Contemporary Ethnic Minority Entrepreneurship in the UK: A Quantitative Exploration of Break Out and Entrepreneurial Quality

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Abstract

Purpose – Ethnic minority entrepreneurs (EMEs) are traditionally associated with lower growth industry sectors. This study draws on the theory of mixed embeddedness to determine if more recent EMEs have been able to break out of lower growth sectors and if break out varies across ethnic minority groups. It also compares entrepreneurial quality in terms of weekly hours worked, weekly earnings and job satisfaction.

Design/methodology/approach – Quantitative inferential statistical analysis is undertaken on data drawn from the large scale, social sciences dataset for the UK, Understanding Society.

Findings – The study finds that break out is not associated with being a recent EME but does vary across ethnic minority groups. Break out is found to be associated with gender, education, English language proficiency and occupational status. Some variation in entrepreneurial quality is found for both recent EMEs and across ethnic minority groups.

Practical implications – Understanding the nature and quality of ethnic minority entrepreneurship is important since it informs public debate about migration, informs policy and shapes activities of future ethnic minority entrepreneurs.

Originality/value – The study provides a theoretically grounded interpretation of the explanatory variables associated with EME break out and entrepreneurial quality. Secondly, it provides a large confirmatory study of break out and finally, it also finds an important

empirical nuance to the concept of opportunity structure by identifying a variation over time in both external and socio-demographic factors.

Key words: ethnic minority entrepreneurs, opportunity structure, mixed embeddedness, entrepreneurial quality

Introduction

There is considerable interest in the economic and social contributions that ethnic minorities make to the countries in which they live (Ram *et al*., 2008; Ma *et al*., 2013; Aliaga-Isla and Rialp, 2013; Zhao *et al*., 2013). In the UK this interest has been fuelled recently by growth in net migration, the increased range of countries of origin and the broad range of migration drivers including economic migration and asylum seeking. The combination of ethnic minorities that are settled in the UK and the more recent arrivals has resulted in the UK being described as 'super-diverse' (Vertovec, 2007; Sepulveda *et al*., 2011) and hence provides a specific and compelling context to study ethnic minority entrepreneurship.

Ethnic minorities, and particularly recent migrants, have been associated with high levels of entrepreneurship (Levie, 2007; Clark *et al*., 2017). However, extant research has associated ethnic minority entrepreneurs (EMEs) with low skilled, lower growth and hence low return sectors such as retailing, restaurants, fast-food provision and personal services (Edwards and Ram, 2006; Dana and Morris, 2007). The ability of EMEs to *break out* of low margin, lower growth industry sectors into higher growth and higher margin sectors has been of considerable interest (Basu, 2011; Arrighetti *et al*., 2014). Such studies have assumed or

asserted that break out, however achieved or characterised, results in improved entrepreneurial quality, where this term indicates outcomes from entrepreneurial activity that are beneficial to EMEs or wider society. Entrepreneurial quality can be measured in various ways. For example, Clark *et al*. (2017) measure the outcome as employment of others. Motivations for entrepreneurship are more commonly expressed in terms of personal gain and improvements to personal working conditions (Dawson *et al*., 2014), indicating that reduction in working hours, increases in earnings, and job satisfaction are appropriate measures of entrepreneurial quality.

Prior studies of EMEs have tended to focus on single ethnic groups in specific geographic locations (e.g., Barrett and Vershinina, 2017). Those that have presented comparative data on EMEs have tended to focus on the characteristics that influence becoming an EME, rather than to consider the outcomes achieved. By drawing on the theory of mixed embeddedness of EMEs (Kloosterman *et al*., 1999; Kloosterman and Rath, 2001), particularly the opportunity structure in which they operate, this study compares recent and more established EMEs and EMEs in different ethnic groups. The aim of the research is to understand what factors influence break out to higher growth sectors and how break out varies across ethnic groups. It also determines if break out is associated with improved quality of entrepreneurship and how this quality varies for recent entrepreneurs and across ethnic minority groups. This aim is operationalised by means of the following specific research questions:

- Are EMEs that have formed their new ventures in the UK since 2008 (termed recent EMEs) operating in higher growth industry sectors than those that started their ventures before 2008 (termed established EMEs)?
- Does EME break out vary across ethnic minority groups?

- Are recent EMEs, particularly those operating in higher growth industry sectors, associated with improved entrepreneurial quality, measured by weekly hours worked, weekly earnings, and job satisfaction?
- Does entrepreneurial quality of EMEs vary across ethnic minority groups?

Research hypotheses relating to the above questions are derived from extant literature and are tested using multivariate regression analyses on pooled data. Data for the analysis is drawn from the large scale, longitudinal dataset for the UK, Understanding Society.

The study makes three contributions to the EME domain. It identifies and provides a theoretically grounded interpretation of the explanatory variables associated with EME break out to higher growth sectors and those associated with improved entrepreneurial quality. Secondly, it provides a large scale and broadly based quantitative, empirical and hence confirmatory study of break out. Finally, it also finds an important empirical nuance to the consideration of time in the concept of opportunity structure. The study shows that break out by more recent EMEs is associated with relatively enduring but not completely static variables: educational attainment, English language proficiency and occupational status. In contrast, measures of entrepreneurial quality achieved by these EMEs, particularly those who have broken out to higher growth sectors, appear to be influenced by the changing external economic conditions, suggesting multiple and differing temporal influences.

The following section provides a summary of prior literature addressing EMEs and break out and the measurement of entrepreneurial quality. This literature is used to derive a set of hypotheses that address the research questions. The method used to undertake the study and the findings are described. A discussion of the findings is presented. The conclusions to the study include implications for practice and policy and suggestions for future research.

Prior Literature: EMEs and Break Out

The focus of this study is the association of ethnic minority group and entrepreneurship, rather than migrant status. Hence it follows the inclusive definition adopted by Blackburn and Smallbone (2015) and in subsequent studies (e.g., Ram *et al*., 2016), by defining EMEs as including all entrepreneurs of ethnic minority heritage in the UK regardless of their date of arrival or place of birth. However, differences between entrepreneurial proclivity between those born in the UK and those migrating to the UK identified in prior literature (Clark *et al*., 2017) are accounted for by including relevant control variables in the statistical analysis. Given the data used in this study are based on self-reported responses; the ethnic groups used represent self-identification (Aldrich and Waldinger, 1990).

Various theories have been proposed to explain the entrepreneurial orientation of EMEs, including cultural theory (Volery, 2007; Azmat, 2010) and disadvantage theory (Light and Gold, 2000; Ley, 2006) both of which focus on socio-cultural characteristics of EMEs. In contrast, mixed embeddedness moves away from a sole focus on '*cultural determinism'* (Ram and Jones, 2008, p.357) and recognises that EMEs are shaped by an inter-play of both socio-cultural factors and wider economic, social and institutional factors (Kloosterman *et al*., 1999; Jones and Ram, 2007). Hence mixed embeddedness effectively recognises both demand (e.g. market needs) and supply (e.g. entrepreneurial proclivity) perspectives of ethnic minority entrepreneurship. These factors will manifest and vary according at local, regional and national levels, hence suggesting that the opportunities and outcomes for EMEs will vary across these spatialities and over time. For example, in an historical study Godley (2001) discusses how the Jewish migrants to London and New York in the early 20th century showed

different levels and experiences of entrepreneurship, despite similar starting resources, due to the varying national attitudes to entrepreneurship they were exposed to in the UK and US.

