

WITH A LOT OF HELP FROM MY FRIENDS: SOCIAL NETWORKS AND IMMIGRANTS IN THE UK

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(published in *Population Space and Place*, 2013, 19(6), 657-670)

Accepted version: February 2013

ABSTRACT

This paper provides a descriptive analysis of the role of social networks in the labour market, comparing immigrant and native men in the UK. We first explore the determinants of using social networks as a channel for looking for jobs. Our focus does not only lie on the main search method of job search, rather we also use information on whether social networks are used as a method of search among many alternative ones. We subsequently investigate the social network effects on labour market outcomes in terms of job finding rates. Based on the UK Quarterly Labour Force Survey for the period 1992 to 2010, the analysis explores the role of two key aspects of immigrants' human capital: the education level and years since immigration. We show that immigrants are more likely than White British-born to rely on using social networks as a main search method, while no crucial difference is found when using personal contacts as a method of job search. However, immigrants are as likely as natives to find employment through their social network, yet among both groups, the less educated are more likely to succeed in obtaining jobs through contacts. Finally, the findings reveal no systematic pattern in the effect of years in the UK on job search success among immigrant groups.

Keywords: social networks; immigration; UK; education; employment; labour market

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INTRODUCTION

Social ties are important in determining human behaviour and economic outcomes. In particular, social networks – as represented by friends, relatives and acquaintances – play an important role in the labour market, promoting information sharing about job opportunities. This issue has not only been of fundamental importance for sociologists, but also engaged economists for many years. The role played by social networks in the labour market is important because through disseminating information about job openings, such networks determine whether workers are allocated efficiently and thus whether labour markets are functioning efficiently (Jackson, 2011). Informal job search methods such as the use of personal contacts have the advantage of being relatively less costly and may provide more reliable information concerning jobs in comparison with other formal methods.

This is particularly the case for immigrants, for whom networks are known to facilitate the economic and social integration into the host country by providing social support and useful information towards finding employment. In fact, social networks play a dual role as a channel for information and a substitute for specific skills needed in the host country – such as the language or the knowledge of institutions – which immigrants, and especially those who have recently arrived, might lack. Whether immigrants are able to find good jobs is an important measure of their successful integration into a society. As argued by Calvó-Armengol and Jackson (2004, 2007) social networks might also help us in explaining persistent inequalities in wages and employment patterns across groups.ⁱ

Understanding how individuals search and obtain jobs is important for both employers and policymakers. While job seekers typically use both formal and informal channels, the methods used appear to be relevant in whether or not they are successful in their job hunt. Focusing on immigrants in the UK, this paper examines the extent to which individuals who rely on their social networks to look for jobs are able to secure employment.

Previous research into the job search activities of immigrants in the UK and the relative effectiveness of these activities has been very limited. Most of the existing literature has focused on the job search behaviour of the general population (for example, Gregg and Wadsworth, 1996; Böheim and Taylor, 2001; Cappellari and Tatsiramos, 2010), paying little attention to differentiating by immigration status. More recently, Frijters et al. (2005) and Battu et al. (2011) have focused on immigrants and ethnic minorities, respectively. Using a panel of unemployed men drawn from the UK's Quarterly Labour Force Surveys between 1997 and 2001, Frijters et al. (2005) compare the success of the job search process between natives and immigrants. They explore whether immigrants employ different job search methods than natives, and importantly whether this choice impacts their unemployment duration. They test the relative effectiveness of using formal methods versus informal methods of job search for the two groups, documenting that the job search of immigrants is generally less efficient than natives'. Battu et al. (2011) find that although personal networks represent a widespread method of finding a job for ethnic minority groups, they are not necessarily the most effective in terms of the level of job achieved.

