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Social Determinants of Labor Market Status of Ethnic Minorities in Britain[*]

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Abstract

The labor market behavior of ethnic communities in advanced societies and the social determinants of labor market outcomes of minority groups are important empirical issues with significant policy consequences. We use detailed micro-data on multiple-origin ethnic minorities in England and Wales to investigate the way different network-based social ties influence individual employment outcomes. We find that the core family structure and contacts with parents and children away (in Britain) increases the probability of self-employment. On the other hand, engagement in organizational social networks is more likely to channel people from ethnic minorities into paid employment. Finally, disaggregating different types of social networks along their compositional characteristics, we find that having ethnic friends is positively associated with the likelihood to be self-employed while integration in mixed or non-ethnic social networks facilitates paid employment among minority individuals. These findings hint at a positive role of social integration on employment opportunities of ethnic communities in host societies.

Keywords: labor market, self-employment, ethnic minorities, social ties
JEL Codes: J7, J15, J21

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1. Introduction

Culturally diverse ethnic communities are a growing feature of advanced economies. Ongoing research is paying more and more attention to understanding the labor market behavior of ethnic minority and immigrant groups and their over-representation in self-employment or certain employment sectors in developed countries (e.g. Clark and Drinkwater, 2000, 2006). Among the most intriguing issues in this debate is the role of social relationships and networks in intermediating employment opportunities of immigrant and ethnic minorities (Munshi, 2003). From a policy perspective, understanding how social and work activities interact is a prerequisite for explaining the integration (or marginalization) process of ethnic minority groups in the host labor market and society as a whole.

Several explanations have been provided to account for labor market choices and outcomes of immigrant and ethnic minority groups in host economies. Local economic conditions (e.g. deprivation), host language fluency and education qualifications have been shown to affect labor outcomes, with variable importance across different ethnic groups (Clark and Drinkwater, 2000, 2006). Discriminatory earnings differentials faced by specific sub-groups of population have been proposed to explain the prospects of ethnic minorities as workers and entrepreneurs (e.g. Clark and Drinkwater, 1998, 2002; Topa, 2001).

Some aspect of ethnic minority culture, religion in particular, have been acknowledged to enhance entrepreneurial ambitions (Clark and Drinkwater, 2006). At the same time, much attention has been paid to the proximity, neighborhood or ‘enclave effect’ (based on shared residence, language or background) in driving labor market

outcomes (e.g. Bayer, Ross and Topa, 2005; Topa, 2001; Clark and Drinkwater, 1998, 2002). The strength and quality of social relationships, however, cannot be captured by the one-dimensional and aggregated enclave effects. This paper contributes to this debate by shedding light on the role of social relationships, such as engagement in familiar, ethnic or non-ethnic social relationships, on labor market outcomes of members of ethnic minority groups.

Social networks have long been acknowledged to play a major role in solving information problems and other frictions in the labor market (e.g. Granovetter 1995; Topa, 2001). This role may be especially pronounced for immigrant minority group members of the same origin in the receiving countries. Indeed, social ties typically build up and develop among 'similar' people (i.e. structural variables[1]) across 'different' dimensions, e.g. age, gender, education, ethnicity, religious affiliation and also economic status (i.e. compositional variables). Networks organized around the origin community have been documented for e.g. Mexican migrants and, more generally, Hispanics in the U.S. (e.g. Munshi, 2003; Holzer 1987).[2]

Yet, much of the existing economic research on social contacts among ethnic minorities has treated social interactions or networks as a static group characteristic, measured in terms of the size of the sub-population group with the same country of origin, nationality, citizenship or race. The division of labor force into ethnic groups with a number of blanket assumptions on the intra and inter-ethnic social structure has led

[1] Structural variables of social networks are essentially ties between actors such as friendship relations, co-workers, same family membership, social club membership and co-ethnics and immigrants of the same origin.

[2] Holzer (1987) found that Hispanic use informal job-search ties through friends or relatives more extensively than other ethnic groups, even though there are only small racial differences in such methods across all age groups.

some scholars to conclude that the effectiveness of informal job contacts is group-specific or driven by cultural factors.[3] However, the perception of social-networks as membership in an ethnic group (based on citizenship, nationality, or parenthood) ignores crucial information on individuals' *choice* (or chance) of belonging to a specific group of people and, more in general, on the actually exercised commitments and relationships to ethnic and social groups within the larger society (Constant, Gataullina and Zimmermann, 2006). Assessing labor market behavior in a way which rules out the diversity of social interactions amongst ethnic groups and the host society may entail misleading explanations of the labor market integration of ethnic minorities. Moreover, from a methodological point of view, the socio-economic characteristics of minorities as a group are not orthogonal to the group's social capital and individual access to various forms of capital through informal non-market interactions (e.g. Metcalf, Modood and Virdee, 1996; Alesina and La Ferrara, 2000; Cox and Fafchamps 2007*).* The exclusion of such networks-related variables from the analysis of ethnicity and labor market may lead to a spurious correlation between ethnic minority environment and employment prospects.

This paper adds to the literature on the differences in labor market prospects amongst ethnic minorities by analyzing the (structure of the) *social process* behind their engagement (or exclusion) in the 'host' labor market. Based on the Fourth National Survey of Ethnic Minorities, a detailed micro-data on ethnic minorities in England and Wales, our analysis provides new empirical evidence on the way network-based social capital influence labor market outcomes of ethnic minority individuals. Specifically, we

3 Battu, McDonald and Zenou (2003) for example, find that job referrals are detrimental for the Pakistanis and Bangladeshis communities. From the latter they infer that Pakistanis and Bangladeshis friendship ties display greater ethnic homophily so that their connections are with their own. If their own exhibit higher unemployment on average individuals in this group may have fewer friends and relative who are employed and can help them attain steady jobs.

investigate the extent to which the structure and composition of social interactions[4] affect employment prospects of ethnic minorities in Britain. Our main contribution is in accounting for the effects of heterogeneous social ties, i.e. family, ethnic and non-ethnic social networks, on labor market outcomes of ethnic minority individuals, i.e. paid-employment, self-employment or unemployment. Our hypothesis is that static and aggregate characteristics, such as those related to ethnicity or neighborhoods, disguise a purposive pattern of social ties that is important in determining labor market outcomes, even more in ethnically and culturally diverse economies (Montgomery, 1991).

