011**	0.003	0.011*	0.004	0.011**	0.003
	(0.004)	(0.003)	(0.004)	(0.002)	(0.004)	(0.003)	(0.004)	(0.003)
Observations	*10996*	*10996*	*10996*	*10996*	*10929*	*10929*	*10975*	*10975*
X^2 (likelihood ratio)	*4016*		*3072*		*2864*		*2731*	
Log likelihood	*-3088*		*-2924*		*-2885*		*-3037*	
Pseudo R^2 (McFadden)	*0.069*		*0.079*		*0.071*		*0.072*	
Akaike information criterion	*6328*		*6000*		*5922*		*6226*	

Notes:
Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Table A7. Results of logit models: probability of involvement in nascent start-up activity 2018-2021, baseline (1) and with regional dummies (2)

	(1)	(2)
Community Wellbeing Index 2018		
CWI3 Voice & Participation	0.015*	0.020*
	(0.007)	(0.009)
CWI1 Relationship & Trust	0.016	0.014
	(0.014)	(0.015)
CWI2 Equality	0.004	0.003
	(0.013)	(0.014)
CWI4 Economy Work & Employment	0.008	0.000
	(0.015)	(0.016)
CWI5 Health 2018	0.001	-0.003
	(0.009)	(0.011)
CWI6 Education & Learning	-0.022**	-0.021*
	(0.008)	(0.009)
CWI7 Culture Heritage & Leisure	0.007	0.011
	(0.014)	(0.014)
CWI8 Housing Space & Environment	0.005	0.012
	(0.012)	(0.014)
CWI9 Transport Mobility & Connectivity	-0.004	-0.002

	(0.014)	(0.015)
Second home ownership	-0.029***	-0.029***
	(0.008)	(0.009)
Population density in th per sqkm	-0.002*	-0.003**
	(0.001)	(0.001)
Female	0.004	0.003
	(0.013)	(0.014)
Age. Benchmark 18-24yrs		
25-34yrs	0.015*	0.015*
	(0.007)	(0.007)
35-44yrs	-0.001	-0.002
	(0.007)	(0.007)
45-54yrs	-0.026***	-0.026***
	(0.007)	(0.007)
55-65yrs	-0.035***	-0.036***
	(0.007)	(0.007)
65-80yrs	-0.060***	-0.060***
	(0.006)	(0.006)
Education. Benchmark No formal qualifications		
Other qualifications	-0.012	-0.012
	(0.014)	(0.014)
Vocational qualifications	0.007	0.007
	(0.014)	(0.014)
GCSE/O-level or CSE	-0.008	-0.008
	(0.013)	(0.013)
A-level or equivalent	0.002	0.003
	(0.013)	(0.013)
Bachelor Degree or equivalent	0.006	0.006
	(0.013)	(0.013)
Masters Degree or equivalent	0.017	0.017
	(0.014)	(0.014)
A Doctorate or equivalent	0.002	0.003
	(0.016)	(0.016)
Income. Benchmark up to GBP 11499		
Income GBP 11500-17499	0.008	0.007
	(0.007)	(0.007)
Income GBP 17500-GBP29999	0.006	0.006
	(0.006)	(0.006)
Income GBP 30000-49999	0.005	0.005
	(0.006)	(0.006)
Income GBP 50000-99999	0.007	0.007
	(0.006)	(0.006)
Income GBP 100000 or more	0.015+	0.015+
	(0.008)	(0.008)
Migrant status. Benchmark UK born life-long residents		
UK born regional in-migrants never lived abroad	0.008*	0.008*
	(0.004)	(0.004)
UK born but has lived abroad	0.019***	0.019***
	(0.005)	(0.005)

Born abroad	0.018**	0.019**
	(0.007)	(0.007)
Ethnicity. Benchmark White		
Mixed	0.058***	0.057***
	(0.013)	(0.013)
Asian	0.035***	0.033***
	(0.009)	(0.009)
Black	0.090***	0.085***
	(0.018)	(0.018)
Year of survey. Benchmark 2018		
2019	0.011**	0.012**
	(0.004)	(0.004)
2020	0.034***	0.033***
	(0.004)	(0.004)
2021	0.044***	0.045***
	(0.004)	(0.004)
UK regions. Benchmark South West		
South East		-0.000
		(0.008)
East		0.005
		(0.009)
London		0.016
		(0.010)
West Midlands		0.020*
		(0.009)
East Midlands		0.009
		(0.010)
Yorkshire & the Humber		-0.002
		(0.009)
North East		-0.005
		(0.011)
North West		-0.003
		(0.008)
Wales		0.007
		(0.007)
Scotland		0.006
		(0.008)
Northern Ireland		0.008
		(0.009)
Observations		
X^2 (likelihood ratio)	*807*	*822*
Log likelihood	*-5447*	*-5438*
Pseudo R^2 (McFadden)	*0.069*	*0.070*
Akaike information criterion	*10971*	*10978*

Notes: Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10
Test of joint significance of regional dummies in the second equation: X^2 =15.20, p=0.17

Table A8. Probability of involvement in different types of start-up activity 2018-2021