We build upon this literature in two major ways. First, we examine the determinants of social network use. Differently from previous studies, we do not focus only on the main method of job search. Given that the use of social contacts is less costly relative to other formal methods and that many unemployed rely on several job search methods, we also use information on whether social networks are used as a method of search among many alternatives. One main focus is to

explore the relationship between social network use and years in the UK. If relying on family and friends is a way of compensating for the lack of language or other country specific skills, one would expect immigrants' network use to decline over time. On the other hand, network use might increase over the years if immigrants cultivate social ties through spending more time in the UK. Similarly, we also explore the role of formal education in determining whether formal or informal methods are more likely to be chosen. The second major contribution of this study is to compare the social network effects on labour market outcomes in terms of job finding rates between immigrants and natives, distinguishing between different immigrant groups. In practice, we investigate whether differences in what determines the probability of finding a job through the network exist between immigrant groups and the group of reference – the White British-born – and within different groups of immigrants. In this respect, we also focus on the role of the duration of stay in the UK and formal education. Throughout the analysis, we also take into consideration the different regional settlements of these groups. We use data from the UK Quarterly Labour Force Survey (QLFS), spanning from 1992 to 2010. This relatively long time period allows us to also explore our research questions for groups of immigrants directly affected by the recent EU enlargements that took place in 2004 and 2007.

Our results indicate that immigrants are more likely to rely on using social networks for job search than White British-born. However, when considering the use of personal contacts as one of many methods, non-White immigrants are as likely as natives to obtain job information from their personal networks. Remarkably, in terms of job finding rates, immigrants are as likely as White British-born to find employment through the social network. However, there is significant heterogeneity among different immigrant groups in terms of the incidence of social network use, and its success rate in securing employment. Moreover, our findings show that the less educated are more likely to obtain employment through personal contacts. Finally, we find evidence of a non-systematic relationship between years in the UK and social networks use. A declining pattern over time emerges for some groups (e.g., South Asian immigrants), which is compatible with the hypothesis that these groups acquire UK labour market-specific skills over time. For other groups (e.g., Eastern and Western Europeans), we find an opposite pattern, suggesting that these groups might invest more in establishing social contacts as they prolong their stay in the UK.

We structure the remainder of the paper as follows. First, we review the economic literature on social networks and job search. We then describe the data and the sample, and presents the empirical analysis. Finally, we provide concluding remarks.

THE ECONOMICS OF SOCIAL NETWORKS AND LABOUR MARKETS

Considerable interest has emerged in the economics literature concerning social interactions and the ways in which social connections affect individual behaviour and outcomes. One prominent focus has been the role of social networks in the labour market, and particularly in job search activities. Social networks are considered an important source of information for job seekers (Montgomery, 1991). The exchange and diffusion of information is critical to the functioning of most labour markets. Individuals seeking jobs mobilise their contacts, which mediate employment opportunities that flow through word-of-mouth, and provide alternative employment information to more formal methods.

Although the use of personal contacts to look for a job may simply result from lower search costs associated with this method, social networks serve as a screening mechanism in the labour market. For example, employers may use referrals as a screening mechanism in order to reduce asymmetric information inherent in the hiring process (Montgomery, 1991)ⁱⁱ. A number of theoretical contributions have focused principally on how this informal channel transmits information (see Jackson, 2011, for a comprehensive survey). The core prediction from this literature is that the higher an individual's number of personal connections, and the better the employment status of these connections, the more likely the individual is to find a job. For example, members of the network who are employed receive information about vacancies that they do not need for themselves and subsequently pass it on to their unemployed contacts.

There is growing empirical literature that seeks to identify the labour market effects of social networks. Most of this empirical evidence concerns the US (see, e.g., the seminal works by Holzer, 1988 and Granovetter, 1995). Despite evidence that the use of social network is widespread among job seekers (over 50% in the US), Ioannides and Loury (2004) highlight differences in the patterns of use of informal contacts, depending on age, race, and ethnicity.

Previous research into immigrants' job search activities and their relative effectiveness has been very limited.ⁱⁱⁱ Munshi (2003) studies the transmission of job information among Mexican immigrants in the US. He finds that community-based social interactions are important in matching Mexican migrants and US employers, and appear to improve the labour market outcomes of immigrants, although smaller and younger networks substantially reduce their employment probabilities.