To develop the argument, we proceed as follows. In the next section we discuss the theoretical underpinnings of the role of social relationships for labor market outcomes. We then describe the data and provide statistics for the key variables of interest. In the next section we develop the empirical strategy to identify relationships between social and labor market variables. Finally, we discuss the results and conclude.

2. Background literature

There is a wide variety of explanations for why social networks are important in the job market, e.g. assortative matching, information asymmetries and insurance motives, and why they develop along dimensions such as race, ethnicity, religious affiliations, and education (Lin 2001; Granovetter, 1995). A number of studies for a range of countries and sub-group population have emphasized the popularity of using friends and family as sources of employment information (Granovetter, 1974, 1995; Blau and Robins, 1990; Topa, 2001; Bentolila, Michelacci and Suarez, 2004; Wahba and Zenou,

[4] We use the terms social interactions and network interchangeably, even though the latter is used slightly loosely as we do not have detailed information on the network structures and nodes beyond the direct social interactions of the studied individuals.

2005).[5] The empirical evidence reveals that around 50% of individuals obtain or hear about jobs through social networks (Montgomery, 1991; Gregg and Wadsworth, 1996; Addison and Portugal, 2003). This is true even in advanced economies such as the U.S., where Ioannides and Loury (2004) find that informal search methods are a key determinant of labor prospects.

On the empirical ground, the group size is often being used as a relevant measure to capture network influences on the economic outcomes of its members. Yet, social networks may influence the labor market differently depending on their structure and there might be non-linearities, capturing either the solidarity or the competition effect amongst members. Wahba and Zenou (2005) for example show that among the employed, the probability of finding a job through a social network is concave with respect to population density that is a proxy for the size of the social network.[6] Moreover, using social contacts is far from being a homogeneous method of searching for jobs (Granovetter, 1995). Social contacts of different composition, including those based on familial, ethnic, and friendship linkages, have different structural and operational characteristics, which lead to different effects on labor market outcomes.

Overall, analyzing network effects by using the stock of co-ethnics as the relevant network measure is likely to miss important heterogeneity in the way network-based social capital and information flows influence economic outcomes. This is even more significant if ethnic groups are relatively well established in the country of residence as it

[5] According to the literature (e.g. Datcher, 1982, 1983), using friends and relatives is productive not only in finding jobs but also in improving the quality of the match between firms and workers (e.g. longer tenure).

[6] In small groups and close knit, where members are connected with strong ties, evolutionary models (Ellison, 1993) argue that cooperative outcomes and coordination are more likely. On the other hand, Granovetter (1995) argues that it is the weak ties that are crucial in job search. If the small group is made of immigrants just arrived in a new country, they will lack information and will compete to get jobs rather than cooperate.

the case for some ethnic minorities in the Britain (where they mostly started arriving after the Second World War).

Moreover, in some cases the effect of an increase in the total size of the network (i.e. the whole ethnic group) may include both network and 'ethnic identity' effects. The degree of assimilation varies considerably across ethnic groups and individuals (there may be typical jobs for certain ethnic groups, for example). Certain individuals or ethnic groups may be seen as being more economically (in terms of the probability of working, expected earnings and occupational attainment), socially and spatially isolated with respect to the white majority and compared to other ethnic groups (Akerlof, 1997; Akerlof and Kranton, 2000 Battu, McDonald and Zenou, 2003). In essence, their labor market outcomes may 'reflect' their identity or assimilation status, which is determined by a social process and not a static characteristic given by ethnicity.[7] The underlying idea is that labor market behavior and, more in general, work values and identity of ethnic minorities are the result not only of their social environment (neighborhood) and their attachment to their culture of origin (ethnicity, religion, language), but also of a social interaction with the host society.

3. Data and descriptive statistics

The *Fourth National Survey of Ethnic Minorities* used in this paper was carried out between 1993 and 1994 by the Policy Studies Institute to investigate the social and economic conditions of Britain's ethnic minorities. This survey over-samples the ethnic minorities in England and Wales and covers a wide range of topics including family

[7] As pointed out by Manski (2000), the evidence based on aggregate group characteristics (such as ethnicity or population density in our case) may *reflect* the average behavior of the group as a whole instead of explain it.

structures, employment, education, housing, racial harassment, community participation and cultural identities.[8] With respect to labor market status, the dataset provides information on whether individuals have a job and whether they are engaged in either paid employment or self-employment.[9] A total of 5196 individuals of foreign origin, aged 16 and over as well as 2867 Whites were interviewed. Six minority groups of different family origin are identified by the survey, i.e. Caribbeans, Indians, African Asians, Pakistanis, Bangladeshis and Chinese. [10] Due to their small numbers, we merge the African Asian and Indians minority groups, which leaves us with five ethnic minority groups.

Sample means of a variety of key socio-economic characteristics by ethnic group are reported in Table 1. The household size and structure significantly differ across ethnic groups. Most of minority individuals are foreign born (e.g. half of Caribbean and 90% of Bangladeshis) arriving as migrants on average 15 years prior to the survey. Overall, about 20% of each ethnic group (one third of Caribbean) have children over 16 years old living away from home. About one to two fifths of members of ethnic minorities have parents living abroad (43% in the Chinese community). The incidence of having parents living in Britain varies across ethnic groups significantly, with the Carribeans trailing the Whites at the top and the Bangladeshis at the bottom. The incidence of living with one or both parents is the highest among the Pakistanis. There is a wide variation across groups as to

[8] Due to the presence of very few minorities, interviews were not conducted in Scotland and Northern Ireland. See Smith and Prior (1996) for details on sampling procedures.
[9] For those engaged in other activities, it is possible to distinguish between unemployment and out-of-labor-force states (or inactivity). The latter category, which includes people who are retired, housewives, students, on temporary or permanent sickness leave, will be excluded from the working age sample.
[10] There is a large omitted group in the dataset – Black Africans.

whether their education was acquired abroad or domestically. While around 80% of the Pakistanis and Indians own their houses, less than half of the Bangladeshis do so.

We also observe the relative variability of neighborhood (ward) characteristics across ethnic groups. The Pakistanis, for example, live in areas where the density of own ethnicity is between 5 and 10% on average, the unemployment rate is in between 15 and 20% and more than a half of the ward population own their house. The Chinese, on the other hand, typically live in wards with less than 2% of coethnics, unemployment rate between 10 and 15%, and the prevalence of house ownership between 60 and 70%.