	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CWI indices aggregated at the Local Authority District level								
CWI3 Voice & Participation 2018	0.006	0.001	0.018**	-.012***	0.005	0.003	0.015**	-0.007
	(0.007)	(0.006)	(0.008)	(0.004)	(0.007)	(0.006)	(0.007)	(0.006)
CWI1 Relationship & Trust 2018	0.024	-0.020	0.006	-0.001	0.002	-0.012	0.006	-0.010
	(0.023)	(0.019)	(0.027)	(0.013)	(0.022)	(0.018)	(0.023)	(0.019)
CWI2 Equality 2018	-0.007	0.006	0.018	-0.013	-0.007	0.009	-0.005	0.001
	(0.017)	(0.015)	(0.020)	(0.009)	(0.017)	(0.014)	(0.017)	(0.014)
CWI4 Economy Work & Employment 2018	0.016	-0.006	0.006	0.003	-0.001	0.010	0.023	-0.012
	(0.021)	(0.018)	(0.025)	(0.012)	(0.021)	(0.017)	(0.021)	(0.017)
CWI5 Health 2018	-0.007	0.004	-0.014	0.012	-0.000	0.005	-0.013	0.012
	(0.013)	(0.011)	(0.015)	(0.007)	(0.013)	(0.011)	(0.013)	(0.011)
CWI6 Education & Learning 2018	-0.011	-0.004	-0.022	0.005	0.003	-0.019	-0.007	-0.006
	(0.014)	(0.013)	(0.017)	(0.008)	(0.014)	(0.012)	(0.015)	(0.012)
CWI7 Culture Heritage & Leisure 2018	-0.018	0.022	0.016	-0.009	0.007	-0.002	-0.004	0.010
	(0.021)	(0.018)	(0.025)	(0.012)	(0.020)	(0.017)	(0.021)	(0.017)
CWI8 Housing Space & Environment 2018	-0.017	0.001	-0.007	-0.005	0.009	-0.023	-0.030	0.007
	(0.018)	(0.016)	(0.022)	(0.010)	(0.018)	(0.015)	(0.019)	(0.015)
CWI9 Transport Mobility & Connect. 2018	0.034	-0.008	0.007	0.013	0.002	0.019	0.028	-0.009
	(0.024)	(0.021)	(0.028)	(0.014)	(0.023)	(0.020)	(0.024)	(0.020)
Second home ownership 2018	-.029***	0.000	-0.008	-.02***	-0.015	-0.009	-0.010	-0.013
	(0.011)	(0.009)	(0.013)	(0.006)	(0.011)	(0.009)	(0.011)	(0.009)
Population density in th per sq km	-0.001*	-.001**	-.002***	-0.000	-.002***	-0.000	-.002***	-0.001
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.001)
Female	-.009***	-.01***	-.01***	-.01***	-.01***	-.01***	-.010***	-.01***
	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)
Age. Benchmark 18-24yrs								
25-34yrs	0.007	0.009*	0.016**	-0.002	.017***	-0.000	.018***	-0.002
	(0.006)	(0.005)	(0.007)	(0.003)	(0.005)	(0.005)	(0.006)	(0.005)
35-44yrs	0.001	-0.002	0.001	-0.002	0.008	-0.005	0.005	-0.006
	(0.005)	(0.005)	(0.006)	(0.003)	(0.005)	(0.005)	(0.005)	(0.005)
45-54yrs	-.014***	-.011**	-.02***	-.007**	-0.004	-.02***	-.014***	-.01**
	(0.005)	(0.004)	(0.006)	(0.003)	(0.005)	(0.004)	(0.005)	(0.005)
55-65yrs	-.019***	-.02***	-.03***	-.01***	-.010**	-.02***	-.013***	-.02***
	(0.005)	(0.004)	(0.006)	(0.003)	(0.005)	(0.004)	(0.005)	(0.004)
65-80yrs	-.036***	-.02***	-.05***	-.01***	-0.02***	-.03***	-.031***	-.03***
	(0.005)	(0.004)	(0.006)	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)
Education. Benchmark No formal qualifications								
Other qualifications	-0.019	0.001	-0.007	-0.006	-0.004	-0.010	-0.000	-0.014
	(0.015)	(0.009)	(0.013)	(0.007)	(0.012)	(0.008)	(0.011)	(0.010)
Vocational qualifications	-0.003	0.004	0.014	-0.008	0.006	-0.003	0.009	-0.002

	(0.015)	(0.008)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
GCSE/O-level or CSE	-0.014	-0.000	-0.004	-0.004	-0.002	-0.009	0.000	-0.009
	(0.014)	(0.007)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.009)
A-level or equivalent	-0.004	-0.000	0.006	-0.004	0.004	-0.003	0.005	-0.002
	(0.015)	(0.007)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
Bachelor Degree or equivalent	-0.004	0.004	0.009	-0.003	0.002	0.002	0.010	-0.004
	(0.015)	(0.007)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
Masters Degree or equivalent	0.005	0.006	0.015	0.002	0.006	0.009	0.015	0.003
	(0.015)	(0.008)	(0.012)	(0.007)	(0.011)	(0.008)	(0.010)	(0.010)
A Doctorate or equivalent	-0.014	0.010	0.006	-0.003	-0.008	0.005	-0.001	0.005
	(0.016)	(0.010)	(0.014)	(0.007)	(0.012)	(0.010)	(0.011)	(0.011)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.005	0.003	0.001	.006**	.014***	-0.006	-0.002	.011**
	(0.006)	(0.004)	(0.006)	(0.003)	(0.005)	(0.005)	(0.005)	(0.004)
Income GBP 17500-GBP29999	0.003	0.004	0.002	.004**	0.010**	-0.005	0.000	0.006*
	(0.005)	(0.003)	(0.005)	(0.002)	(0.004)	(0.004)	(0.005)	(0.003)
Income GBP 30000-49999	-0.003	.009***	0.002	0.003*	.012***	-0.007*	0.003	0.003
	(0.005)	(0.003)	(0.005)	(0.002)	(0.004)	(0.004)	(0.005)	(0.003)
Income GBP 50000-99999	-0.009**	.016***	-0.005	.011***	0.009**	-0.002	-0.002	.009**
	(0.005)	(0.004)	(0.005)	(0.002)	(0.004)	(0.004)	(0.005)	(0.003)
Income GBP 100000 or more	-0.009	.023***	-0.002	.02***	0.011*	0.002	0.005	.010**
	(0.006)	(0.005)	(0.007)	(0.003)	(0.006)	(0.005)	(0.006)	(0.005)
Migrant status. Benchmark UK born life-long residents								
UK born migrants never lived abroad	0.007**	0.002	0.007**	0.002	0.006**	0.002	0.003	.005**
	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)
UK born but has lived abroad	.013***	0.008**	.015***	.005**	.008**	.011***	0.009**	.01***
	(0.004)	(0.004)	(0.005)	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)
Born abroad	.013***	0.006	0.014**	.006**	0.003	.02***	0.011**	0.007
	(0.005)	(0.004)	(0.006)	(0.003)	(0.005)	(0.005)	(0.005)	(0.004)
Ethnicity. Benchmark White								
Mixed	.041***	0.018**	.039***	.02***	.043***	.016**	0.018*	.036***
	(0.011)	(0.009)	(0.012)	(0.006)	(0.012)	(0.008)	(0.009)	(0.010)
Asian	.029***	0.005	.025***	.010**	.033***	0.007	.021***	.014**
	(0.007)	(0.005)	(0.008)	(0.004)	(0.008)	(0.005)	(0.007)	(0.006)
Black	.040***	.053***	.076***	.016**	.050***	.03***	.056***	.04***
	(0.013)	(0.015)	(0.017)	(0.007)	(0.015)	(0.010)	(0.015)	(0.012)
Year of survey. Benchmark 2018								
2019	.015***	-0.003	0.007**	.004**	.016***	-.006**	0.001	.01***
	(0.002)	(0.003)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
2020	.041***	-.007**	.029***	.004**	.026***	0.002	.015***	.02***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
2021	.043***	0.002	.037***	.01***	.035***	.006**	.024***	.02***
	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)
Observations	26107	26107	26107	26107	25982	25982	26076	26076
X^2 (likelihood ratio)	*1084*		*942*		*844*		*831*	
Log likelihood	*-6357*		*-6095*		*-6022*		*-6358*	
Pseudo R^2 (McFadden)	*0.079*		*0.072*		*0.066*		*0.061*	

Akaike information criterion	*12870*		*12346*		*12199*		*12872*	

Notes:
Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Table A9. Probability of involvement in different types of start-up activity 2020-2021