Evidence for the UK is limited and rather mixed. Focusing on unemployment duration, Frijters et al. (2005) report that the job search of immigrants in the UK is comparatively less successful. They use the UK QLFS between 1997 and 2001, finding that: immigrant job search is less successful than that of natives; immigrants are as likely to gain employment through informal methods as via verifiable routes; the probability of success increases with years since migration. However, their measure of success, i.e., outcome of interest, is unemployment duration. Examining the probability of social networks use on employment and on the level of job, Battu et al. (2011) obtain a similar result: personal contacts are not always the most effective channel in terms of the job position achieved for ethnic minorities. However, it is important to note that they do not distinguish between foreign born and British-born ethnic minorities. Finally, Patacchini and Zenou (2012) explore the relationship between residential proximity of individuals from the same ethnic group and the probability of finding a job through social networks, relative to other search methods. They find that the higher the percentage of a given ethnic group living nearby, the higher is the probability of finding a job through social contacts. However, this effect decays very rapidly with distance. They do not examine the determinants of social network use, combine males and females in their sample, and like Battu et al. (2011), study ethnic minorities rather than specifically immigrants.

DATA AND SAMPLE

Our analysis draws data from the UK Quarterly Labour Force Survey and includes the quarters April-June 1992 to October-December 2010. The QLFS is a large scale survey covering a wide range of labour market topics. Its sample size and design makes it one of the most widely used

data sources for studying the labour market experience of immigrants in the UK (see, e.g., Dustmann et al., 2005).

We restrict the sample to working age males. We do not focus on women in our analysis because the participation rates of many immigrant women in the UK are rather low (Shields and Price) and therefore the samples of unemployed and employed women are likely to be highly self-selected.

For the purpose of this paper, we focus on two major groups: individuals who are recently unemployed (for whom we extract information on job search methods) and those who have recently found employment (for whom we obtain data on the job finding method). We define an individual as being recently unemployed if he has been in unemployment for less than six months and has been actively searching for a job during the four weeks before the survey (i.e., ILO definition). We draw information on the search methods of the unemployed, grouping them according to the categories used by Frijters et al. (2005): Social networks; Job centre; Adverts/Newspapers; Direct to employer; Agency/Other. The social networks method corresponds to the answer “Ask friends, relatives, colleagues or trade unions about jobs”. We derive two variables: one characterising the intensity of social networks as the main method of search and one eliciting information on whether social networks are used as “any” method among the many possibly used by the unemployed. For the scope of the regression analysis, we define two indicators for whether social networks are used as main method, $1(SNm)$ or as any method, $1(SNa)$ where SNm is a subset of SNa .

The employed individuals who form part of our sample are those who recently found a job and report the job finding method. Before Spring 2005, the pertinent question was only asked to individuals who had found a job in the previous three months; subsequently, the question has referred to all individuals who had found a job in the previous twelve months. Despite job finding methods being classified in a slightly different manner than the job search methods, we follow the exact same categories as Frijters et al. (2005), namely: Social networks; Job centre; Adverts/Newspapers; Direct to employer; Agency/Other. In particular, social networks correspond to the answer of having obtained the job by “Hearing from someone who worked there”. For our analysis, we define an indicator for whether the individual found a job through the network, $1(REF)$.

We extract information on ethnicity and country of birth, which allows us to derive the demographic groups of interest. We first distinguish four broad groups: non-White foreign-born (NWF), White foreign-born (WF), non-White British-born (NWB) and White British-born (WB). We classify an individual as British-born if born in England, Wales, Scotland or Northern Ireland and foreign-born if born somewhere else. “White” ethnicity relates to individuals who report belonging to the group of “White”, “White British”, “White Irish”, or “Other White”. We then select 9 major groups defined according to country of birth and ethnicity: Indians (IN); Pakistanis (PA); Bangladeshis (BN); Black Caribbeans (BC); Black Africans (BA); Polish (PO); Other Eastern Europeans (EE); Western Europeans (WE) and immigrants from the USA and other OECD countries (UC), including Canada, Australia and New Zealand.^{iv}

Other relevant information obtained from the LFS includes socio-demographic variables such as age, marital status, the number of children below age 16 and the years since first arrival in the UK in the case of immigrants. In order to measure education, we follow the approach of Dustmann and Theodoropoulos (2010) and use the years of full-time continuous education, defined as the difference between the age at which the individual left education and the compulsory starting age

in his country of birth.^v Finally, we derive information on the individual's usual residence, defining four major regions: North of England; London; South of England and the Remainder of the UK (Wales, Scotland and Northern Ireland). Due to the sample size, an indicator for whether the individual lives in London is used in most of the analysis.