Table 2 presents average labor outcomes of persons belonging to different ethnic groups. There is a relative variation in the employment outcomes across individual ethnic groups. In particular unemployment rate is very low amongst Chinese, followed by Indians, Caribbeans, Pakistanis and Bangladeshis. Conversely, the self-employment rate is highest for Chinese and Pakistanis, followed by Indians, Bangladeshis and Caribbeans.

Also white majority individuals report a significant self-employment rate (15%), which is higher than in case of Caribbeans (8%), for example. Thus, the common wisdom that in many developed countries ethnic minorities are disproportionately represented in self-employment disguises significant variation between different ethnic groups. Not surprisingly, we observe ethnic gaps in labor market outcomes of females, with employment rates (the combination of paid-employment and self-employment) much higher for Chinese, Caribbeans, Indians and Whites and lower for Bangladeshis and Pakistanis.

Table 3 reports mean individual and neighborhood variables across employment status of ethnic minority individual in working age (i.e. males aged 16-64 years, and

females aged 16-59). We observe a significant variation of many socio-economic characteristics. In particular, most of self-employed individuals are married, have larger households, arrived from abroad more than 19 years prior to the survey, 30% of them having parents abroad, overall less educated than employees but with a higher percentage of house ownership. Moreover, self-employed appear to be settled in less ethnically concentrated ethnic neighborhood than paid-employed or unemployed, which goes against the 'enclave effect' argument proposing positive effects of ethnic concentration (as already argued by Clark and Drinkwater, 2002). As expected, in contrast, unemployed seem to live in areas where the ward unemployment rate is higher (between 15 and 20%), household ownership is lower and social housing density higher. There is no significant difference between paid-employees and self-employees with respect to the latter variables, though.

Table 4 reports the distribution of structural characteristics of individual social networks across ethnic groups, i.e. 'group membership' and 'family contacts'.[11] We also distinguish some compositional characteristics of social ties, that is the ethnic or non ethnic composition and contacts with relatives abroad rather than in Britain.[12]

The Caribbeans show the highest propensity to belong to a formal group or organization (which can be either community work or club membership) with an average group membership rate of over 36% followed by the Chinese, Indians, Pakistanis and Bangladeshis. On average, almost 10 % of organizations are set up specifically for the

[11] Specifically, interviewees are asked if, in the last year, they have you done any unpaid voluntary community work in some organizations or clubs; how often they are in contact (via visits. phone calls, mails) with parents and relatives living far away (in Britain or abroad). In case of positive answers they are also asked f these social contacts occur specifically with people of same ethnic origin or not.

[12] We distinguish 2 types of group membership but the 3 categories are not mutually exclusive at individual level (i.e. individual can belong to more than one at the same time); this will be considered in the inferential analysis.

same ethnic group of the individual member, while 11% have a mixed composition and less than 7% are non-ethnic.

Overall, the incidence of family contact, including seeing, speaking on the phone, and corresponding with them in past four weeks, is substantial across all ethnic groups in that, on average, more than one third of each ethnic population has contacts with parents and relatives living away. Chinese and Pakistanis have the highest rate of contacts with relatives living abroad (35% and 25% respectively) while the remaining ethnic groups report an incidence around or below 20%.

Table 5 presents the incidence of social ties and their characteristics by individual employment status in working age ethnic minority population. Membership in social networks is significantly higher amongst employees, followed by self-employed and unemployed. Most of social network membership has an ethnic or mixed focus. In particular, almost 12% of paid employed take part in organizations specifically set up for people of the same ethnicity, while more than 15% of them belong to ethnically mixed organizations. It is also worth noting that almost 10% of unemployed take part in ethnic organizations, while only 4% belong to non-ethnic ones. Family contacts seem to be important for all groups, especially for employed persons, but about one forth of both paid-employed and self employed maintain contact with relatives abroad, while less than 15% of unemployed do so.

Eventually, Table 6 shows the distribution of social ties across different ethnically concentrated neighborhoods. Interestingly, the incidence of formal group membership decreases as the ward density of ethnic minorities increases. In particular, participation in organizations or clubs not devoted to a specific ethnic group is much higher (21% of the

population) in less ethnically concentrated (segregated) neighborhoods than in more concentrated ones. Conversely, there is relatively low heterogeneity in having family contacts across different neighborhood, supporting the idea that family ties are driven by other factors other than neighborhood characteristics.

As a rule, we observe considerable variation of labor market outcomes and involvements in social relationships of different nature across ethnic groups. The empirical analysis presented below aims at disentangling the roles of different forms of social capital for labor market outcomes of ethnic minorities in Britain.

4. The empirical strategy

Given our key dependent variable measuring three possible labor market outcomes, i.e. paid employment, self-employment, and, as a benchmark, unemployment, our baseline regression analysis is based on the multinomial probabilistic dependent variable regression model of the Logit type

$$P\left(Y = j\middle|\overline{X}\right) = \frac{\exp\left(\beta_j'\overline{X}\right)}{\sum_{j=0}^{J}\exp\left(\beta_j'\overline{X}\right)}$$

where $P\left(Y = j\middle|\overline{X}\right)$ is the probability of observing $j \in \{0, J\}$ outcome of the dependent variable Y conditional on the vector $\overline{X}$ of individual characteristics and the socioeconomic context variables described in the previous section. β_j is the vector of regression coefficients to be estimated by the Maximum Likelihood method, and we impose the standard normalization $\beta_0 = 0$.

The dependent variable Y captures the labor market status of the individual: paid employment, unemployment and self-employment. Besides the key variables of interest, the measures of family contacts, social capital, religion, ethnicity, and migration history, the vector of independent variables $\overline{X}$ includes indicators of the household and family structure, individual demographics, education, ward ethnic densities, unemployment, and regional controls.

The dataset used in our analysis contains very detailed information on ethnic minority members with respect to both their family structure in Britain and abroad as well as their extra-familiar social ties. We measure strong social ties through information about family members cohabiting (i.e. parents or children) in the respondent's household, contacts (through telephone, email or postal mail) with family members living away in Britain and with relatives living in the country of origin. As for extra-family or weak social ties, we use available information on individual voluntary membership in club or organizations, distinguishing those devoted to the own ethnic group and non-ethnically characterized.[13]

For the regression analysis, we select working age individuals, that is, older than 16 and younger than 64 (males) and 59 (females), participating in the labor market. Additionally, we drop the observations with missing observations on the regressors. This leaves us with 1321 observations.