	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CWI indices aggregated at the Local Authority District level								
CWI3 Voice & Participation 2018	0.047***	0.006	0.057***	-0.004	0.045***	0.003	0.054***	-0.002
	(0.017)	(0.013)	(0.020)	(0.009)	(0.016)	(0.013)	(0.016)	(0.014)
CWI1 Relationship & Trust 2018	0.024	0.024	0.055	-0.003	0.035	-0.007	0.051*	-0.005
	(0.027)	(0.023)	(0.034)	(0.015)	(0.029)	(0.019)	(0.030)	(0.021)
CWI2 Equality 2018	-0.002	0.012	0.027	-0.007	0.017	-0.017	-0.005	0.006
	(0.031)	(0.025)	(0.034)	(0.015)	(0.031)	(0.027)	(0.025)	(0.024)
CWI4 Economy Work & Employment 2018	-0.065*	-0.023	-0.070	-0.019	-0.060	-0.020	-0.053	-0.040
	(0.039)	(0.031)	(0.050)	(0.023)	(0.042)	(0.034)	(0.035)	(0.030)
CWI5 Health 2018	-0.010	-0.007	-0.022	0.004	-0.021	0.010	-0.027	0.012
	(0.016)	(0.013)	(0.020)	(0.009)	(0.017)	(0.012)	(0.017)	(0.014)
CWI6 Education & Learning 2018	0.034	-0.007	0.007	0.014	0.028	-0.001	0.057**	-0.029
	(0.024)	(0.020)	(0.028)	(0.013)	(0.024)	(0.019)	(0.027)	(0.021)
CWI7 Culture Heritage & Leisure 2018	-0.035	0.007	-0.029	0.004	-0.007	-0.027	-0.047	0.022
	(0.035)	(0.024)	(0.038)	(0.018)	(0.031)	(0.028)	(0.033)	(0.026)
CWI8 Housing Space & Environment 2018	-0.028	-0.002	-0.008	-0.016	-0.017	-0.010	-0.029	-0.004
	(0.022)	(0.015)	(0.024)	(0.010)	(0.018)	(0.015)	(0.020)	(0.019)
CWI9 Transport Mobility & Connect. 2018	0.037	0.024	0.053	0.010	0.017	0.037	0.020	0.033
	(0.035)	(0.029)	(0.041)	(0.018)	(0.030)	(0.025)	(0.032)	(0.026)
Second home ownership 2018	-0.052***	-0.005	-0.036*	-0.016**	-0.034*	-0.018	-0.034**	-0.018
	(0.017)	(0.014)	(0.019)	(0.008)	(0.017)	(0.012)	(0.016)	(0.012)
Population density in th per sq km	-0.002*	-0.001**	-0.003**	-0.000	-0.002**	-0.001	-0.002***	-0.001
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)	(0.001)	(0.001)
Female	-0.012***	-0.010***	-0.014***	-.01***	-0.015***	-.007***	-0.010***	-.012***
	(0.004)	(0.003)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)
Age. Benchmark 18-24yrs								
25-34yrs	0.013	0.005	0.023**	-0.005	0.019**	0.002	0.023***	-0.003
	(0.009)	(0.006)	(0.009)	(0.004)	(0.008)	(0.006)	(0.008)	(0.007)
35-44yrs	0.002	-0.005	0.002	-0.005	0.006	-0.001	0.007	-0.010
	(0.008)	(0.006)	(0.009)	(0.004)	(0.007)	(0.006)	(0.008)	(0.006)
45-54yrs	-0.016**	-0.012*	-0.017**	-.011***	-0.004	-.015***	-0.010	-0.015**
	(0.008)	(0.006)	(0.008)	(0.004)	(0.006)	(0.006)	(0.008)	(0.006)
55-65yrs	-0.022***	-0.014**	-0.023***	-.012***	-0.009	-.016***	-0.007	-.025***

	(0.007)	(0.006)	(0.008)	(0.004)	(0.006)	(0.006)	(0.008)	(0.006)
65-80yrs	-0.048***	-0.021***	-0.055***	-.015***	-0.032***	-.026***	-0.032***	-.034***
	(0.007)	(0.006)	(0.008)	(0.004)	(0.006)	(0.005)	(0.007)	(0.006)
Education. Benchmark No formal qualifications								
Other qualifications	-0.079	0.024***	-0.063	0.007**	0.033***	-0.088	-0.074	.016***
	(0.557)	(0.007)	(0.095)	(0.003)	(0.008)	(0.586)	(0.583)	(0.005)
Vocational qualifications	-0.054	0.025***	-0.034	0.004**	0.045***	-0.077	-0.058	.030***
	(0.557)	(0.006)	(0.095)	(0.002)	(0.006)	(0.586)	(0.583)	(0.005)
GCSE/O-level or CSE	-0.068	0.020***	-0.057	0.010***	0.038***	-0.086	-0.069	.021***
	(0.558)	(0.003)	(0.095)	(0.002)	(0.004)	(0.585)	(0.584)	(0.003)
A-level or equivalent	-0.054	0.023***	-0.040	0.011***	0.045***	-0.074	-0.059	.031***
	(0.558)	(0.003)	(0.095)	(0.002)	(0.003)	(0.585)	(0.583)	(0.003)
Bachelor Degree or equivalent	-0.055	0.023***	-0.041	0.011***	0.041***	-0.072	-0.055	.025***
	(0.558)	(0.002)	(0.095)	(0.001)	(0.003)	(0.585)	(0.583)	(0.002)
Masters Degree or equivalent	-0.041	0.030***	-0.030	0.019***	0.048***	-0.060	-0.049	.040***
	(0.557)	(0.004)	(0.095)	(0.003)	(0.005)	(0.586)	(0.584)	(0.004)
A Doctorate or equivalent	-0.067	0.036***	-0.044	0.015***	0.030***	-0.065	-0.073	.048***
	(0.559)	(0.010)	(0.096)	(0.005)	(0.008)	(0.586)	(0.584)	(0.013)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.010	0.001	0.004	0.007**	0.021***	-0.007	-0.007	.018***
	(0.008)	(0.004)	(0.009)	(0.003)	(0.007)	(0.007)	(0.007)	(0.006)
Income GBP 17500-GBP29999	0.010	0.002	0.005	0.007***	0.014**	-0.003	0.001	0.010**
	(0.007)	(0.004)	(0.007)	(0.002)	(0.006)	(0.005)	(0.006)	(0.004)
Income GBP 30000-49999	0.002	0.010**	0.007	0.004*	0.017***	-0.005	0.007	0.004
	(0.007)	(0.004)	(0.007)	(0.002)	(0.005)	(0.005)	(0.007)	(0.004)
Income GBP 50000-99999	-0.005	0.015***	-0.003	0.012***	0.014**	-0.003	-0.003	0.011**
	(0.006)	(0.004)	(0.007)	(0.003)	(0.006)	(0.006)	(0.006)	(0.005)
Income GBP 100000 or more	-0.009	0.023***	-0.009	0.018***	0.011	0.001	0.004	0.009
	(0.009)	(0.008)	(0.010)	(0.005)	(0.007)	(0.007)	(0.009)	(0.007)
Migrant status. Benchmark UK born life-long residents								
UK born migrants never lived abroad	0.012***	0.004	0.013***	0.004*	0.009**	0.005*	0.006	0.008**
	(0.004)	(0.003)	(0.005)	(0.002)	(0.004)	(0.003)	(0.004)	(0.003)
UK born but has lived abroad	0.016***	0.005	0.018***	0.003	0.007	0.012***	0.010*	0.010**
	(0.006)	(0.004)	(0.007)	(0.003)	(0.005)	(0.004)	(0.006)	(0.005)
Born abroad	0.016**	0.012**	0.023***	0.005	0.006	0.017***	0.018**	0.008
	(0.007)	(0.005)	(0.008)	(0.003)	(0.007)	(0.006)	(0.007)	(0.006)
Ethnicity. Benchmark White								
Mixed	0.059***	0.023**	0.055***	0.023***	0.057***	0.025**	0.026*	.049***
	(0.017)	(0.011)	(0.016)	(0.008)	(0.016)	(0.011)	(0.013)	(0.013)
Asian	0.037***	0.008	0.032***	0.012**	0.040***	0.011*	0.026***	0.019**
	(0.011)	(0.007)	(0.011)	(0.005)	(0.011)	(0.006)	(0.009)	(0.008)
Black	0.059***	0.036**	0.076***	0.019**	0.054***	0.033**	0.054***	0.043**