ANALYSIS

An overview of search and job finding methods

As a first step, we examine the job search methods among currently unemployed men. Table 1 shows that over 12% of non-White immigrants use social networks as their main job search method. Although less than 10% of White immigrants also use social networks as the main job search method, the difference between the two immigrant groups is not statistically significant. On the other hand, the figures suggest that the use of social networks as the principal job search method is lower among White British-born (9%). This is consistent with Frijters et al. (2005), who also find that all immigrant groups use their social networks to a greater extent than the White British-born. Interestingly, in terms of the use of networks as one among several job search methods, we find no difference between the proportion of users among the White British-born and non-White immigrants, with around two thirds of both groups reporting use of their networks as a search method. However, it also appears that White immigrants tend to use their contacts less in job search (63%). Thus, overall, the proportion of immigrants who use intensively their network (SN_m=1) is higher than natives, yet when the network is used among many alternative methods (SN_a=1) – a distinction ignored by previous studies – there is no significant difference between the two groups.

Table 1: Job search methods (%)

	NWF	WF	NWB	WB
<i>Main method</i>				
Social networks	12.28	9.97	7.16	9.33
Job centre	36.03	25.88	36.98	34.69
Adverts/Newspapers	31.73	40.71	37.98	39.35
Direct to employer	11.95	11.22	8.63	9.00
Agency/Other	8.02	12.22	9.25	7.64
<i>Any method</i>				
Social networks	67.13	63.30	62.86	68.06
Other methods	32.87	36.70	37.14	31.94
N	5,424	2,798	3,826	70,315

Source: QLFS 1992-2010, own elaborations. NWF= Non-white foreign born; WF= White foreign-born; NWB= Non-white British-born; WB= White British-born. Figures in bold indicate values which are statistically different from the figures of NWF at the 5% level.

When examining the proportion of individuals who are recently employed, Table 2 shows that around a third (29%) of non-White immigrants report social networks as the actual method resulting in them obtaining a job. Indeed an equal proportion of White British-born have been successful in finding a job through their social contacts, suggesting that there is no evidence that immigrants are less successful than natives in getting jobs through informal channels. This is

similar to the descriptive statistics obtained by Battu et al. (2011). However, the group of White immigrants seems to be relatively more successful in securing employment through the method “Agency/Other”, which is unsurprising given the reliance of recent A8 immigrants on recruitment agencies (see McCollum and Findlay, 2010). Overall, and based on this classification of methods, social networks are the most common channel of securing employment for non-White immigrants and White British-born.

Table 2: Job finding methods (%)

	NWF	WF	NWB	WB
Social networks	28.94	26.46	24.33	29.11
Job centre	9.55	9.86	14.54	10.36
Adverts/Newspapers	21.51	18.43	22.77	23.43
Direct to employer	17.27	14.46	13.64	14.45
Agency/Other	22.73	30.79	24.72	22.65
N	8,415	9,594	4,656	138,826

Source: QLFS 1992-2010, own elaborations. NWF= Non-white foreign born; WF= White foreign-born; NWB= Non-white British-born; WB= White British-born. Figures in bold indicate values which are statistically different from the figures of NWF at the 5% level

In Table 3, we present the salient features of our sample of unemployed men, focusing on the differences between immigrants and White British-born and distinguishing between different groups of immigrants. There are striking differences between immigrant groups. In terms of the proportion using social networks as their prime job search method, Bangladeshis (24%), Other Eastern Europeans (16%) and Pakistanis (15%) report the highest proportions, while the Poles exhibit the lowest share with only 7% relying on their network as the main job search method. While this could reflect actual lower use of networks by Polish immigrants, it is also important to note that their sample size is rather low.^{vi} As for SNa, it is clear that over 60% of all unemployed men (with the exception of Poles) use social networks, with Bangladeshis and Pakistanis exhibiting the highest incidence. Meanwhile, White British-born are as likely as immigrants to use social networks as a job search method. Data also shows a prominent variation among immigrant groups in terms of years of stay in the UK, with Poles exhibiting a stay of less than five years on average, and Black Caribbeans having been in the UK for the longest time. The geographical distribution of the unemployed also reflects the over-attraction of London as a destination for immigrants. Only 7% of White British-born unemployed live in London, while as many as 15% of Poles and 68% of Black Africans reside there.