Endogenous network formation and the ensuing problem of reverse causality are important empirical issues that need to be tackled in the analysis of the link between

[13] The dataset we use includes questions such as: "Is this club/organization set up specifically for people of a specific ethnicity?", "In your work with this organization, are you mainly in contact with people of a specific ethnic origin?". It should be also noted that we exclude trade unions from these associations or organizations, as they apply for paid employees only.

social relationships and labor market outcomes. Social networks may be affected by labor market outcomes, in that labor choices and labor market status may influence social interaction and social relationships by creating some and limiting the time available for the maintenance of other interaction opportunities. Yet, we can consider that the family structure and family relationships, especially the *existence* of such contacts between children and parents (as measured by our family contact variables), are largely exogenous with respect to individual labor market outcomes. Conversely, involvement in social clubs and voluntary organizations may be more dependent on the type of labor market activity of the individual. Thus, we apply the instrumental variable method to mitigate the potential endogeneity bias and identify how work and social activities interact among ethnic minorities in the British labor market.

5. The results

We summarize the estimation results in Table 7. Columns 1 and 2 report regression results using the baseline model with standard demographic controls including household and family structure as well as individual characteristics, educational variables, regional controls and neighborhood characteristics such as own ethnic group density and unemployment rate at ward level.[14]

Overall, the structure of the core family importantly affects the likelihood of being in paid employment and self-employed. The number of household members is positively associated with the likelihood of being self-employed, suggesting that the latter

[14] Final specification have been adopted after performing several robustness checks. Among other variables initially included in the analysis there are self-reported episodes of discrimination and harassment, which turned out not to significantly affect labor market choices.

may be a way to create or control family labor.[15] Being married increases the likelihood of being in paid employment and even more so of being self-employed. This effect is not significantly different for men and women. Having minor children living in the household reduces the likelihood of being in paid employment or self-employed. This effect is particularly significant for children aged 0 to 4. Cohabiting with parents is negatively associated with employment probability, but the effect is significant only if both parents are cohabiting.

Concerning educational attainments, secondary education and especially being in possession of a higher university degree significantly increase the chances of being in paid employment. We find a significant penalty for achieving these educational levels abroad.

One of the traditional variables measuring (potential) ethnic and social capital of ethnic minorities is the share of ethnic minorities in the region. Results are in line with existing evidence (Clark and Drinkwater, 2000) that the share of one's own ethnic group in the ward has a significant negative effect on his or her self-employment likelihood. We find similar but somewhat less significant negative effects on paid employment.

Individual and ward-level controls play the expected role.[16] Age increases the employment likelihood in paid or self- employment at a decreasing rate. Being a female has a positive effect on paid employment, most probably due to the selection of women out of participation rather than going into unemployment. Health status plays a positive but insignificant role, whilst home ownership, as a main control for household wealth

[15] The gender differences concerning the slopes of these effects are by and large insignificant, excepting marginally significant result that the negative effect of children aged 0 to 4 is smaller on mothers' than fathers' self-employment likelihood. Not reported.
[16] These results are not reported; available upon request.

position,[17] is positively related to both paid employment and self- employment likelihood.[18] At ward level, unemployment rates are negatively associated with individual employment probabilities, in particular significantly decreasing the propensity to be self-employed.

In columns 3 and 4 we amend the baseline model with our key variables of interest – the measures of family ties and social capital. Estimation results show that having contacts with parents or children living outside the household (but in Britain) is positively and significantly associated with the probability of being self-employed but has no such effect on paid employment. This result is in line with the hypothesis that strong social ties (to family members) do not significantly intermediate opportunities in paid employment, but they may be important for making the way to self-employment.

On the other hand, our social capital variable, measuring whether the respondent has been engaged in voluntary work in any organization or is a member of a club, is strongly positively related to the probability of paid employment, whilst the effect on self-employment proves insignificant. This result is in line with the existing evidence of the importance of (weak) social ties in intermediating opportunities in paid employment.

Since ethnicity and migration background may interfere with the links between social relationships and labor market outcomes and may affect employment opportunities on their own, columns 5 and 6 report the results of the regression model amended with a range of indicators of ethnicity and migration history. Clearly, these variables significantly improve the explanatory power of the regression model and many of them

[17] See Clark and Drinkwater (2002).
[18] This may be related to larger capacity of home owners to overcome credit imperfections when becoming self-employed, but it may also be due to the reverse channel through which the more affluent (employed) individuals are more likely to own their homes.

are significant. Taking Indians ethnic origin as the benchmark, being of Pakistanis ethnic origin decreases and of Chinese ethnic origin increases the probability of paid employment and self-employment. Caribbeans face such penalty in self-employment but not paid employment. On the other hand, being religious does not seem to affect employment opportunities significantly. Concerning years since migration, we find generally insignificant effects of experience in the host country as measured vis-à-vis the benchmark individual born in the UK. However, having at least 30 year experience in the host country exhibits positive effects, significant at 5.1% significance level. In line with previous evidence, weak command of English has significant negative effects on the probability of paid employment and self-employment.

While the significance of contacts with parents and children away for self-employment likelihood slightly decreases with inclusion of ethnicity and migration history variables, the evidence for the significant role of social capital on paid employment probability even strengthens. An important observation is that the significance of ward density of own ethnic minority becomes entirely insignificant for paid employment and less and less significant for self-employment with inclusion of ethnicity and migration history variables. In particular, the role on self-employment of ward density of own ethnic minority becomes insignificant in the ranges between 5 and 25 percent, but remains significantly negative in the range between 2 and 10 percent and above 25 percent. This non-linearity is probably the result of the interaction between the (negative) competition effect and the (positive) ethnic enclave effects.

While the results discussed above provide evidence for strong associations between social relationships and labor market outcomes, their causal interpretation

requires further investigation. The structure of and contacts with the family are largely determined outside the labor market and thus these variables are not particularly problematic in this respect. However, in light of the arguments in section 4, the significant link between social capital and the probability of paid employment does require further analysis to permit its causal interpretation.