	(0.018)	(0.016)	(0.021)	(0.009)	(0.018)	(0.016)	(0.017)	(0.017)
Year of survey. Benchmark 2020								
2021	0.001	0.008***	0.008**	0.002	0.008***	0.004*	0.009***	0.000
	(0.003)	(0.002)	(0.004)	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)
Observations	*16152*	*16152*	*16152*	*16152*	*16047*	*16047*	*16123*	*16123*
X^2 (likelihood ratio)	*2764*		*619*		*2764*		*3287*	
Log likelihood	*-4643*		*-4395*		*-4341*		*-4594*	
Pseudo R^2 (McFadden)	*0.058*		*0.066*		*0.057*		*0.058*	
Akaike information criterion	*9434*		*8938*		*8830*		*9335*	

Notes:
Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Table A10. Probability of involvement in different types of start-up activity 2018-2021 (by gender)

	OPPORTUNITY		OPPORTUNITY		GROWTH ASP.		GROWTH ASP.	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1) F	(2) F	(3) M	(4) M	(5) F	(6) F	(7) M	(8) M
CWI3 Voice & Participation 2018	0.006	0.003	0.017*	0.002	0.013	-0.005	0.027**	-0.008
	(0.007)	(0.006)	(0.008)	(0.008)	(0.009)	(0.004)	(0.010)	(0.005)
CWI1 Relationship & Trust 2018	0.012	0.009	0.021	-0.009	0.017	0.005	0.026	-0.013
	(0.015)	(0.012)	(0.016)	(0.015)	(0.017)	(0.007)	(0.019)	(0.011)
CWI2 Equality 2018	0.026+	0.012	-0.017	-0.008	0.032*	0.006	-0.018	-0.006
	(0.013)	(0.011)	(0.014)	(0.013)	(0.016)	(0.006)	(0.017)	(0.009)
CWI4 Economy Work & Employment 2018	0.007	-0.001	0.014	-0.006	0.001	0.006	-0.008	0.014
	(0.016)	(0.012)	(0.017)	(0.016)	(0.018)	(0.008)	(0.020)	(0.011)
CWI5 Health 2018	-0.003	-0.010	-0.006	0.022*	-0.011	-0.002	0.003	0.013+
	(0.010)	(0.008)	(0.011)	(0.010)	(0.011)	(0.004)	(0.013)	(0.007)
CWI6 Education & Learning 2018	-0.010	-0.006	-0.017+	-0.012	-0.017+	0.000	-0.031**	0.004
	(0.008)	(0.007)	(0.009)	(0.009)	(0.010)	(0.004)	(0.011)	(0.006)
CWI7 Culture Heritage & Leisure 2018	-0.016	0.030**	-0.008	0.005	0.006	0.011	0.010	-0.013
	(0.014)	(0.011)	(0.016)	(0.015)	(0.017)	(0.007)	(0.019)	(0.011)
CWI8 Housing Space & Environment 2018	0.013	-0.002	-0.011	0.015	0.014	-0.003	0.017	-0.012
	(0.012)	(0.009)	(0.013)	(0.013)	(0.014)	(0.006)	(0.016)	(0.009)
CWI9 Transport Mobility & Connect. 2018	0.009	-0.017	-0.001	0.005	-0.007	0.000	-0.014	0.017
	(0.015)	(0.012)	(0.016)	(0.016)	(0.018)	(0.007)	(0.020)	(0.011)
Second home ownership 2018	-0.029***	-0.012+	-0.018*	0.001	-0.033***	-0.007+	-0.002	-0.014*
	(0.008)	(0.007)	(0.009)	(0.009)	(0.010)	(0.004)	(0.011)	(0.006)
Population density in th per sq km	0.001	-0.001	-0.002*	-0.002+	-0.001	0.000	-0.003**	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
Age. Benchmark 18-24yrs								
25-34yrs	0.000	0.012**	0.009	0.000	0.014*	-0.001	0.009	-0.000
	(0.005)	(0.005)	(0.006)	(0.005)	(0.006)	(0.002)	(0.007)	(0.004)
35-44yrs	0.000	0.003	0.000	-0.004	0.001	0.001	-0.000	-0.004
	(0.005)	(0.005)	(0.006)	(0.005)	(0.007)	(0.002)	(0.007)	(0.004)
45-54yrs	-0.013*	-0.003	-0.011+	-0.016**	-0.013+	-0.004	-0.019*	-0.008*
	(0.006)	(0.005)	(0.006)	(0.006)	(0.007)	(0.003)	(0.008)	(0.004)
55-65yrs	-0.021***	-0.009	-0.015*	-.021***	-0.024**	-0.008*	-0.025**	-0.012**
	(0.006)	(0.006)	(0.007)	(0.006)	(0.008)	(0.003)	(0.008)	(0.004)
65-80yrs	-0.045***	-0.014*	-0.055***	-.041***	-0.053***	-0.007*	-0.078***	-.018***
	(0.008)	(0.006)	(0.009)	(0.008)	(0.009)	(0.003)	(0.010)	(0.005)
Education. Benchmark No formal qualifications								
Other qualifications	-0.029+	0.004	-0.008	-0.000	-0.018	-0.001	0.003	-0.014
	(0.016)	(0.012)	(0.027)	(0.015)	(0.019)	(0.007)	(0.024)	(0.012)
Vocational qualifications	-0.013	0.005	0.017	0.002	0.001	-0.003	0.029	-0.018+