When focusing on the sample of recently employed individuals, a number of interesting aspects emerge (see Table 4). The incidence of finding a job through social networks varies between 19% for Black Africans and 49% for Bangladeshis, while the same proportion for White British-born is 29%. Remarkably, more than 30% of Poles report finding a job thorough the network, which somewhat contrasts with the relatively low proportion reporting using the social network as job search method, as discussed above. As will later transpire from the regression analysis, one explanation for this apparent ambiguity might be related to Polish immigrants being a relatively younger group, and thus more likely to exhibit higher rates of finding a job through the network. It is also important to note that over 40% of Poles are engaged in elementary occupations (occupation 9). This is the largest share among all immigrant groups and more than double the share for natives (16%).

With the exception of Bangladeshis, Black Caribbeans and Eastern Europeans, employed immigrants report a higher number of years of education than White British born. Immigrants from Western Europe, followed by those from the US and other OECD countries and Indians, are relatively more represented in skilled occupations (occupations 1 and 2), when compared to White British-born.

Table 3: Summary statistics: Immigrants unemployed

	IN	PA	BN	BC	BA	PO	EE	WE	UC	WB
SNm=1 (%)	0.105 (0.306)	0.153 (0.36)	0.238 (0.426)	0.104 (0.305)	0.077 (0.267)	0.071 (0.258)	0.156 (0.363)	0.087 (0.281)	0.084 (0.277)	0.093 (0.291)
SNa=1 (%)	0.690 (0.463)	0.749 (0.434)	0.780 (0.415)	0.634 (0.482)	0.609 (0.488)	0.426 (0.496)	0.625 (0.485)	0.654 (0.476)	0.656 (0.476)	0.681 (0.466)
Age (years)	40.712 (11.484)	34.538 (11.331)	32.297 (9.787)	43.981 (12.754)	33.595 (9.985)	31.945 (9.654)	29.625 (8.854)	31.220 (11.332)	32.432 (11.068)	32.857 (13.891)
Married (%)	0.748 (0.434)	0.713 (0.453)	0.740 (0.439)	0.356 (0.479)	0.384 (0.487)	0.426 (0.496)	0.441 (0.497)	0.228 (0.419)	0.388 (0.488)	0.285 (0.451)
Children < 16 (#)	0.932 (1.243)	1.478 (1.624)	1.992 (1.702)	0.436 (0.837)	0.683 (1.121)	0.481 (0.762)	0.671 (1.049)	0.384 (1.28)	0.548 (1.011)	0.538 (1.007)
Years of education	13.057 (3.544)	13.015 (3.353)	11.474 (3.448)	10.726 (2.378)	14.016 (3.911)	12.738 (2.773)	11.336 (3.699)	12.606 (3.431)	12.827 (3.369)	11.671 (2.092)
Years in UK	19.752 (12.946)	15.175 (12.792)	14.362 (9.813)	25.309 (14.419)	8.729 (8.576)	4.699 (8.392)	5.469 (6.974)	16.477 (13.536)	18.821 (13.895)	- -
Occup 1 (%)	0.155 (0.363)	0.067 (0.25)	0.044 (0.206)	0.087 (0.282)	0.081 (0.274)	0.026 (0.161)	0.082 (0.275)	0.111 (0.314)	0.193 (0.395)	0.092 (0.29)
Occup 2 (%)	0.111 (0.314)	0.047 (0.212)	0.022 (0.147)	0.052 (0.223)	0.073 (0.261)	0.020 (0.14)	0.044 (0.206)	0.069 (0.253)	0.092 (0.29)	0.042 (0.201)