Whilst mixed embeddedness has a broad remit, from the socio-cultural perspective of individual EMEs and their local community to national policies, it has a number of challenges (Anwar and Daniel, 2017). The dimensions of mixed embeddedness are fluid and flexible in order to reflect the varied forces shaping the opportunities of EMEs (Kloosterman, 2010). However, this leads to lack of consistency across studies that adopt this theoretical lens (Ram and Smallbone, 2001; Rath, 2002; Barrett *et al.*, 2001). Also, studies based on the theory have tended to overlook entrepreneurial agency, suggesting that EMEs have little influence over their context. In contrast, Anwar and Daniel (2017) have shown that EMEs creatively influence the varied forces acting on them, suggesting a more mutually constitutive relationship.

An important consequence of the mixed embeddedness perspective is recognition of the concept of '*opportunity structure'* (Kloosterman, 2010, p.30). This consists of a consideration of the opportunities available to EMEs, their ability to access and shape those opportunities and recognition that these opportunities are both temporally and spatially contingent (Tolciu, 2011; Barrett and Vershinina, 2017; Lassalle and McElwee, 2016). As noted, EMEs have traditionally been associated with low skill, low return industry sectors and have been exhorted to break out to higher return sectors. Break out can be understood using the conceptual model of opportunities available to EMEs proposed by Kloosterman (2010) and shown in Figure 1. This is derived from an interaction of the "demand" for EMEs, which is represented by industry sector growth (horizontal axis) and the "supply" of EME skills, which is represented by the human capital offered by EMEs (vertical axis). Each quadrant offers distinct opportunities, challenges and returns to EMEs. The lower left quadrant represents the *"traditional migrant entrepreneur with his* [sic] *business firmly stuck*

at the lower end of the market in either small-scale retailing or cheap restaurants" (Kloosterman, 2010, p.30). This is often associated with push factors from poor education or limited language skills, and strong but homogeneous co-ethnic social networks (Ojo, 2012; Achidi Ndofor and Priem, 2011). In contrast, the right-hand side of the figure suggests that ethnic minority entrepreneurs can break out into higher growth sectors. The lower right quadrant is associated with high levels of service activity, driven by outsourcing and growth in personal services. Drivers are pull factors from higher potential rewards. Accessing such opportunities suggests the need for more varied social networks, including non-ethnics and potentially wider spatial dispersion. The upper right quadrant requires high levels of education or experience. In many developed economies migration policies have shifted towards points-based systems targeting skilled professionals, allowing ethnic migrant entrepreneurs to establish high threshold, higher growth businesses.

Figure 1 here

Hypothesis Development

Mixed embeddedness theory considers ethnic entrepreneurship as a mutually constitutive interaction between the individual, local, regional and institutional levels of the context in which EMEs operate, recognising both demand and supply perspectives (Kloosterman and Rath, 2006; Jones *et al*., 2014). Opportunity structure is viewed as the opportunities available based on the constitutive interactions of these levels. Given its contextual and contingent nature, opportunity structure is recognised as both time and place specific (Kloosterman, 2010). This suggests that over time EMEs will have access to different resources and will be faced with different opportunities. EMEs that start their

businesses at later points in time will therefore be able to leverage different opportunities to EMEs who started their businesses earlier in time, including the benefit of being able to learn from and be supported by earlier EMEs.

The period since the financial crisis of 2008 represents an example of a major change to the opportunity structure available to EMEs and has been linked to permanent changes in patterns of entrepreneurship in the UK, including participation in growing sectors such ICT and personal services (Henley, 2017). This period also coincides with changing patterns of ethnic minority groups in the UK. This includes large numbers of arrivals in the UK from the EU enlargements that took place in 2004 and 2007 and arrivals from diverse countries following strife and regime change. The UK also moved to a points-based approach to visas in 2008, with the intention of prioritising arrivals with high or scarce skills. Hence EMEs starting their ventures pre- and post-2008 are taken as a meaningful comparator for the basis of the exploration of break out and resulting entrepreneurial quality.

The support from established EMEs, structural changes in self-employment particularly increased access to growing market sectors, and the emphasis on skilled arrivals suggests that those starting businesses since 2008 will focus on higher growth, higher margin sectors than those EMEs that started their businesses before 2008. Taking recent EMEs as those that established their businesses during the period 2008 – 2016 and established EMEs as those that established their businesses before 2008, the foregoing leads to a first hypothesis:

H1a: Recent EMEs are more likely to operate in higher growth sectors than earlier EMEs.

Factors influencing the differential choice of industry sectors, and hence break out, will be ethnically patterned. Opportunity structure is by definition a result of the interaction of *inter alia* social and cultural factors and hence will vary by ethnic minority group. Whilst all

EMEs have agency, this is both constrained and enabled by, for example, levels of education and experience, access to finance and varied social networks (Jones and Ram, 2007; Ram *et al*., 2016) and hence will be experienced differentially across ethnic minority groups. Similarly, the support from incumbent EMEs will manifest and be experienced differently across these groups, with some providing significant support for co-ethnics and others eschewing provision of such intra-group support (e.g., Sepulveda *et al*., 2011). These differences will result in heterogeneity in industry sector break out across ethnic groups and lead to a related hypothesis:

H1b: There will be a difference in the participation in higher growth sectors across ethnic minority groups.

The underlying assumption driving the ongoing interest in EME break out is that, whatever form break out takes, it will be associated with improved entrepreneurial outcomes for the EMEs involved. Prior conceptual studies have asserted that access to expanding markets with high entry thresholds will result in better outcomes (Engelen, 2001, Rusinovic, 2008). This is supported empirically by Shinnar *et al.* (2011) who find that EMEs who reduce reliance on co-ethnic markets have higher earnings than those who have a predominantly co-ethnic clientele. Rationales for entrepreneurship frequently include improved working conditions and increased financial gain (Dawson *et al*., 2014). Since entrepreneurship has traditionally been associated with long working hours (Ram *et al*., 2016), a reduction in hours worked, whilst maintaining sufficient earnings to meet their needs and aspirations, suggest one indication of improved entrepreneurial quality. Similarly, studies find that entrepreneurship and self-employment is associated with lower earnings than employment (e.g., Mandelman and Montes-Rojas, 2009), with earnings being between -4

percent and -15 percent compared over a range of developed countries (Åstebro 2017). Increased earnings can therefore be considered another indicator of improved entrepreneurial quality. Improved EME outcomes of break out may manifest as higher job satisfaction. The notion of the agentic, self-reflexive EME (Kloosterman, 2010) suggests individuals who are aware of their abilities and needs, and consistent with the theory of entrepreneur-venture fit (Markman and Baron, 2003; Dvir *et al*., 2010), can identify opportunities that fit these abilities or needs, resulting in greater job satisfaction. This is consistent with motivational theories that associate the fulfilment of needs and achievement with greater job satisfaction (Maslow, 1943).