	(0.014)	(0.011)	(0.026)	(0.013)	(0.017)	(0.007)	(0.022)	(0.011)
GCSE/O-level or CSE	-0.033*	-0.000	0.012	-0.000	-0.023	-0.004	0.014	-0.003
	(0.014)	(0.011)	(0.025)	(0.012)	(0.017)	(0.006)	(0.021)	(0.009)
A-level or equivalent	-0.019	0.001	0.021	-0.002	-0.008	-0.002	0.024	-0.006
	(0.014)	(0.011)	(0.025)	(0.012)	(0.016)	(0.006)	(0.021)	(0.009)
Bachelor Degree or equivalent	-0.018	0.003	0.021	0.003	-0.008	-0.000	0.027	-0.005
	(0.014)	(0.011)	(0.025)	(0.012)	(0.016)	(0.006)	(0.021)	(0.009)
Masters Degree or equivalent	-0.007	0.005	0.024	0.007	0.004	0.000	0.025	0.002
	(0.014)	(0.011)	(0.026)	(0.012)	(0.017)	(0.006)	(0.022)	(0.009)
A Doctorate or equivalent	-0.030	-0.009	0.008	0.017	-0.028	-0.005	0.031	-0.003
	(0.019)	(0.015)	(0.027)	(0.014)	(0.023)	(0.008)	(0.024)	(0.010)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.008	0.007	-0.002	0.000	0.009	0.006	-0.011	0.015+
	(0.006)	(0.006)	(0.008)	(0.010)	(0.008)	(0.003)	(0.010)	(0.008)
Income GBP 17500-GBP29999	0.003	0.004	0.002	0.007	0.003	0.004	-0.001	0.014+
	(0.005)	(0.006)	(0.007)	(0.008)	(0.007)	(0.003)	(0.008)	(0.008)
Income GBP 30000-49999	-0.005	0.012*	-0.002	0.011	0.004	0.001	-0.002	0.013+
	(0.005)	(0.005)	(0.007)	(0.008)	(0.007)	(0.003)	(0.008)	(0.008)
Income GBP 50000-99999	-0.005	0.011*	-0.013+	0.025**	-0.002	0.006+	-0.008	0.025**
	(0.006)	(0.006)	(0.007)	(0.008)	(0.007)	(0.003)	(0.008)	(0.008)
Income GBP 100000 or more	-0.029*	0.017*	-0.003	0.029**	-0.013	0.006	-0.001	.029***
	(0.012)	(0.007)	(0.008)	(0.009)	(0.012)	(0.004)	(0.010)	(0.008)
Migrant status. Benchmark UK born life-long residents								
UK born migrants never lived abroad	0.005	-0.000	0.007+	0.003	0.005	0.001	0.007	0.003
	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.002)	(0.005)	(0.003)
UK born but has lived abroad	0.011*	0.006	0.012*	0.007	0.017**	-0.000	0.010	0.009**
	(0.005)	(0.004)	(0.005)	(0.005)	(0.006)	(0.002)	(0.006)	(0.003)
Born abroad	0.009+	0.008+	0.015*	0.002	0.014*	0.002	0.012	0.007+
	(0.005)	(0.004)	(0.006)	(0.007)	(0.007)	(0.002)	(0.008)	(0.004)
Ethnicity. Benchmark White								
Mixed	0.028***	0.011	0.029***	0.018*	0.027**	0.010***	0.033**	0.014**
	(0.008)	(0.007)	(0.008)	(0.008)	(0.011)	(0.003)	(0.011)	(0.005)
Asian	0.018**	0.010+	0.027***	0.002	0.021*	0.006**	0.022*	0.009*
	(0.006)	(0.006)	(0.006)	(0.008)	(0.008)	(0.002)	(0.009)	(0.004)
Black	0.029***	0.021**	0.030**	0.041***	0.046***	0.005	0.055***	0.017**
	(0.009)	(0.007)	(0.010)	(0.008)	(0.011)	(0.004)	(0.011)	(0.005)
Year of survey. Benchmark 2018								
2019	0.044***	0.004	0.042***	-0.011*	0.028***	0.003	-0.003	0.007+
	(0.010)	(0.004)	(0.010)	(0.005)	(0.008)	(0.003)	(0.008)	(0.004)
2020	0.067***	-0.004	0.076***	-0.012**	0.043***	0.003	0.031***	0.007*
	(0.009)	(0.004)	(0.009)	(0.004)	(0.007)	(0.002)	(0.006)	(0.003)
2021	0.068***	0.006+	0.076***	-0.004	0.050***	0.004+	0.036***	0.009**

	(0.009)	(0.003)	(0.009)	(0.004)	(0.007)	(0.002)	(0.006)	(0.003)
Observations	*13163*	*13163*	*12947*	*12947*	*13163*	*13163*	*12947*	*12947*
X^2 (likelihood ratio)	*495*		*645*		*424*		*545*	
Log likelihood	*-2762*		*-3539*		*-2602*		*-3443*	
Pseudo R^2 (McFadden)	*0.082*		*0.083*		*0.075*		*0.073*	
Akaike information criterion	*5676*		*7231*		*5356*		*7038*	

Notes:
Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Table A11. Probability of involvement in different types of start-up activity 2018-2021 (by gender)

	EXPORTING		EXPORTING		INNOVATION		INNOVATION	
	No	Yes	No	Yes	No	Yes	No	Yes
	(1) F	(2) F	(3) M	(4) M	(5) F	(6) F	(7) M	(8) M
CWI3 Voice & Participation 2018	0.009	0.004	0.015+	-0.002	0.006	0.003	0.024**	-0.001
	(0.007)	(0.006)	(0.008)	(0.007)	(0.007)	(0.006)	(0.008)	(0.007)
CWI1 Relationship & Trust 2018	0.018	0.007	0.025	-0.017	0.020	-0.001	0.018	-0.005
	(0.014)	(0.011)	(0.016)	(0.014)	(0.015)	(0.012)	(0.016)	(0.014)
CWI2 Equality 2018	0.012	0.025*	-0.023	-0.003	0.005	0.030**	-0.008	-0.023+
	(0.013)	(0.010)	(0.014)	(0.012)	(0.013)	(0.011)	(0.015)	(0.012)
CWI4 Economy Work & Employment 2018	-0.010	0.011	0.015	-0.011	0.013	-0.004	-0.008	0.011
	(0.015)	(0.012)	(0.017)	(0.015)	(0.016)	(0.012)	(0.018)	(0.015)
CWI5 Health 2018	-0.014	0.004	0.007	0.013	-0.010	-0.002	-0.001	0.014
	(0.009)	(0.007)	(0.011)	(0.009)	(0.010)	(0.007)	(0.011)	(0.010)
CWI6 Education & Learning 2018	0.002	-0.017**	-0.016+	-0.009	0.006	-.021***	-0.016+	-0.013
	(0.008)	(0.006)	(0.009)	(0.008)	(0.009)	(0.006)	(0.009)	(0.008)
CWI7 Culture Heritage & Leisure 2018	-0.002	0.013	-0.002	-0.003	-0.008	0.024*	0.018	-0.022
	(0.013)	(0.011)	(0.016)	(0.014)	(0.014)	(0.011)	(0.017)	(0.014)
CWI8 Housing Space & Environment 2018	0.035**	-0.015	0.001	0.006	0.015	-0.004	-0.005	0.008
	(0.012)	(0.009)	(0.014)	(0.012)	(0.012)	(0.009)	(0.014)	(0.012)
CWI9 Transport Mobility & Connect. 2018	-0.011	-0.000	-0.008	0.012	0.003	-0.013	-0.011	0.015
	(0.014)	(0.011)	(0.017)	(0.014)	(0.015)	(0.011)	(0.017)	(0.015)
Second home ownership 2018	-0.018*	-0.024***	-0.011	0.000	-0.027**	-0.013*	-0.006	-0.009
	(0.008)	(0.006)	(0.010)	(0.008)	(0.008)	(0.006)	(0.010)	(0.008)
Population density in th per sq km	0.000	0.000	-0.002**	-0.001	-0.000	0.000	-0.002*	-0.001+
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age. Benchmark 18-24yrs								
25-34yrs	0.013*	-0.001	0.013*	0.001	0.015**	-0.003	0.012+	-0.001
	(0.005)	(0.004)	(0.006)	(0.005)	(0.005)	(0.004)	(0.006)	(0.005)
35-44yrs	0.009	-0.004	0.004	-0.002	0.004	-0.001	0.005	-0.009+
	(0.005)	(0.004)	(0.007)	(0.005)	(0.006)	(0.004)	(0.006)	(0.005)