We tackle this issue in the Probit binary choice model with endogenous regressors using contacts with parents and children abroad as the instrumental variable.[19] The key to such approach is a well-behaved instrumental variable. We use the measure of contact with parents and children over 16 who live abroad, including seeing, speaking on the phone, and corresponding with them in past four weeks, as the instrument for social capital. The underlying assumption that we make is that such contacts intermediate social relationships in the host country and thereby increase the likelihood of one's engagement on social networks such as clubs and voluntary organizations, while not being directly related to labor market outcomes. Indeed ethnic communities are increasingly transnational in their nature and people abroad may constitute social nodes that intermediate social relationships to other relatives, co-ethnics, and natives in the host country. In contrast to having active linkages with relatives in Britain, though, cross-border social contacts are unlikely to directly create paid employment opportunities - unless via local social networks.[20] Finally, the contact between parents and children is

[19] The choice variable in the binary regression takes the value "1" if the individual is employed (in paid employment only) and "0" if he or she is unemployed. The slightly lower number of observations in the IV probit model is due to some missing values on contacts with children and parents abroad. Results of social capital effect on self-employment remain insignificant also in the binary choice model and therefore are not reported.

[20] It could be argued that such cross-border contacts are able to alleviate credit constraints and therefore foster employment outcomes. Yet, while this is very unlikely in case of paid-employment outcomes, it should be noted that in general most of immigrants or ethnic minority individuals with contacts with family abroad are likely to remit money to their countries of origin instead of receiving them.

one of the strongest social relationships whose existence is typically exogenous to labor market outcomes.

Column 7 reports the results of a simple probit model for the paid employment status; most of the results mimic those obtained for paid employment in the multinomial analysis. In column 8 the potential endogeneity of social capital is accounted for. The results confirm that social capital increases the likelihood of paid employment for ethnic minorities. The coefficient on social capital even increases and, although its standard deviation increases as well, it remains strongly significant. The first stage regressions show that our instruments are significant predictors of social capital.[21]

Overall, our results on the strong family and social network effects one paid employment and self-employment probabilities are robust to a number of alternative specifications and are informative on the social determinants of labor market outcomes amongst ethnic minority groups in a developed labor market. In particular, we show that employment opportunities of ethnic minorities in Britain are related to social capital variables beyond what can be captured by ethnic density variables.

In order to further explore the role of qualitative characteristics of social relationships on employment, we replicate columns 3 to 6 of Table 7, distinguishing social capital as involving ethnic, non-ethnic, and mixed social networks and English and non-English friendship ties. Table 8 reports the family contact, social capital and its ethnic nature, religion, ethnicity, and migration history variables.[22] Given the importance of formal group membership (e.g. associations or clubs) in increasing the probability to be in paid employment and the potential role of such relationships with co-ethnics and the

[21] Contact with parents abroad is positive and significant at 1% significance level; contact with children over 16 abroad is positive but nonsignificant.
[22] The results for the remaining variables remained robust to this modification (not reported).

native population, we investigate whether the ethnic composition of this form of social capital matter in shaping labor market status. Distinguishing ethnic, mixed, and non-ethnic formal group membership (social capital), we find that it is mixed and non ethnic social capital that facilitates opportunities in paid employment. This finding hints at a positive role of social integration on opportunities in paid employment.[23]

Finally, we explore the effects of whether individuals speak to friends in English or some other language to measure the effects on paid employment and self-employment probabilities of the degree of integration as measured by this variable. While we find a negative non-significant effect of speaking non-English on the likelihood of paid employment, the effect on self-employment is positive and strongly significant. Assuming that non-English friendships indicate embeddedness in ethnic social relationships, this finding suggests that ethnic social capital importantly facilitates opportunities and success in self-employment.

6. Conclusions

That social contacts are some of the key determinants of economic success is a widely accepted notion. To measure how different types of social contacts affect the labor market status of immigrants participating in the labor market is the key objective of this paper. Considering the structure of the core family, social contacts with the extended family and friends as well as their qualitative measures, and social capital measured by involvement with clubs and voluntary organizations, several conclusions can be drawn.

[23] It also suggests that the endogeneity issue is not affecting our results, since the networking-working tradeoff should be invariant with the ethnic characteristics of social networks.

First, social relationships do matter. In accord with the previous literature, we find that the structure of the core family, including children, spouses, and parents living with the respondent, significantly affect the likelihood of being in paid employment or self-employed. Contacts with parents or children away significantly affect one's probability of being self-employed, but only if these contacts are in Britain. No such effects are found for paid employment.

Remarkably, engagement in voluntary work in any organization or membership in a club, as captured by our measure of social capital, significantly affects the likelihood of respondent's being in paid employment but not self employment. This result is robust to different estimation strategies and to potential endogeneity of social capital.

Our results thus indicate that weak ties, measured by engagement in voluntary organizations or clubs, facilitate opportunities in paid employment. On the other hand, strong ties, measured by contacts with parents and children outside the household, intermediate self-employment opportunities.

Second, the qualitative characteristics of social contacts do matter. Given the heated debate about social integration of immigrants, it is informative to investigate how the ethnic character of social capital matters for immigrants' economic success. Three measures of ethnic character of social ties are investigated in this paper: language spoken to friends, the ethnic character of voluntary work and club membership, and, measuring potential ethnic capital, the share of minority population in the ward. We find evidence that having ethnic friends (spoken to in a language other than English) is positively associated with the likelihood of self-employment. On the other hand, it is integration in mixed or non-ethnic clubs and voluntary organizations that facilitates opportunities in

paid employment. This finding suggests that ethnic communities are dependent on the contact with majority population to be informed about opportunities in paid employment. However, it is the support of local ethnic communities that facilitate self-employment. As concerns minority shares, we find that the share of own minority is negatively correlated with the probability of self-employment, probably signifying the prevalence of the competition effect.

Our finding that mixed and non-ethnic social networks are likely to actively channel their members into paid employment implies that policy measures aiming at social integration of ethnic minorities can be expected to yield better opportunities in paid employment for ethnic minorities. On the other hand, family capital and ethnic capital in terms of friendships with co-ethnics seem to breed opportunities in self employment. Therefore, immigration policies facilitating family reunification, thereby increasing the number of strong ties in Britain, may facilitate ethnic entrepreneurship and self-employment.