Operation in higher growth sectors is likely to be more successful in terms of firm growth and avoidance of competition, since it is easier for many EMEs to prosper in a growing and high margin sector. Operation in such sectors can therefore be expected to be associated with reduced weekly working hours and increased weekly earnings. Operation in such sectors may also be expected to be associated with a sense of personal achievement, as well as improved hours and financial achievement, and hence to be associated with greater job satisfaction. This leads to a second hypothesis:

H2a: Recent EMEs in higher growth industry sectors will be associated with increased entrepreneurial quality (lower weekly hours worked, increased weekly earnings, increased job satisfaction).

Similar arguments to those presented for why choice of industry sectors and break out are ethnically patterned pertain to entrepreneurial quality, which will also be ethnically patterned. The outcomes of the ventures started by EMEs will be both constrained and enabled by the human, financial, social and ethnic networks that they have or that they can

access, and will vary across ethnic groups. Different attitudes to working hours, acceptable earnings levels, and job expectations will also vary across ethnic minority groups and will generatively and differentially affect the working patterns, expectations, and satisfaction of the ethnic minority groups. These differences will result in heterogeneity in the entrepreneurial quality across ethnic minority groups. This results in the related hypothesis:

H2b: There will be differences in entrepreneurial quality across ethnic minority groups.

Figure 2 presents the hypotheses as a research model.

Figure 2 here

Methodology

Understanding Society Survey and Sample

Analysis uses data drawn from the Understanding Society longitudinal survey, comprising approximately 40,000 UK households and their individual members (Buck and McFall, 2012). The first wave started in January 2009 with subsequent waves collected annually. The study is based on data drawn from Waves 1 (2009/10) to 7 (2015/16). Understanding Society has an explicit aim to reflect the diversity of the UK population and by design over-samples ethnic minority groups. This "boost" comprises approximately 4,000 ethnic households (Berthoud *et al*., 2009).

The analysis was conducted using the sub-sample who identify as self-employed business owners. The "dependent" self-employed (Clark and Drinkwater, 2010b), comprising contractors and freelancers were excluded. This definition implies some element of

entrepreneurial novelty, either new-to-the-world or new-to-them. Following the description proposed by Blundel and Lockett (2011, p. 5) "*business owners who seek to generate value through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets",* the term "entrepreneurs" was adopted.

Similar to previous comparative studies (Vershinina *et al*., 2011; Kingston *et al*., 2015), the sample was divided into two groups of pooled data: EMEs who became self-employed business owners more than twelve months before the first survey wave, that is before 2008, termed "established entrepreneurs", and EMEs observed from year-to-year transitioning behaviour becoming self-employed business owners between 2008 and 2016, termed "recent entrepreneurs". Analysis undertaken (not reported but available on request) shows that the average duration of business ownership for EMEs was just over 10 years. Hence, the sample includes businesses started over an approximately eighteen-year period (approximately up to ten years before 2008 and eight years between 2008 and 2016). With past low levels and diversity of migrants, break out has been characterised as an extended process (Kloosterman, 2010). However, higher levels and super-diversity of recent migrants has increased the variety of ethnic entrepreneurship increasing the rate of EME diversity and potential break out (Sepulveda *et al*., 2011). Hence, a period of around eighteen years covered in this study seems appropriate to explore current manifestations of break out.

Despite an explicit objective of Understanding Society to explore multi-culturalism in the UK through the boost sample, many of the 17 ethnic groups included in the survey have low numbers of business owners. Ethnic groupings were therefore recombined into five categories: White Non-British (includes non-Irish), South Asian (Indian, Bangladeshi and Pakistani), Chinese, Black Caribbean and African and a mixed group termed "other" (Arab and all other ethnic groups). White British or Irish were not included in the study as these were considered as non-minority. The largest White Non-British group were Polish (19

percent of all wave 1 White Non-British), with next most frequent groups being Americans (5.1 percent), Germans (4.8 percent) and French (4.5 percent). Table 1 reports the total sample numbers for established EMEs (444) and recent EMEs (303) and the numbers in each of the five ethnic groups considered.

Table 1 here

Statistical Analysis

A Heckman two-step selection corrected regression analysis was undertaken to test the hypotheses (Tabachnick and Fidell, 2013). The first step, termed the selection equation, involved calculation of a probit model to correct for non-randomness of entrepreneurship amongst the ethnic minority population. Explanatory variables for this model were derived from previous studies of factors that have been found to influence the uptake of entrepreneurship by ethnic minorities and entrepreneurship more generally (Clark *et al*., 2017; Simoes *et al*., 2016). The dependent variable for this step was self-employment and the sample was all ethnic minority individuals in the sample (N=6373).

The second step, termed the outcome equation, involved calculation of a regression model to explore the effects of posited explanatory factors on the dependent variable of interest. For the first dependent variable (categorical industry growth), estimation of the first and second stages were undertaken jointly by the maximum likelihood method and a likelihood-ratio (LR) test was undertaken to determine that the selection and outcome equations were independent. For the remaining three outcome equations (continuous or scale dependent variables) an inverse Mills ratio derived from the selection equation was included in the explanatory variables to account for selection bias.

In order to test the hypotheses, the second (outcome) step was undertaken four times, each time using the appropriate dependent variable: industry growth, weekly hours worked, weekly earnings or job satisfaction. Industry growth was a binary categorical variable and hence a maximum likelihood probit Heckman regression was used. The other three dependent variables were continuous or scale variables and a multivariate Heckman regression was used. The sample for all outcome equations was EMEs and the sample size varied slightly according to the dependent variable due to some missing data values (N=622 to 651).

Variables

The variables included in the study are shown in the first column of Table 2 and were derived from extant studies of EMEs discussed in the literature review section. For the selection equation, variables that have been linked to becoming an EME or entrepreneur more generally were included as explanatory variables (e.g., Chaganti and Greene, 2002; Clark and Drinkwater, 2000; Simoes *et al*., 2016). These were: gender, age, having a long term health condition that limits work, number of children, highest educational level, ethnic group, religion and being a homeowner. Age has been recognised as having a non-linear relationship with aspects of EMEs (e.g., Heath and Martin, 2013) and hence both an age and age-squared variable were included. In order to differentiate those EMEs born in the UK to those that have migrated to the UK, a variable capturing decade of migration was included, with the comparator group being EMEs born in the UK. A variable to capture generation of migration of EMEs, "both parents born outside the UK" was included. For first generation "both parents born outside UK" is true (=1), for second generation it is not true (=0). Two variables were included to capture the geographic location and context of the EMEs. The first was the local area unemployment rate, since high unemployment has been associated

with increased EMEs (Clark and Drinkwater, 2010a). The second was the proportion of the local population that are ethnic minorities, as EMEs have been associated with high EME concentration enclaves (Aldrich *et al*., 1985; Zolin *et al*., 2016). A special licence was required to access location data in the Understanding Society dataset for the purpose of linking to local unemployment and population structure data provided by the UK Office for National Statistics.