45-54yrs	-0.004	-0.012**	-0.003	-0.017**	-0.012+	-0.006	-0.014*	-0.011*
	(0.006)	(0.004)	(0.007)	(0.005)	(0.006)	(0.004)	(0.007)	(0.005)
55-65yrs	-0.016*	-0.011*	-0.005	-.022***	-0.016*	-0.012*	-0.009	-.026***
	(0.007)	(0.005)	(0.007)	(0.006)	(0.007)	(0.005)	(0.007)	(0.006)
65-80yrs	-0.027***	-0.026***	-0.044***	-.039***	-0.039***	-.019***	-0.048***	-.044***
	(0.007)	(0.006)	(0.009)	(0.007)	(0.008)	(0.005)	(0.009)	(0.007)
Education. Benchmark No formal qualifications								
Other qualifications	-0.003	-0.013	-0.006	-0.013	0.001	-0.015	-0.001	-0.018
	(0.017)	(0.010)	(0.019)	(0.017)	(0.019)	(0.010)	(0.019)	(0.020)
Vocational qualifications	0.007	-0.009	0.005	0.005	0.011	-0.007	0.009	0.008
	(0.016)	(0.009)	(0.017)	(0.014)	(0.018)	(0.009)	(0.017)	(0.017)
GCSE/O-level or CSE	-0.003	-0.023*	0.000	0.003	-0.003	-0.020*	0.004	0.005
	(0.016)	(0.009)	(0.017)	(0.013)	(0.018)	(0.009)	(0.016)	(0.016)
A-level or equivalent	0.005	-0.012	0.004	0.008	0.004	-0.010	0.008	0.009
	(0.016)	(0.009)	(0.017)	(0.013)	(0.017)	(0.009)	(0.016)	(0.016)
Bachelor Degree or equivalent	0.001	-0.008	0.002	0.013	0.008	-0.012	0.014	0.008
	(0.016)	(0.008)	(0.017)	(0.013)	(0.017)	(0.009)	(0.016)	(0.016)
Masters Degree or equivalent	0.009	-0.003	0.001	0.020	0.016	-0.005	0.013	0.015
	(0.016)	(0.009)	(0.017)	(0.013)	(0.018)	(0.009)	(0.017)	(0.016)
A Doctorate or equivalent	-0.012	-0.013	-0.011	0.020	-0.025	-0.008	0.007	0.019
	(0.020)	(0.012)	(0.020)	(0.015)	(0.024)	(0.011)	(0.019)	(0.017)
Income. Benchmark up to GBP 11499								
Income GBP 11500-17499	0.022***	-0.006	0.003	-0.003	0.009	0.007	-0.020*	0.018*
	(0.007)	(0.005)	(0.009)	(0.008)	(0.007)	(0.005)	(0.010)	(0.008)
Income GBP 17500-GBP29999	0.011+	-0.005	0.012	-0.003	0.003	0.004	-0.003	0.012
	(0.006)	(0.004)	(0.008)	(0.007)	(0.006)	(0.005)	(0.007)	(0.008)
Income GBP 30000-49999	0.013*	-0.007+	0.014+	-0.005	0.006	0.000	-0.001	0.009
	(0.006)	(0.004)	(0.008)	(0.006)	(0.006)	(0.005)	(0.007)	(0.008)
Income GBP 50000-99999	0.009	-0.003	0.011	0.003	-0.001	0.005	-0.004	0.017*
	(0.006)	(0.004)	(0.008)	(0.006)	(0.006)	(0.005)	(0.007)	(0.007)
Income GBP 100000 or more	0.000	-0.004	0.016+	0.009	0.008	-0.020+	0.003	0.024**
	(0.010)	(0.006)	(0.009)	(0.007)	(0.009)	(0.011)	(0.009)	(0.008)
Migrant status. Benchmark UK born life-long residents								
UK born migrants never lived abroad	0.003	0.002	0.007+	0.002	0.004	0.001	0.001	0.006+
	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)
UK born but has lived abroad	0.006	0.010**	0.009	0.009*	0.010+	0.007+	0.006	0.012**
	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	(0.004)	(0.006)	(0.004)
Born abroad	0.000	0.012**	0.005	0.012*	0.005	0.008*	0.015*	0.003
	(0.006)	(0.004)	(0.007)	(0.005)	(0.006)	(0.004)	(0.007)	(0.006)
Ethnicity. Benchmark White								
Mixed	0.020*	0.016**	0.038***	0.010	0.013	0.023***	0.018+	.024***
	(0.008)	(0.006)	(0.008)	(0.008)	(0.009)	(0.005)	(0.010)	(0.007)

Asian	0.016*	0.011*	0.033***	0.002	0.019**	0.008	0.017*	0.015*
	(0.006)	(0.005)	(0.007)	(0.006)	(0.006)	(0.005)	(0.007)	(0.006)
Black	0.022*	0.018**	0.044***	0.023**	0.033***	0.017*	0.042***	.030***
	(0.010)	(0.006)	(0.010)	(0.008)	(0.009)	(0.007)	(0.010)	(0.008)
Year of survey. Benchmark 2020								
2019	0.041***	-0.003	0.020**	-0.012*	0.014*	0.014**	-0.008	0.014*
	(0.008)	(0.004)	(0.007)	(0.005)	(0.006)	(0.005)	(0.007)	(0.006)
2020	0.044***	0.005	0.039***	-0.002	0.027***	0.017***	0.010+	.028***
	(0.007)	(0.004)	(0.006)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
2021	0.051***	0.007*	0.045***	0.002	0.031***	0.021***	0.022***	.023***
	(0.007)	(0.003)	(0.006)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
Observations	*13098*	*13098*	*12887*	*12887*	*13148*	*13148*	*12931*	*12931*
X^2 (likelihood ratio)	*433*		*491*		*417*		*498*	
Log likelihood	*-2555*		*-3401*		*-2742*		*-3549*	
Pseudo R^2 (McFadden)	*0.078*		*0.067*		*0.071*		*0.066*	
Akaike information criterion	*5831*		*6955*		*5637*		*7250*	

Notes:
Baseline category: not involved in start-up. Average marginal effects reported.
*** denotes significance level at 0.001; ** at 0.01; * at 0.05; + at 0.10