Further investigation into the observed interactions is necessary. It would be most informative to investigate the studied relationships in a longitudinal dataset, permitting a more precise identification of causal effects. Even in a cross section, though, we disentangle the various ways social ties, and their characteristics, significantly affect the labor market success of ethnic minorities in the UK, hinting at a positive role of social integration on employment outcomes.

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Tables

Table 1: Means of selected socio-economic characteristics by ethnic group

	Caribbean	Pakistanis	Bangladeshis	Indians	Chinese	Whites
Household and family structure						
Household size	3.05	5.44	6.14	4.32	3.69	2.80
Married	47%	71%	66%	70%	57%	66%
Having any children	78%	77%	83%	80%	74%	68%
Living with children	50%	63%	67%	62%	54%	40%
Having children away	33%	17%	15%	22%	16%	40%
Parents in Britain	37%	19%	15%	29%	24%	50%
Parents abroad	27%	33%	31%	21%	43%	2%
Living with one parent	13%	7%	8%	8%	4%	5%
Living with both parents	12%	27%	20%	22%	16%	9%
House owner	55%	81%	47%	86%	55%	71%
Education						
Education in Britain	60%	32%	24%	41%	47%	64%
Education overseas	8%	20%	17%	28%	27%	2%
No education	31%	48%	59%	31%	26%	34%
Secondary school	27%	32%	31%	33%	37%	19%
Non-school certificate	21%	4%	1%	7%	7%	23%
University degree	2%	7%	4%	13%	9%	4%
Master/PhD	1%	2%	2%	4%	5%	1%
Other or diploma	17%	7%	3%	12%	16%	19%
Religion, ethnicity and migration.						
Foreign born	52%	75%	90%	77%	81%	-
Years since arrival	15.50	14.80	14.80	16.32	13.40	-
Speaking non-English with friends	8%	35%	44%	36%	31%	0%
Ward density of own ethnic group (range)	5-9.99%	5-9.99%	5-9.99%	5-9.99%	<1.99%	-
Ward unemployment rate (range)	15-20%	15-20%	>20%	10-14.99%	10-14.99%	10-14.99%
Ward owner occupier household density (range)	50-59.99%	50-59.99%	33-49.99%	60-69.99%	50-59.99%	60-69.99%
Ward tenure- social housing density (range)	25-32.99%	10-19.99%	25-32.99%	10-19.99%	10-19.99%	10-19.99%
Observations (unweighted)	1,205	1,232	598	1,947	214	2,748
Frequency distribution	20%	11%	4%	26%	5%	35%

Table 2: Average labor outcomes of ethnic groups by gender

		Caribbean	Pakistanis	Bangladeshis	Indians	Chinese	Whites	Total
Male	Paid-employed	49%	29%	34%	46%	50%	59%	48%
	Self-employed	8%	15%	7%	20%	21%	15%	15%
	Unemployed	24%	26%	30%	14%	7%	11%	17%
	Self-emp. rate (as % of those employed)	13%	34%	18%	31%	30%	20%	24%
Female	Paid-employed	56%	14%	5%	44%	48%	56%	46%
	Self-employed	2%	2%	1%	6%	17%	5%	5%
	Unemployed	11%	9%	5%	6%	1%	4%	7%
	Self-emp. rate (as % of those employed)	3%	13%	11%	11%	26%	8%	9%
Total	Paid-employed	53%	22%	20%	45%	49%	57%	47%
	Self-employed	4%	9%	4%	13%	19%	10%	10%
	Unemployed	17%	18%	18%	10%	4%	7%	12%
	Self-emp. rate (as % of those employed)	8%	28%	17%	23%	28%	15%	17%

Notes: Sample of working age population (males aged 16 to 64 years, females aged 16-59).

Table 3: Individual and neighborhood characteristics by employment status

	Paid-employed	Self-employed	Unemployed	Total
Household and family structure				
Household size	3.8	4.4	4.3	4.0
Married	68.0%	87.8%	49.5%	67.2%
Having any children	78.1%	86.8%	71.4%	78.1%
Living with children	59.0%	73%	53.3%	59.9%
Having children away	19.1%	18.6%	20.2%	19.20%
Parents in Britain	35.5%	37.4%	28.2%	34.3%
Parents abroad	32.8%	30.00%	20.6%	29.8%
Living with one parent	9.4%	6.2%	14.1%	9.9%
Living with both parents	15.7%	9.3%	29.0%	17.6%
House owner	78.4%	86.1%	48.7%	73.5%
Education				
Education in Britain	55.7%	38.9%	44.2%	50.9%
Education overseas	22.4%	30.3%	13.6%	21.8%
No education	21.8%	30.6%	41.7%	27.2%
Secondary school	30.0%	30.4%	26.2%	29.3%
Non-school certificate	15.0%	9.7%	11.5%	13.5%
University degree	10.2%	15.1%	6.9%	10.2%
Master/PhD	4.3%	2.8%	1.4%	3.5%
Other or diploma	18.4%	10.7%	11.4%	15.9%
Religion, ethnicity and migration.				
Foreign born	66.1%	84.8%	60.4%	67.70%
Years since arrival	14.9	19.5	13.5	15.3
Having religion/church	83.2%	82.0%	80.9%	82.5%
Speaking non-English with friends	22%	38%	28%	26%
Ward density of own ethnic group	5-9.99%	2-4.99%	5-9.99%	5-9.99%
Ward unemployment rate	10-14.99%	10-14.99%	15-20%	10-14.99%
Ward owner occupier household density	60-69.99%	60-69.99%	50-59.99%	60-69.99%

Notes: Sample of working age population (males aged 16 to 64 years, females aged 16-59).

Table 4: Incidence of social network variables by ethnic group

	Caribbean	Pakistanis	Bangladeshis	Indians	Chinese
Network membership (clubs and voluntary organizations)	36.1%	20.0%	16.0%	23.4%	25.1%
Compositional characteristics:					
Non-ethnic network	10.3%	3.2%	3.4%	4.9%	14.4%
Mixed network	18.1%	10.0%	7.5%	9.1%	1.7%
Ethnic network	10.6%	8.0%	5.9%	10.4%	8.9%
Family contact away	52.6%	33.6%	24.9%	37.2%	47.8%
Compositional characteristics:					
Family contact abroad	21.0%	25.4%	16.8%	17.8%	35.4%
Family contact domestic (includes living with parents &/or children)	75.5%	78.0%	78.9%	83.5%	69.4%

Table 5: Incidence of social network variables by employment status

	Paid-employed	Self-employed	Unemployed	Total
Network membership (clubs and voluntary organizations)	34.3%	25.1%	21.5%	30.1%
Compositional characteristics:				
Non-ethnic network	9.2%	6.0%	4.4%	7.7%
Mixed network	15.5%	9.9%	9.2%	13.3%
Ethnic network	11.7%	9.6%	9.9%	11.0%
Family contact	49.0%	51.2%	34.6%	46.4%
Compositional characteristics:				
Family contact abroad	25.0%	24.9%	14.2%	22.7%
Family contact domestic (including living with parents &/or children)	76.4%	78.4%	80.1%	77.5%

Notes: Sample of working age population (males aged 16 to 64 years, females aged 16-59).