Table 2 here

For the outcome equations, due to lack of prior studies of entrepreneurial quality, variables expected to be associated with the outcome of being an EME were included as explanatory variables. These were: gender, having a work-limiting long term health condition, highest educational level, ethnic group, and occupation. Occupational status was based on the eightfold 1-digit level Standard Occupational Classification 2010 (SOC 2010). This classification is widely used in official statistics (Office for National Statistics, 2017a) and in studies in the entrepreneurial domain (Markusen *et al*., 2008; Kitching and Smallbone, 2012). SOC 2010 were consolidated into two groups: white- and blue-collar. The white-collar group includes managers, professionals and administrative staff, and suggests higher thresholds such as educational and professional requirements, consistent with the upper quadrants of the opportunity typology. The blue-collar group includes trades, service occupations and operatives, and suggests relatively lower human capital thresholds. In order specifically to test the hypotheses, the binary variables established (=0) or recent (=1) EME and recent EME in higher growth sector (=1) or all other EMEs (=0) were also included.

For the dependent variable in the first outcome equation (column 3 in Table 2), a binary variable of higher (=1) or lower (=0) industry sector growth was derived. This was based

upon the sevenfold 1-digit level Standard Industrial Classification 2007 (SIC, 2007). SIC 2007 and its earlier variants are well accepted means of characterising industry sector and have been widely used in official statistics (Office for National Statistics, 2017b). It has been used in previous studies in the entrepreneurship domain some of which are based on the predecessor survey and hence uses identical measures (e.g., Reuschke, 2016; Block and Sandner, 2009). Higher growth sectors were taken as those showing annual employment growth rates above 1 percent p.a. over the study period according to PwC (2016), with lower growth sectors showing growth below 1percent p.a.

The dependent variables for the remaining three outcome equations (columns 4 to 6 in Table 2), were weekly hours worked, weekly earnings (in £s) and job satisfaction. Self-employed earnings are well understood to be subject to measurement error (Åstebro, 2017), from the varying ways in which the self-employed frame earnings (drawings or profit) and because earnings may accrue on irregular timescales (Hamilton, 2000, Mandelman and Montes-Rojas, 2009). Despite challenges in measurement, self-employed earnings are used as a variable in previous studies in the entrepreneurship domain (e.g., Kautonen and Palmroos, 2010). Hours worked does not seem to be widely used in previous studies in the entrepreneurial domain. Given it relies on recall and may be subject to influences of social desirability, it is likely to be prone to similar measurement errors as self-employed earnings. However, the Understanding Society questionnaire is careful to address the framing issue, asking respondents to report their working hours in the previous week in order to increase accuracy. Job satisfaction was measured by a single-item 7 point Likert Scale (7: completely satisfied, 1: completely dissatisfied). Georgellis and Yusuf (2016) use the same single-item measure for job satisfaction and observe, "*single-item measures compare favourably to the Job Description Index (JDI), contain more face validity, and they are more flexible than*

multiple-item scales" (p.57). However, it is recognised that a single item measure is a limitation as it confounds elements of satisfaction which may be distinct and which may vary differentially across ethnic minority groups. This limitation is tempered by the inclusion of multiple measures of the entrepreneurial quality in the study.

Findings

Factors associated with becoming an EME: Selection Equation

The findings of the selection equation are shown in Table 2. The findings show women are less likely to be EMEs, older people more so but at a declining rate, both of which confirm previous results (Clark *et al*., 2017). Those with more children are more likely to be EMEs whilst those who are more educated (degree or other HE qualification) less so. The latter is consistent with individuals with higher qualifications being able to access employment opportunities and hence eschewing the uncertainties of entrepreneurship (Simoes *et al*., 2016).

Most minority groups are less likely to be EMEs than the white non-British group which was taken as the reference group. Whilst the findings of date of arrival in the UK (compared to the reference group of born in the UK) were non-significant, there is a suggestion that more recent arrivals are less likely to be entrepreneurs than those born in the UK, with the most recent being the least likely to be EMEs. This suggests that it may take time to gain the skills, resources and networks necessary to become an EME. Alternatively, more recent arrivals may be better qualified and better able to find good quality employment. Again, whilst not reaching significance, there is an indication that 2nd generation migrants (those who were born in the UK to parents that came to the UK but were born outside the UK) are less likely to be EMEs. This is consistent with their being born in the UK increasing

ability to participate in the employment market and hence eschewing entrepreneurship. Religion is found to play a part in EME selection, with Muslims more likely to be EMEs than the Christian/Jewish/none reference group. Heath and Martin (2013) identify a "*Muslim penalty*" (p.1005), a term they employ to describe their findings that both male and female Muslims have lower levels of economic activity and employment than other religious affiliations, even after ethnic group is controlled for in order to isolate the effect of religion. Their measurement of employment included self-employment and they did not explore differences between these types of employment. These findings complement theirs by suggesting that the discrimination or challenges in entering the labour market that they identify, may lead to the higher levels of EMEs amongst Muslims shown in the findings.

Consistent with previous research, homeowners are more likely to be EMEs (Reuschke, 2016). Whilst cause and effect cannot be determined from this analysis, the ability to provide personal security for loans to start or develop small businesses is common practice in the UK (Henley, 2005) and a home provides suitable security. The home may also provide the location for a business, with home-based businesses being the most frequent type of business in the UK and other developed and developing economies (Mason *et al*., 2011). Individuals in areas of high unemployment are less likely to be EMEs, which is consistent with theories that poor external market conditions dissuade entrepreneurs (Jones *et al*., 2014). Local area ethnic population was not found to be related to likelihood of being an EME. This is in contrast to previous studies that have considered the support from local co-ethnics, as both suppliers of resources and customers as an important contributor to EMEs, leading to the term "enclave economies" to describe the mutually supportive phenomenon (Arrighetti *et al*., 2014). Whilst such support has been found to exist, the analysis shows that other variables, such as gender, age, ethnic group and religion provide a stronger explanation of the likelihood of becoming and EME than simply considering proximity of co-ethnics.

Factors associated with breakout to higher growth industry sectors: Hypotheses H1a and H1b

The findings of the probit outcome equation with the binary dependent variable industry growth (lower growth sectors = 0, higher growth sectors = 1) are shown in Table 2. The self-selection of EMEs and their operation in higher growth sectors is not independent, as indicated by the significance of the LR test. This reflects the selection and survivor bias in much entrepreneurship research, with studies based on those that enter or persist in entrepreneurship.

Females are more likely than men to be operating in higher growth sectors. Whilst the selection analysis showed females were less likely to be EMEs, it would seem that when they do become EMEs then they operate in higher growth sectors. EMEs with degree, other HE qualifications, or A-Levels and their equivalents are more likely to be in higher growth industry sectors. For example, an EME with a degree is 22 percentage points more likely to be in a higher growth industry sector than the reference group of those with no qualifications. Those for whom English is not first language are 9 percentage points less likely to be in higher growth sectors than those whose first language is English, suggesting that language may be a barrier to entry to such higher growth markets. Those in white collar occupations are 16 percentage points more likely to be in higher growth sectors, even after the high educational requirements often associated with these occupations are taken into account. There is no association between being a recent EME (starting business after 2008) and operating in higher growth sectors. It is therefore concluded that there is no support for the break out of recent entrepreneurs posited in hypothesis H1a. In contrast, operation in higher

growth sectors is determined by gender, qualifications, English language proficiency and occupational status.