Table A12. Probability of involvement in different types of start-up activity, 2006-2017

	NASCENT STARTUP	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
		No	Yes	No	Yes	No	Yes	No	Yes
	(1)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)
GE Turnout 2005/10/15/17	0.036***	0.013*	0.024***	0.038***	-0.001	0.006*	0.006*	0.029***	0.006
	(0.009)	(0.006)	(0.007)	(0.008)	(0.004)	(0.003)	(0.002)	(0.008)	(0.004)
Female	-0.018***	-0.007***	-.010***	-0.011***	-0.008***	-0.001**	-0.001*	-0.014***	-.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)
Age. Benchmark 18-24yrs									
25-34yrs	0.004+	0.001	0.003	0.006**	-0.001	0.002***	0.001+	0.004	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)
35-44yrs	0.001	0.001	-0.001	0.003+	-0.002+	0.002***	0.001	0.001	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)
45-54yrs	-0.004	-0.001	-0.004*	0.000	-0.004**	0.003***	0.000	-0.004	0.001
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
55-65yrs	-0.013***	-0.006***	-.008***	-0.008***	-0.005***	0.001**	0.000	-0.012***	-0.001
	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.000)	(0.001)	(0.002)	(0.001)
65-80yrs	-0.029***	-0.014***	-.015***	-0.021***	-0.008***	0.000	-0.001*	-0.024***	-.004***
	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Education. Benchmark No formal qualifications									
Other	0.017***	0.010***	0.005*	0.013***	0.003*	0.000	0.001	0.013***	0.002*

qualifications									
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.001)	(0.001)	(0.003)	(0.001)
Vocational qualifications	0.012***	0.004***	0.006***	0.009***	0.003**	0.001	0.000	0.009***	0.002***
	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
GCSE/O-level or CSE	0.007***	0.003**	0.003*	0.005***	0.002**	0.000	0.001	0.005**	0.002***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
A-level or equivalent	0.015***	0.007***	0.008***	0.011***	0.005***	-0.000	0.001*	0.012***	0.003***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Bachelor Degree or equivalent	0.020***	0.009***	0.009***	0.015***	0.005***	0.001*	0.001*	0.016***	0.004***
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)
Masters Degree or equivalent	0.028***	0.012***	0.014***	0.021***	0.007***	0.001	0.000	0.021***	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
A Doctorate or equivalent	0.023***	0.006*	0.014***	0.021***	0.003*	0.002	0.002	0.016***	0.005**
	(0.004)	(0.003)	(0.003)	(0.004)	(0.001)	(0.002)	(0.001)	(0.004)	(0.002)
Income. Benchmark up to GBP 11499									
Income GBP 11500-17499	-0.006*	-0.004*	-0.002	-0.006**	-0.000	0.001	0.000	-0.001	-.004***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Income GBP 17500-GBP29999	-0.008***	-0.008***	0.000	-0.008***	-0.000	0.001	-0.001	-0.004*	-.004***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Income GBP 30000-49999	-0.009***	-0.011***	0.002	-0.009***	-0.000	0.000	-0.001+	-0.004*	-.005***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Income GBP 50000-99999	-0.010***	-0.014***	0.004**	-0.013***	0.002*	-0.001	-0.000	-0.005*	-.005***
	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Income GBP 100000 or more	0.001	-0.011***	0.012***	-0.009***	0.010***	0.001	0.002+	0.005+	-0.003*
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.003)	(0.001)
Migrant status. Benchmark UK born life-long residents									
UK-born regional in-migrants	0.009***	0.004***	0.005***	0.007***	0.003***	0.001+	0.001***	0.008***	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)
immigrants	0.011***	0.004**	0.007***	0.006***	0.005***	0.000	0.001*	0.009***	0.001+
	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Ethnicity. Benchmark White									
Mixed	0.022***	0.011**	0.011**	0.012**	0.009**	0.000	0.003	0.021***	0.002
	(0.005)	(0.004)	(0.004)	(0.005)	(0.003)	(0.008)	(0.002)	(0.005)	(0.002)
Asian	0.006*	0.004*	0.003	0.001	0.005**	0.000	-0.001	0.006*	0.000
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.003)	(0.001)

Black	0.041***	0.017***	0.023***	0.027***	0.014***	0.005+	-0.001**	0.035***	0.004*
	(0.006)	(0.004)	(0.005)	(0.005)	(0.003)	(0.002)	(0.001)	(0.006)	(0.002)
Year of survey									
2007	0.001	-0.000	-0.001	0.002	-0.001+	-0.000	0.001	0.001	0.000
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
2008	-0.002	0.000	-0.003*	0.001	-0.002**	-0.001	0.001	-0.002+	0.001
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
2009	-0.001	0.002+	-.004***	-0.000	-0.001	-0.001+	0.001+	-0.001	-0.000
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)
2010	-0.001	0.002	-.005***	-0.000	-0.001	-0.001	0.001+	-0.002	-0.000
	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
2011	0.011***	0.009***	0.002	0.009***	0.001	0.000	0.002*	0.008**	0.003*
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
2012	0.012***	0.009***	0.001	0.011***	0.000	0.002+	0.001*	0.009***	0.002*
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
2013	0.005+	0.005**	-0.001	0.005*	0.000	0.000	0.000	0.002	0.002
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.003)	(0.001)
2014	0.011***	0.008***	0.002	0.010***	0.000	0.000	0.002*	0.008**	0.002+
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.003)	(0.001)
2015	0.009***	0.005**	0.004+	0.011***	-0.001	-0.000	0.001	0.006*	0.003*
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
2016	0.014***	0.008***	0.005*	0.010***	0.003*	-0.000	0.001+	0.009***	0.005***
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
2017	0.010***	0.005**	0.004*	0.010***	-0.000	0.000	0.002*	0.005*	0.003***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)
Observations	121495	121303	121303	121495	121495	118509	118509	121418	121418
X^2 *(likelihood ratiol)*	1934.723	2190.052		2192.613		243.619		1935.337	
Log likelihood	-14949.355	-16405.54		-17797.1		-3632.425		-16180.23	
Pseudo R^2 *(McFadden)*	0.061	0.063		0.062		0.032		0.056	
Akaike information criterion	29970.709	32955.08		33545.6		7408.85		32504.45	

Notes:
Standard errors in parentheses
+ p<0.10; * p<0.05; ** p<0.01; *** p<0.001
Opportunity coding: 0 - No SU activity; 1 - Necessity + partly opportunity motive; 2- Purely opportunity motive
Innovation coding: 0 - No SU activity; 1 - Not new to any / new to some; 2- New to all
General elections in the UK were held in 2005 (5 May 2005), 2010 (6 May 2010), 2015 (7 May 2015), and 2017 (8 June 2017). We use GE 2005 turnout to analyse entrepreneurial activity in 2006, 2007, 2008, and 2009; GE 2010 – in 2010, 2011, 2012, 2013, 2014; GE 2015 – in 2015 and 2016; GE2017 – in 2017.