Table 6: Distribution of social network characteristics by ward ethnic concentration

	Ward density of all ethnic minorities						
	up to 4.99%	*5-9.99%*	*10-24.99%*	*25-32.99%*	*33-49.99%*	*50-74.99%*	*75% or more*
Network membership (clubs and voluntary organizations)	42.3%	27.0%	24.9%	28.1%	24.7%	20.1%	25.6%
Compositional characteristics:							
Non-ethnic network	20.9%	12.6%	5.4%	3.2%	3.2%	1.6%	7.6%
Mixed network	14.1%	7.0%	11.1%	11.3%	13.8%	10.9%	18.0%
Ethnic network	9.8%	9.4%	9.7%	13.9%	10.2%	8.2%	0.0%
Family contact	50.5%	49.8%	39.2%	42.0%	43.7%	35.3%	48.7%
Compositional characteristics:							
Family contact abroad	24.4%	25.0%	22.4%	21.4%	19.0%	16.0%	43.4%
Family contact domestic (incl. living with parents &/or children)	73.3%	78.3%	78.9%	81.7%	79.8%	80.7%	76.4%

Notes: Sample of working age population (males aged 16 to 64 years, females aged 16-59).

Table 7. Social determinants of labor market outcomes – Results

	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
	Multinomial model		Multinomial model		Multinomial model		Probit	IV Probit
	Paid-emp.	Self-emp.	Paid-emp.	Self-emp.	Paid-emp.	Self-emp.	Paid-emp.	Paid-emp
Household structure								
Household size	-0.062	0.190*	-0.054	0.216**	0.000	0.217*	0.001	0.025
	(1.12)	(2.38)	(0.97)	(2.66)	(0.00)	(2.36)	(0.01)	(0.70)
Married	1.240**	2.309**	1.299**	2.284**	1.334**	2.298**	0.845**	0.876**
	(4.48)	(5.18)	(4.64)	(5.08)	(4.50)	(4.75)	(4.76)	(3.95)
Married x Female	-0.398	-0.816	-0.42	-0.837	-0.273	-0.926	-0.258	-0.341
	(1.09)	(1.3)	(1.15)	(1.32)	(0.70)	(1.36)	(1.17)	(1.66)
Own child cohabiting 0-4	-0.730**	-1.628**	-0.693**	-1.676**	-0.709**	-1.718**	-0.448**	-0.377
	(3.23)	(5.12)	(3.05)	(5.23)	(2.96)	(4.99)	(3.22)	(1.65)
Own child cohabiting 5-11	-0.405	-0.479	-0.446	-0.491	-0.347	-0.377	-0.216	-0.188
	(1.75)	(1.61)	(1.90)	(1.63)	(1.39)	(1.15)	(1.49)	(1.40)
Own child cohabit. 12-15	-0.449	-0.675*	-0.479	-0.683*	-0.349	-0.536	-0.152	-0.225
	(1.81)	(2.13)	(1.91)	(2.13)	(1.30)	(1.54)	(0.98)	(1.51)
Own child cohabiting >16	0.043	-0.277	0.001	-0.186	0.008	-0.292	0.008	-0.122
	(0.16)	(0.79)	(0.01)	(0.52)	(0.03)	(0.76)	(0.05)	(0.71)
One parent cohabiting	-0.092	-0.478	-0.067	-0.252	-0.143	-0.347	-0.121	-0.089
	(0.35)	(1.17)	(0.25)	(0.60)	(0.50)	(0.77)	(0.71)	(0.54)
Two parents cohabiting	-0.666*	-1.030*	-0.722*	-0.629	-0.894**	-0.844	-0.491*	-0.510**
	(2.21)	(2.21)	(2.25)	(1.30)	(2.63)	(1.61)	(2.50)	(2.64)
Education								
Secondary	0.968**	0.546	0.914**	0.307	0.483	0.159	0.198	0.019
	(3.82)	(1.53)	(3.53)	(0.83)	(1.69)	(0.37)	(1.20)	(0.09)
Non-school certificate	1.189**	0.184	1.078**	0.047	0.641	0.252	0.312	-0.099
	(4.04)	(0.43)	(3.55)	(0.10)	(1.91)	(0.51)	(1.65)	(0.30)
First degree	0.611	0.789	0.468	0.668	0.059	0.463	-0.07	-0.436
	(1.80)	(1.81)	(1.36)	(1.50)	(0.16)	(0.92)	(0.31)	(1.45)
Higher university degree	2.483**	0.967	2.268*	0.684	1.808	0.28	0.955*	0.344
	(2.74)	(0.89)	(2.49)	(0.62)	(1.94)	(0.24)	(1.98)	(0.51)
Diploma, other, can't say	0.947**	0.007	0.714*	-0.19	0.289	-0.635	0.139	-0.296
	(3.48)	(0.02)	(2.5)	(0.45)	(0.91)	(1.31)	(0.77)	(0.80)
If education overseas	-0.529*	-0.219	-0.550*	0.049	-0.419	-0.064	-0.154	-0.131
	(1.96)	(0.63)	(1.97)	(0.14)	(1.24)	(0.14)	(0.78)	(0.71)
Ward ethnic densities								
2-5% own group	-0.446	-1.746**	-0.461	-1.795**	-0.446	-1.481**	-0.192	-0.18
	(1.50)	(4.37)	(1.53)	(4.45)	(1.38)	(3.38)	(1.03)	(1.03)
5-10% own group	-0.456	-1.695**	-0.448	-1.759**	-0.166	-1.124**	-0.068	-0.017
	(1.62)	(4.54)	(1.58)	(4.63)	(0.53)	(2.64	(0.37)	(0.09)
10-15% own group	-0.333	-1.453**	-0.337	-1.444**	0.019	-0.953*	0.042	0.013
	(1.04)	(3.37)	(1.04)	(3.32)	(0.05)	(1.98)	(0.21)	(0.07)
15-25% own group	-0.709*	-1.414**	-0.653*	-1.515**	-0.401	-0.968*	-0.217	-0.122
	(2.22)	(3.29)	(2.03)	(3.49)	(1.12)	(1.97)	(1.04)	(0.57)
25-33% own group	-0.158	-1.703**	-0.051	-1.719**	0.326	-1.330*	0.274	0.41
	(0.41)	(3.15)	(0.13)	(3.16)	(0.77)	(2.26)	(1.10)	(1.71)
>33% own group	-0.967*	-3.230**	-0.916*	-3.267**	-0.326	-2.731**	-0.147	-0.063
	(2.30)	(4.32)	(2.18)	(4.37)	(0.70)	(3.46)	(0.54)	(0.23)