With regard to hypothesis H1b, the findings indicate heterogeneous participation of ethnic minority groups in higher growth industry sectors, with South Asians and Chinese less likely to operate in higher growth sectors than the White Non-British comparator group. This study therefore finds support for hypothesis H1b.

Factors associated with the entrepreneurial quality: hypotheses H2a and H2b

In order to explore the entrepreneurial quality three separate multivariate regression analyses were undertaken, with the results shown in Table 2. Outcome equation 2 shows the regression coefficients for the dependent variable hours worked per week. Considering first the variables associated with the second set of hypotheses, recent EMEs are found to work, on average 3.5 hours less per week than established EMEs and recent EMEs in higher growth sectors are found to work a further 5.3 hours less. This provides strong support for hypothesis H2a. In contrast, no significant differences were found in weekly hours worked across the four ethnic minority groups, providing no support for hypothesis H2b.

Other variables that were found to be significantly associated with weekly hours include gender, with female EMEs on average working 7.3 hours less per week, and having a long-term health condition, which as may be expected was associated with reduced working hours (2.3 hours less per week). Those EMEs for whom English is not their first language also reported reduced working hours compared to those for whom English is their first language (2.4 hours per week). EMEs in white collar occupations were found to work more hours per week than those in blue collar occupations (3.4 hours more per week).

Outcome equation 3 shows the regression coefficients for the specified variables with the dependent variable weekly earnings. Again considering first the variables associated with

the second set of hypotheses, recent EMEs earn £216 per week less than established EMEs, whilst the difference for EMEs in higher growth sectors did not reach statistical significance. These findings do not support the first hypothesis H2a. With regard to differences across the four ethnic minority groups, Chinese EMEs earn on average £151 per week less than the white non-British reference group, and were the only ethnic minority group to show a significant difference to this reference group. The difference in weekly earnings for one ethnic minority group provides limited support for hypothesis H2b.

Variables that were found to be significantly associated with weekly earnings include having a long-term health condition, which was associated with an average £85 decrease in weekly earnings and having only school level (to age 18) qualifications which was associated with a £138 average decrease in weekly earnings. However, the largest single predictor of reduced weekly earnings was English not being the first language of an EME, which resulted in a £167 average decrease in weekly earnings. The only factor that was associated with a significant increase in weekly earnings was having a degree, which resulted in a £125 average increase in weekly earnings, showing that the much discussed graduate premium applies to EMEs as well as to employees.

Outcome equation 4 shows the regression coefficients for the specified variables with the dependent variable job satisfaction. No significant association is found for either recent EMEs or recent EMEs in higher growth sectors, providing no support for hypothesis H2a. When considering differences across ethnic groups, only the group termed "other" show a significant difference from the white non-British reference group. The difference in job satisfaction for one ethnic minority group provides limited support for hypothesis H2b.

Variables that were found to be significantly associated with job satisfaction include: gender, with female EMEs more satisfied, and having a long-term health condition which was associated with reduced job satisfaction. Having only school level qualifications (to age

16) was associated with reduced job satisfaction, as was English not being the first language of the EME.

The support found for the hypotheses is summarised in Table 3.

Table 3 here.

Discussion

This study has found no association between being a recent EME (2008 onwards) and operating in higher growth industry sectors, after controlling for other factors shown in Table 2. That is, no support for break out to higher growth sectors among this recent cohort of EMEs was found. This is in contrast to broadly based studies of all entrepreneurs which found post-2008 new ventures were predominately associated with new opportunities rather than being necessity driven (Henley, 2017), suggesting that EMEs may have missed out on opportunities identified by other entrepreneurs.

In contrast, these findings show that rather than being dependent on when EMEs started their ventures, break out to higher growth sectors was dependent on four characteristics: gender, education, proficiency in English, and occupational status. Being female, having higher levels of education, having English as a first language and being in a white-collar occupation were all positively associated with break out to higher growth sectors.

With regard to the role of gender, additional analysis (not reported but available on request) shows that female EMEs are strongly associated with the higher growth sectors of professional services, education and health. In contrast, there is a strong association of males

with lower growth sectors of transportation, construction, and hospitality. The higher proportion of female EME in higher growth sectors suggests that some of the barriers identified as salient to this group may be eroding or being overcome (Verduijn and Essers, 2013; Carter *et al*., 2015). Education has long been positively associated with improved entrepreneurial opportunity (Henley, 2004), with those with the increased skills and knowledge derived from increased education able to access and select between more and better entrepreneurial opportunities. Indeed, in developing the model shown in Figure 1, Kloosterman (2010) identifies education and skills as a key contributor to moving to the upper right hand quadrant of both expanding and high threshold, and hence less competitive, markets. Hence the finding that education is highly associated with break out is consistent both with prior literature and with this model. Proficiency in relevant language has also long been positively associated with improved entrepreneurial opportunity (Clark *et al*., 2017). The association of white collar occupational status with higher growth sectors would usually be explained through the mediating role of education, with white collar occupations being associated with higher educational qualifications. However, in this study a residual association of occupational status with higher growth sector after control for educational attainment was identified. This suggests that factors over and above educational qualification, but associated with managerial or professional roles, are important. Such factors may include experience, professional networks or professional accreditation and certification (Levenson and Zoghi, 2010).

Mixed embeddedness theory and the concept of opportunity structure emphasises the importance of specific location and time on the opportunities afforded to EMEs. Whilst variation in location was not the focus of this study, as it would require a detailed study in its own right, the findings of the selection equation shown in Table 2 indicate that there were lower rates of EMEs in areas with higher rates of local unemployment. This suggests that

variation in the local area influenced the level of EMEs, in particular suggesting entrepreneurship was not a response to limited job vacancies in the area. In contrast, Table 2 shows the level of non-white ethnic minorities in the local area is not related to the level of EMEs.

With regard to the time specificity of the opportunity structure available to EMEs, these findings show that break out by EMEs starting their businesses in 2008 and onwards is associated with the relatively enduring but not completely static variables: educational attainment, English language proficiency and occupational status. In contrast, measures of entrepreneurial quality achieved by these recent EMEs, particularly those who have broken out to higher growth sectors, appear to be influenced by the specific prevailing economic conditions post the 2008 financial crisis. This suggests that variation over time in both external conditions and individual socio-demographic factors can influence the opportunities available and pursued by EMEs. Whilst individual gender can be changed, it has tended to be treated as a relatively fixed demographic variable at the individual level. Recent studies have shown that there is an increase in the number of female EMEs at the UK population level (Clark *et al*., 2017). Whilst they do not differentiate those participating in higher and lower growth sectors, the growth in female participation in higher growth sectors identified in the study may reflect this overall increase in female EMEs. Increases in female EMEs may be considered as an outcome of their mixed embeddedness. Drawing on the notion of agency and recursive change (Anwar and Daniel, 2017), increased rates of female EMEs could influence normative or mimetic forces in the local or national context, encouraging further female EMEs, for example through role modelling, mentoring or business support policies targeted at female entrepreneurs and female EMEs (Langevang *et al*., 2015).