Occup 3 (%)	0.055 (0.229)	0.043 (0.202)	0.041 (0.198)	0.071 (0.257)	0.080 (0.271)	0.046 (0.21)	0.019 (0.137)	0.112 (0.316)	0.092 (0.29)	0.060 (0.238)
Occup 4 (%)	0.087 (0.282)	0.048 (0.215)	0.028 (0.164)	0.045 (0.207)	0.091 (0.287)	0.033 (0.179)	0.032 (0.175)	0.059 (0.235)	0.072 (0.259)	0.075 (0.263)
Occup 5 (%)	0.143 (0.351)	0.158 (0.365)	0.253 (0.435)	0.241 (0.429)	0.088 (0.283)	0.296 (0.458)	0.199 (0.4)	0.168 (0.374)	0.127 (0.333)	0.208 (0.406)
Occup 6 (%)	0.035 (0.184)	0.066 (0.248)	0.304 (0.461)	0.071 (0.257)	0.084 (0.278)	0.026 (0.161)	0.136 (0.343)	0.112 (0.316)	0.094 (0.293)	0.053 (0.224)
Occup 7 (%)	0.070 (0.255)	0.101 (0.302)	0.076 (0.265)	0.039 (0.195)	0.089 (0.285)	0.026 (0.161)	0.054 (0.226)	0.056 (0.23)	0.084 (0.278)	0.066 (0.248)
Occup 8 (%)	0.220 (0.415)	0.288 (0.453)	0.077 (0.268)	0.186 (0.39)	0.097 (0.297)	0.204 (0.404)	0.130 (0.337)	0.106 (0.308)	0.131 (0.337)	0.186 (0.389)
Occup 9 (%)	0.123 (0.329)	0.182 (0.386)	0.155 (0.362)	0.207 (0.406)	0.316 (0.465)	0.322 (0.469)	0.304 (0.461)	0.209 (0.407)	0.114 (0.319)	0.218 (0.413)
North of England (%)	0.440 (0.497)	0.622 (0.485)	0.325 (0.469)	0.295 (0.456)	0.213 (0.409)	0.590 (0.493)	0.298 (0.458)	0.368 (0.483)	0.295 (0.456)	0.510 (0.5)
London (%)	0.416 (0.493)	0.230 (0.421)	0.589 (0.492)	0.550 (0.498)	0.682 (0.466)	0.153 (0.361)	0.543 (0.499)	0.246 (0.431)	0.299 (0.458)	0.074 (0.261)
South of England (%)	0.125 (0.331)	0.108 (0.311)	0.067 (0.25)	0.151 (0.358)	0.081 (0.273)	0.158 (0.366)	0.110 (0.313)	0.274 (0.446)	0.281 (0.45)	0.227 (0.419)
Remainder of UK (%)	0.019 (0.137)	0.040 (0.196)	0.019 (0.137)	0.005 (0.069)	0.024 (0.154)	0.098 (0.299)	0.049 (0.216)	0.111 (0.314)	0.126 (0.332)	0.190 (0.392)
Sample size	946	896	627	424	1,025	183	429	901	549	70,315
Sample size (occup)	830	702	542	381	750	152	316	786	498	59,920

Source: QLFS 1992-2010, own elaborations. Standard deviation in parentheses. The sample is composed by males 16-64 who are ILO unemployed and report a job search method. SNm=1 indicates social network as main job search method; SNa=1 indicates social networks as any job search method. IN=Indian; PA=Pakistani, BN=Bangladeshi, BC=Black Caribbean, BA=Black African, PO=Polish, EE=Other East Europe, WE=West Europe, UC=US and New Commonwealth, WB=White British-born. Occup 1=Managers, Directors and Senior Official; Occup 2=Professional Occupations; Occup 3=Associate Professional and Technical Occupations; Occup 4=Administrative and Secretarial Occupations, Occup 5=Skilled Trades Occupations; Occup 6=Caring, Leisure and Other Service Occupations; Occup 7=Sales and Customer Service Occupations, Occup 8=Process, Plant and Machine Operatives; Occup 9=Elementary Occupations.