Family contact								
Contact with parents or children away in Britain			-0.061	0.731**	-0.194	0.630*	-0.135	-0.11
			(0.29)	(2.63)	(0.86)	(2.07)	(1.04)	(0.91)
Social capital								
Network member (clubs & voluntary organizations)			0.660**	0.101	0.718**	0.356	0.446**	1.604*
			(3.35)	(0.36)	(3.48)	(1.22)	(3.75)	(2.01)
Religion, ethnicity and migration history								
Religious					0.44	0.592	0.257	0.139
					(1.65)	(1.38)	(1.64)	(0.83)
Caribbean					-0.019	-1.303**	0.044	-0.046
					(0.07)	(3.05)	(0.27)	(0.29)
Pakistanis					-1.277**	-1.432**	-0.766**	-0.758**
					(4.33)	(3.70)	(4.49)	(3.89)
Bangladeshis					-0.476	-1.468*	-0.252	-0.167
					(1.17)	(2.32)	(1.05)	(0.67)
Chinese					2.210**	3.226**	1.313**	1.065*
					(2.97)	(3.94)	(3.11)	(2.18)
Arrived <2 years ago					-0.096	-2.055	0.014	0.135
					(0.09)	(1.08)	(0.02)	(0.25)
Arrived 2-5 years ago					0.976	0.168	0.436	0.693*
					(1.63)	(0.18)	(1.28)	(2.04)
Arrived 5-10 years ago					0.594	0.549	0.543	0.581*
					(1.25)	(0.81)	(1.91)	(2.11)
Arrived 10-20 years ago					-0.049	0.281	-0.005	0.067
					(0.16)	(0.62)	(0.03)	(0.37)
Arrived 20-30 years ago					0.128	0.453	0.065	0.103
					(0.45)	(1.04)	(0.39)	(0.66)
Arrived >30 years ago					0.792	1.168*	0.451	0.623**
					(1.94)	(2.11)	(1.94)	(2.87)
English language ability								
Fairly well					-0.846**	-0.018	-0.472**	-0.421*
					(3.10	(0.05)	(2.95)	(2.12)
Slightly					-1.085**	-1.274**	-0.631**	-0.549*
					(3.08)	(2.58)	(3.07)	(2.11)
Not at all					-4.260**	-2.427*	-2.232**	-2.114**
					(3.88)	(2.32)	(4.10)	(3.46)
Constant	-5.310**	-8.739**	-5.493**	-9.169**	-5.638**	-8.233**	-3.127**	-2.829**
	(3.84)	(4.28	(3.92	(4.45	(3.74)	(3.57)	(3.52)	(3.10)
Individual controls[a]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ward controls[b]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1321	1321	1321	1321	1321	1321	1139	1122
Pseudo R^2	0.25	0.25	0.26	0.26	0.32	0.32	0.32	532.5[c]

Notes: [a] Include age, age squared, female dummy, good subjective health and house ownership. [b] Include unemployment density at ward level, dummies for geographic areas and conurbation of living in the UK. Absolute value of z statistics in parentheses. * significant at 5%; ** significant at 1%. [c] Wald χ^2 statistics with 58 degrees of freedom. The reduced numbers of observations in columns 7 and 8 are due to elimination of entrepreneurs from the regressions (7, 8) and missing data on the instrumental variables (8).

Table 8: Quality of social ties and labor market outcomes – Results

	(3') Paid-emp.	*(4')* Self-emp.	*(5')* Paid-emp.	*(6')* Self-emp.
Family contact				
Contact with parents or children away in Britain	-0.064	0.760**	-0.198	0.618*
	(0.30	(2.69)	(0.88)	(2.00)
Social capital ethnic nature				
Ethnic network member	0.244	-0.022	0.175	-0.043
	(0.95)	(0.06)	(0.66)	(0.11)
Mixed network member	0.810**	0.396	0.892**	0.669
	(2.95)	(1.00)	(3.12)	(1.61)
Non-ethnic network member	0.925*	-0.056	1.140**	0.337
	(2.51)	(0.11)	(3.00)	(0.61)
Speaking non-English to friends	-0.221	1.028**	-0.062	0.819**
	(1.19)	(3.75)	(0.29)	(2.61)
Religion, ethnicity and migration				
Religious			0.469	0.595
			(1.75)	(1.35)
Caribbean			-0.068	-0.968*
			(0.24)	(2.14)
Pakistanis			-1.306**	-1.473**
			(4.42)	(3.78)
Bangladeshis			-0.475	-1.548*
			(1.16)	(2.39)
Chinese			2.311**	3.255**
			(3.07)	(3.9)
English language ability				
Fairly well			-0.841**	-0.076
			(3.03)	(0.21)
Slightly			-1.088**	-1.432**
			(3.05)	(2.85)
Not at all			-4.260**	-2.678*
			(3.88)	(2.47)
Constant	-5.830**	-9.685**	-5.978**	-9.092**
	(4.11)	(4.61)	(3.91)	(3.87)
Observations	1321	1321	1321	1321
Pseudo R^2	0.26	0.26	0.32	0.32

Notes: Absolute value of z statistics in parentheses. * significant at 5%; ** significant at 1%. The coefficients of *Household and family structure, Individual demographics, Education, Years since arrival, Ward ethnic densities, Unemployment, and Regional controls* are not reported.