The findings show support for hypothesis H1b, that is there are different proportions of EMEs in higher growth sectors across ethnic minority groups, with South Asians and Chinese

less likely to participate in higher growth sectors. This difference is after gender, education, English as a first language and the other variables shown in Table 2 are taken into account, suggesting that there are latent characteristics of these groups, or attitudes to them that differ from the other ethnic groups considered. Such latent characteristics may be linked to specific cultural social norms, beliefs, and family ties, consistent with cultural theories of EMEs (Volery, 2007, Contín-Pilart and Larraza-Kintana, 2015). Previous studies have linked certain South Asians with transportation, particularly operating mini-cabs and small-scale retailing and Chinese have traditionally been associated with catering and hospitality (Clark *et al*., 2017). While these sectors can show growth in the UK's service-based economy, their relatively low entry thresholds render them competitive and likely to be associated with lower returns.

Mixed support is found for the association of recent EMEs in higher growth industry sectors with improved entrepreneurial quality. Being a recent EME, in any industry sector compared to an established EME, is associated with reduced weekly working hours but also reduced weekly earnings, with no differential in job satisfaction. Reduced hours may represent a welcome move away from the long hours associated with entrepreneurship, for example to part-time working, and hence be seen as an improvement in entrepreneurial quality. However, if it is associated with lower earnings it suggests competitive market conditions and consequential underemployment. These may both arise from the period of the study, with recent entrepreneurs starting their businesses during the 2008 financial crisis. Hence, whilst it was found that factors affecting break out were largely independent of the period considered in the study, the entrepreneurial quality experienced by the recent EMEs appears shaped by the conditions during that period. Recent EMEs in higher growth sectors show a further reduction in weekly working hours compared to recent EMEs in lower growth sectors, but no further reduction in weekly earnings or job satisfaction. This suggests that

those recent EMEs that have broken out to higher growth sectors are able to escape from the long working hours of entrepreneurship, and hence are showing some improvement in entrepreneurial quality.

Some differences in entrepreneurial quality were found across ethnic groups providing mixed support for hypothesis H2b. No differences across the groups were found in the weekly hours worked but the Chinese were found to have lower weekly earnings and the "other" ethnic group (Arab and all other groups) lower job satisfaction. The lower earnings of the Chinese group are consistent with their lower participation in higher growth sectors discussed above. In contrast, whilst the South Asian group was also associated with lower participation in higher growth sectors, they are not associated with lower weekly earnings. This suggests that structural differences in the lower growth sectors in which the South Asians and Chinese operate result in reduced weekly earnings only for the latter.

Conclusion

Previous studies have called for increased focus on EME entrepreneurial quality (Jones and Ram, 2007; Carter *et al*., 2015). Placing a spotlight on EME quality is particularly important since EMEs are often associated with "*lean pickings, [and] a livelihood sustainable only by brutally hard work"* (Ram *et al*., 2016, p. 6). This study addresses this call by considering the notion of break out to higher growth, and therefore notionally more rewarding industry sectors. It is guided by the theoretical framework proposed by Kloosterman, which he himself describes thus: "*this innovative analytical framework should enable us to address the question how patterns of variation in migrant entrepreneurship – between groups …. can be explained systematically"* (Kloosterman, 2010, p. 28).

The study makes three contributions. Firstly, it presents a quantitative analysis of the factors that are associated with break out to higher growth sectors. Use of longitudinal data

allowed exploration of break out over a period of time that spanned significant changes in economic conditions: the 2008 financial crisis. Previous studies have presented descriptive statistics, for example, of the proportions of female EMEs and of the proportions of EMEs in different industry sectors, based on cross-sectional data (Clark and Drinkwater, 2010b). The associations of break out over the period considered with a range of explanatory variables have been modelled, as have the impacts of those explanatory variables on three indicators of entrepreneurial quality: weekly hours worked, weekly earnings and job satisfaction.

By focusing on break out, rather than industry sectors, the study makes a second contribution. Opportunity structure is an important concept within EME theories of mixed embeddedness and hence in the EME domain and the entrepreneurship domain more widely. To date, studies drawing on the concept have tended to be narrow in focus, for example, considering the specificities of one EME group in one location, often over a limited period in time (e.g. Lassalle and McElwee, 2016). The cross-UK, multi-ethnic group analysis presented in this paper, and the interpretation of that data, contributes to providing a broadly based and hence strong empirical basis for this much cited concept.

A consideration of opportunity structure provides the third contribution. To date, previous studies discussing this concept have emphasised the importance of "*the specific set of historical conditions encountered"* (Waldinger *et al*., 1990, p. 13). These findings provide an important empirical nuance to the consideration of time in the concept of opportunity structure. To date this has focussed on changes in the prevailing external conditions. This study shows that break out by EMEs starting their businesses in 2008 and onwards is associated with relatively enduring but not completely static personal variables: educational attainment, English language proficiency and occupational status. In contrast, measures of entrepreneurial quality achieved by these recent EMEs, particularly those who have broken out to higher growth sectors, appear to be influenced by the specific prevailing economic

conditions post the 2008 financial crisis. This suggests that variation over time in both external conditions and individual socio-demographic factors can influence the opportunities available and pursued by EMEs. Further consideration suggests that these factors may display quite distinct rates and patterns of change over time, adding further complexity and richness to the opportunity structure concept and by extension to the theory of mixed embeddedness.

Policy and Practice Implications

Currently there is considerable public debate and policy interest in the role of migration and the economic and social contribution of, and opportunities available to, ethnic minorities in many countries. In the UK this is evidenced by the recent publication of the Race Disparity Audit by the UK Government (Prime Minister's Office, 2017). Despite many previous studies that highlight the contribution that EMEs make to the national economy (e.g., Syrett and Sepulveda, 2011) public perceptions are that such entrepreneurs are trapped in lower growth, low margin sectors. This study provides evidence that gender, higher levels of educational attainment, English language proficiency and occupational status can help EMEs to operate in higher growth sectors. UK immigration policy already recognises the value of highly qualified employees, who must also have strong English skills via the Tier 2 "skilled worker" visas. In contrast, entrepreneurship visas have been predicated on the amount of investment a new arrival is able to invest in their business in the UK. The inclusion here of both migrant and UK-born EMEs emphasises that a focus on education and skills is required for both of these groups. The considerable current focus on new migrants may overshadow the importance of the continued help required by those already settled or resident in the UK.

Findings that the South Asian and Chinese ethnic groups are less associated with higher growth sectors than the other groups can also direct policy support. It will first be necessary to undertake further research to understand why these groups are more limited in their participation in higher growth sectors, considering both exogenous and endogenous factors.

Perhaps the most intriguing and unexpected part of these findings is the greater proportion of female EMEs operating in higher growth sectors, despite the selection equation showing that there were fewer female EMEs overall. Again, further research is needed to understand what factors account for the higher proportion of female, rather than male, EMEs in higher growth sectors. The modelling has accounted for education, English language proficiency and the other factors shown in Table 2. Hence there are other latent factors that are yet to be identified.

Limitations and Further Research

Cross-sectional studies based on datasets such as the UK Census have much larger samples. Available sample size has limited some aspects of the analysis, for example, requiring the use of combined ethnic groups such as Black African and Caribbean. Mixed embeddedness emphasises the importance of the specific context of EMEs. The study was undertaken in a developed country and hence the findings cannot be generalised to developing countries, where the opportunities and resources available to EMEs will be very different.