Table A13. Probability of involvement in different types of start-up activity, 2008-2009

	NASCENT STARTUP	OPPORTUNITY		GROWTH ASP.		EXPORTING		INNOVATION	
		No	Yes	No	Yes	No	Yes	No	Yes
	(1)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)
GE Turnout 2005	0.036*	0.020*	0.012	0.033**	0.003	0.004	0.004	0.028*	0.007
	(0.014)	(0.009)	(0.010)	(0.013)	(0.007)	(0.004)	(0.004)	(0.014)	(0.006)
Female	-0.012***	-0.005***	-0.006***	-0.007***	-.005***	0.000	0.000	-0.009***	-0.003***
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)
Age. Benchmark 18-24yrs									
25-34yrs	-0.001	0.001	-0.001	0.001	-0.002	0.002+	0.002	-0.001	-0.000
	(0.006)	(0.004)	(0.004)	(0.005)	(0.002)	(0.001)	(0.001)	(0.006)	(0.002)
35-44yrs	-0.005	-0.002	-0.005	-0.004	-0.001	0.003+	0.002+	-0.004	-0.002
	(0.005)	(0.004)	(0.004)	(0.005)	(0.002)	(0.002)	(0.001)	(0.005)	(0.002)
45-54yrs	-0.010+	-0.002	-0.008+	-0.007	-0.003	0.002+	0.002+	-0.009+	-0.001
	(0.005)	(0.004)	(0.004)	(0.005)	(0.002)	(0.001)	(0.001)	(0.005)	(0.002)
55-65yrs	-0.017**	-0.007*	-0.011**	-0.013**	-0.004	0.001+	0.000	-0.014**	-0.003
	(0.005)	(0.003)	(0.004)	(0.005)	(0.002)	(0.001)	(0.001)	(0.005)	(0.002)
65-80yrs	-0.031***	-0.014***	-0.016***	-0.025***	-0.006**	0.001	-0.001	-0.026***	-0.005*
	(0.005)	(0.003)	(0.004)	(0.005)	(0.002)	(0.001)	(0.001)	(0.005)	(0.002)
Education. Benchmark No formal qualifications									
Other qualifications	0.024*	0.007	0.014	0.020*	0.003	-0.002	-0.001+	0.023*	0.001
	(0.011)	(0.007)	(0.009)	(0.010)	(0.004)	(0.003)	(0.001)	(0.011)	(0.003)
Vocational qualifications	0.006*	0.001	0.003	0.004	0.002	0.001	-0.001	0.005+	0.001
	(0.003)	(0.002)	(0.002)	(0.003)	(0.001)	(0.003)	(0.001)	(0.003)	(0.001)
GCSE/O-level or CSE	0.006*	0.002	0.002	0.003	0.002*	-0.000	0.000	0.005*	0.001
	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)
A-level or equivalent	0.010***	0.006***	0.002	0.007**	0.004**	-0.000	0.001	0.008**	0.002+
	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)	(0.001)	(0.003)	(0.001)
Bachelor Degree or equivalent	0.019***	0.008***	0.009***	0.014***	0.005***	0.001	0.002+	0.016***	0.002*
	(0.003)	(0.002)	(0.002)	(0.003)	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)
Masters Degree or equivalent	0.021***	0.008**	0.010***	0.016***	0.005**	0.000	-0.000	0.017***	0.004*
	(0.004)	(0.003)	(0.003)	(0.004)	(0.002)	(0.003)	(0.001)	(0.003)	(0.002)
A Doctorate or equivalent	0.026**	0.013*	0.010*	0.024**	0.003	0.002	0.002	0.020*	0.004
	(0.008)	(0.006)	(0.005)	(0.008)	(0.002)	(0.019)	(0.003)	(0.008)	(0.003)
Income. Benchmark up to GBP 11499									
Income GBP 11500-17499	-0.004	-0.008*	0.004+	-0.004	0.000	0.000	0.001	-0.002	-0.002
	(0.004)	(0.003)	(0.002)	(0.004)	(0.002)	(0.002)	(0.002)	(0.004)	(0.002)
Income GBP	-0.007+	-0.011***	0.002	-0.007*	0.000	0.001	-0.001	-0.004	-0.002

17500-GBP29999									
	(0.004)	(0.003)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)	(0.004)	(0.002)
Income GBP 30000-49999	-0.011**	-0.014***	0.003+	-0.009**	-0.002	0.000	-0.002	-0.008*	-0.003+
	(0.004)	(0.003)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)	(0.003)	(0.002)
Income GBP 50000-99999	-0.012**	-0.017***	0.005*	-0.013***	0.001	-0.000	-0.002+	-0.008*	-0.004*
	(0.004)	(0.003)	(0.002)	(0.003)	(0.002)	(0.002)	(0.001)	(0.004)	(0.002)
Income GBP 100000 or more	-0.004	-0.015***	0.010**	-0.010*	0.006*	0.003	-0.001	-0.000	-0.003
	(0.005)	(0.004)	(0.004)	(0.004)	(0.003)	(0.003)	(0.002)	(0.005)	(0.002)
Migrant status. Benchmark UK born life-long residents									
UK-born regional in-migrants	0.006**	0.003*	0.003*	0.005**	0.001	0.001	0.001*	0.005**	0.001
	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)
immigrants	0.007*	0.005+	0.002	0.004	0.003+	0.000	0.005*	0.008*	-0.000
	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.004)	(0.002)	(0.004)	(0.001)
Ethnicity. Benchmark White									
Mixed	0.021*	0.008	0.013+	0.015+	0.006	-0.002*	0.000	0.018+	0.003
	(0.010)	(0.006)	(0.008)	(0.009)	(0.005)	(0.001)	(0.002)	(0.010)	(0.004)
Asian	0.012*	0.004	0.009+	0.003	0.009*	0.001	-0.001**	0.009+	0.002
	(0.006)	(0.003)	(0.004)	(0.004)	(0.004)	(0.014)	(0.001)	(0.005)	(0.002)
Black	0.027*	0.017*	0.006	0.016+	0.011+	0.002	-0.002***	0.016	0.010
	(0.011)	(0.008)	(0.007)	(0.009)	(0.006)	(0.029)	(0.000)	(0.011)	(0.007)
Year of survey									
2009	0.000	0.001	-0.001	-0.001	0.001	-0.000	0.000	0.002	-0.001
	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.002)	(0.001)
Observations	31409	31355	31355	31409	31409	30858	30858	31399	31399
X^2 (likelihood ratiol)	435.553	510.679		490.016		100.258		445.221	
Log likelihood	-2976.877	-3144.58		-3299.16		-736.93		-3210.33	
Pseudo R^2 (McFadden)	0.068	0.075		0.069		0.064		0.065	
Akaike information criterion	6005.754	6393.16		6702.328		1577.86		6524.66	

Notes:
Standard errors in parentheses
+ p<0.10; * p<0.05; ** p<0.01; *** p<0.001
Opportunity coding: 0 - No SU activity; 1 - Necessity + partly opportunity motive; 2- Purely opportunity motive
Innovation coding: 0 - No SU activity; 1 - Not new to any / new to some; 2- New to all
General election turnout used is from 2005, the latest general election held prior to the outbreak of the global financial crisis.

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