Also, as noted in the discussion, future research could build on some of the findings from this study. Research is needed to understand why South Asian and Chinese ethnic groups are less associated with higher growth sectors than the other groups. It is also needed

to understand the higher proportion of female, rather than male, EMEs in higher growth sectors, despite the lower overall proportion of female EMEs.

The Understanding Society survey has information on a large number of social, cultural, economic, and health variables that can be further combined and analysed to extend the findings of this study, in particular how characteristics of EMEs and their context are differentially associated with break out and entrepreneurial quality. For example, prior studies have shown that networks are important to entrepreneurs (e.g., Ortiz-Walters *et al*., 2015) and that personal and professional networks can affect break out by influencing the opportunities both available and proscribed to EMEs and the resources they can draw on, that is, both axes of Figure 1. Future studies could explore how networks vary across EMEs and how these are differentially associated with EMEs from different ethnic groups. Such studies will help move from the ongoing focus on entrepreneurial quantity to entrepreneurial quality.

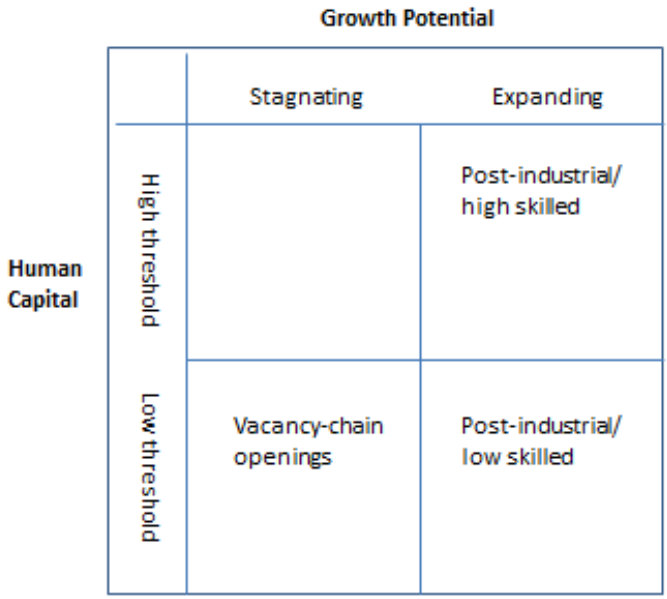

Figure 1: Opportunity structure typology (Kloosterman, 2010)

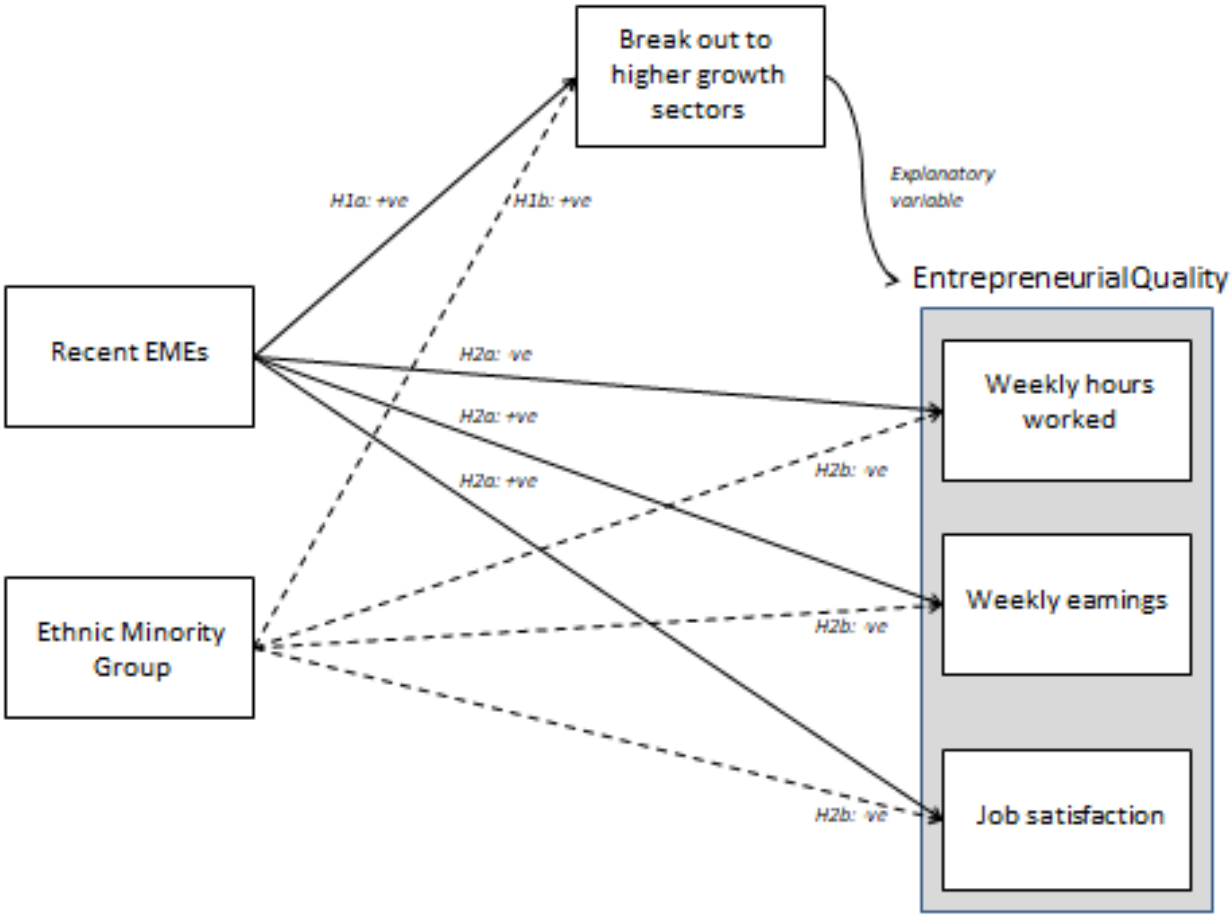

Figure 2: Diagram of hypotheses

Table 1: Ethnic group frequencies for established and recent ethnic minority entrepreneurs

	Ethnic Minority All (Wave 1)	Established EMEs (prior to 2008)	Recent EMEs (2008 – 2016)
White Non-British	922	69	50
South Asians	2579	213	120
Chinese and other Asian	521	38	31
Caribbean and Africans	1749	79	69
Other (Arab and all other groups)	602	45	33
Totals	6373	444	303

Note: sample restricted to those aged 18 to 59 in Wave 1
Source: authors' own calculations from Understanding Society, Waves 1 to 7

Table 2: Heckman two-step multivariate regression analysis

	Selection equation	**Outcome 1**	**Outcome 2**	**Outcome 3**	**Outcome 4**
Dependent variable	Self-employment	Industry sector growth (higher = 1)	Hours per week	Weekly earnings (£s)	Job satisfaction
	Marginal effects	**Marginal effects**	**Coefficient**	**Coefficient**	**Coefficient**
Female	-0.074***	0.102*	-7.325***	-20.36	0.401***
Age (years)	0.010***				
Age squared	-0.00009**				
Long-term work-limiting health condition	-0.001	-0.027	-2.306**	-84.76*	-0.214**
Children (reference group: none)					
One child	0.031***				
Two or three children	0.021**				
Four or more children	0.060***				
Highest education level (reference group: no qualifications)					
Degree	-0.035***	0.221**	-0.139	125.06*	-0.204
Other higher education (HE)	-0.031**	0.168**	-3.504	-110.69	-0.103
Quals aged 18 (A levels and equivalent)	-0.018	0.126**	0.488	-138.05*	0.026
Quals aged 16 (O levels and equivalent)	-0.023	0.022	-0.251	-124.15	-0.469***
Other qualifications	-0.016	-0.004	-1.168	-98.30	-0.174
English not first language	0.008	-0.089**	-2.379**	-166.58***	-0.182*
Ethnicity (reference group: White Non-British/Irish					
South Asian	-0.047***	-0.097**	-2.524	30.39	-0.055
Chinese	-0.029*	-0.141**	-1.220	-151.16*	-0.310
Black African/Caribbean	-0.062***	0.005	-1.565	-54.45	-0.194
Other (Arab and all other groups)	-0.018	0.058	-1.519	-111.46	-0.381**
Migrant arrival (reference group: born in UK)					
1960s or earlier	-0.005				
1970s	-0.006				
1980s	-0.021				
1990s	-0.014				
2000s	-0.047				
Both parents born outside UK	0.015				
Religion (reference group: Christian/Jewish/none)					
Hindu/Sikh	-0.003				
Muslim	0.031**				
Buddhist	0.022				
Home owner	0.032***				
Local area unemployment rate	-0.006***				
Local area non-white population	0.0003				

White collar occupation		0.159***	3.447***	114.64**	0.043
Recent entrepreneur		-0.038	-3.532**	-216.42***	-0.051
Recent entrepreneur in higher growth sector			-5.261***	-22.58	0.008
Intercept			48.728***	502.53***	5.942***
Inverse Mills Ratio			-2.372	31.14	-0.168
LR test Chi-squared		5.05**			
Log likelihood value	-2130.2	-2226.4			
Regression overall significance	333.0***	72.8***	85.0***	99.5***	35.5***
N all	6373	6280	6278	6251	6257
N entrepreneurs		651	649	622	628

Notes: * denotes significance at <0.1 ** at <0.05 *** at <0.01. Column 2 estimated as Heckman selection-corrected probit; LR is a test of the null hypothesis that selection and outcome equations are independent. Columns 3 to 5 estimated as Heckman two-step selection-corrected regressions. Selection equation reported in column 1 is indicative. Precise estimates vary due to differences in available sample size. Sample restricted to ethnic minority (non-white British/Irish) adults aged 18 to 59 in Wave 1 of survey.

Source: authors' own computations from Understanding Society Waves 1 to 7 using Stata version 14.

Table 3: Summary of support for hypotheses

Hypothesis	Support/ Lack of Support
H1a: Recent EMEs are more likely to operate in higher growth sectors than earlier EMEs.	No support Operation in higher growth sectors is associated with gender (being female), education, English language proficiency and occupational status.
H1b: There will be a difference in the participation in higher growth sectors across ethnic minority groups.	Support - South Asians and Chinese less likely to operate in higher growth sectors than the White Non-British comparator group
H2a: Recent EMEs in higher growth industry sectors will be associated with increased entrepreneurial quality.	
lower weekly hours worked	Support – recent EMEs in higher growth sectors work 5.3 hours less per week
increased weekly earnings	No support – no statistical difference for recent entrepreneurs in higher growth sectors
increased job satisfaction	No support – no statistical difference for recent entrepreneurs in higher growth sectors
H2b: There will be differences in entrepreneurial quality across ethnic minority groups.	
lower weekly hours worked	No support – no difference across ethnic minority groups
increased weekly earnings	Limited support - Chinese EMEs earn on average £151 per week less than the White Non-British reference group
increased job satisfaction	Limited support – "other" EMEs indicate lower job satisfaction than the White Non-British reference group

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Appendix

Table A1: Correlation matrix for regression analysis reported in Table 2

	Higher growth	Hours	Earnings	Job satisfaction	Female	Work limiting condition	Degree	Other higher ed	School aged 18	School aged 16	Other quals	English not 1st	South Asian	Chinese	Afro-Caribbean	Other ethnicity	White collar	Recent EME
Higher growth	1.000																	
Hours	**-0.128**	1.000																
Earnings	**0.156**	**0.201**	1.000															
Job satisfaction	0.062	0.046	**0.110**	1.000														
Female	**0.317**	**-0.273**	-0.018	**0.121**	1.000													
Work limiting condition	-0.043	**-0.079**	**-0.086**	-0.075	0.023	1.000												
Degree	**0.334**	0.026	**0.210**	-0.014	0.070	-0.001	1.000											
Other higher ed	**0.104**	**-0.116**	-0.068	0.036	**0.166**	-0.027	**-0.273**	1.000										
School aged 18	0.029	-0.016	**-0.088**	0.071	0.042	-0.007	**-0.292**	**-0.140**	1.000									
School aged 16	**-0.178**	0.005	**-0.079**	**-0.108**	-0.053	-0.038	**-0.322**	**-0.109**	**-0.141**	1.000								
Other quals	**-0.178**	0.002	**-0.074**	-0.027	**-0.085**	0.048	**-0.251**	**-0.118**	**-0.134**	-0.059	1.000							
English not 1st	**-0.263**	-0.047	**-0.154**	-0.074	**-0.107**	-0.018	-0.051	**-0.096**	**-0.158**	-0.004	**0.111**	1.000						
South Asian	**-0.230**	0.045	0.075	0.018	**-0.277**	-0.013	**-0.091**	**-0.106**	-0.009	**0.079**	0.003	**0.090**	1.000					
Chinese	-0.048	0.007	-0.054	-0.046	0.048	0.027	**0.089**	-0.005	-0.049	-0.029	-0.060	**0.081**	**-0.270**	1.000				
Afro-Caribbean	**0.162**	-0.043	-0.014	0.005	**0.103**	-0.040	-0.029	**0.083**	**0.161**	0.015	-0.056	**-0.314**	**-0.447**	**-0.150**	1.000			
Other ethnicity	**0.095**	-0.026	-0.069	-0.067	0.056	0.039	0.027	0.024	-0.070	-0.047	0.002	0.055	**-0.317**	**-0.106**	**-0.175**	1.000		
White collar	**0.365**	**0.084**	**0.192**	0.044	**0.140**	0.005	**0.390**	-0.028	-0.068	**-0.149**	**-0.165**	**-0.190**	-0.036	**0.082**	-0.046	-0.018	1.000	
Recent EME	0.027	**-0.238**	**-0.184**	-0.026	**0.104**	0.061	**0.098**	0.025	0.017	-0.002	-0.057	0.020	-0.071	-0.014	0.069	0.020	-0.018	1.000

Note: Bold denotes statistical significance <0.05
Source: authors' own computations from Understanding Society data using Stata version 14.