Table 4: Summary statistics: Immigrants recently employed

	IN	PA	BN	BC	BA	PO	EE	WE	UC	WB
REF=1 (%)	0.260 (0.439)	0.346 (0.476)	0.487 (0.5)	0.309 (0.463)	0.188 (0.391)	0.304 (0.46)	0.331 (0.471)	0.238 (0.426)	0.219 (0.414)	0.291 (0.454)
Age (years)	36.485 (9.791)	33.336 (9.204)	31.393 (8.589)	39.886 (11.552)	34.930 (8.937)	29.251 (7.529)	29.768 (8.322)	31.738 (10.027)	33.785 (10.343)	33.495 (12.755)
Married (%)	0.754 (0.431)	0.774 (0.418)	0.727 (0.446)	0.537 (0.499)	0.513 (0.5)	0.325 (0.469)	0.355 (0.479)	0.315 (0.465)	0.447 (0.497)	0.390 (0.488)
Children < 16 (#)	0.776 (1.051)	1.355 (1.448)	1.681 (1.58)	0.656 (0.923)	0.812 (1.198)	0.274 (0.688)	0.454 (0.828)	0.410 (1.132)	0.452 (1.01)	0.564 (1.011)
Years of education	14.747 (3.676)	14.207 (3.868)	12.233 (3.719)	11.943 (3.251)	14.960 (4.11)	13.001 (2.781)	12.266 (3.205)	13.781 (3.829)	14.319 (3.31)	12.362 (2.486)
Years in UK	13.319 (13.387)	12.745 (11.773)	13.638 (9.63)	21.173 (15.265)	7.284 (7.181)	2.146 (3.382)	4.290 (6.586)	13.607 (13.955)	14.304 (14.961)	-
Occup 1 (%)	0.101 (0.302)	0.064 (0.244)	0.034 (0.18)	0.060 (0.237)	0.043 (0.204)	0.013 (0.113)	0.032 (0.176)	0.143 (0.35)	0.184 (0.387)	0.114 (0.318)
Occup 2 (%)	0.269 (0.444)	0.104 (0.306)	0.037 (0.189)	0.076 (0.265)	0.125 (0.331)	0.043 (0.203)	0.069 (0.254)	0.168 (0.374)	0.210 (0.407)	0.092 (0.288)
Occup 3 (%)	0.097 (0.296)	0.052 (0.222)	0.052 (0.222)	0.073 (0.261)	0.103 (0.304)	0.026 (0.159)	0.044 (0.205)	0.132 (0.339)	0.154 (0.361)	0.098 (0.297)
Occup 4 (%)	0.072 (0.259)	0.092 (0.289)	0.042 (0.201)	0.054 (0.227)	0.094 (0.292)	0.015 (0.123)	0.023 (0.15)	0.067 (0.25)	0.073 (0.26)	0.079 (0.27)
Occup 5 (%)	0.083 (0.276)	0.090 (0.286)	0.250 (0.433)	0.228 (0.42)	0.049 (0.216)	0.191 (0.394)	0.176 (0.381)	0.107 (0.31)	0.101 (0.301)	0.177 (0.382)
Occup 6 (%)	0.039 (0.195)	0.057 (0.232)	0.198 (0.399)	0.070 (0.256)	0.112 (0.315)	0.021 (0.142)	0.053 (0.223)	0.087 (0.283)	0.064 (0.245)	0.050 (0.219)
Occup 7 (%)	0.080 (0.271)	0.085 (0.279)	0.101 (0.301)	0.038 (0.191)	0.075 (0.263)	0.016 (0.125)	0.034 (0.182)	0.068 (0.252)	0.042 (0.2)	0.074 (0.261)
Occup 8 (%)	0.111 (0.314)	0.198 (0.399)	0.047 (0.212)	0.149 (0.357)	0.099 (0.298)	0.272 (0.445)	0.182 (0.386)	0.077 (0.266)	0.073 (0.259)	0.155 (0.361)
Occup 9 (%)	0.148 (0.355)	0.259 (0.438)	0.240 (0.427)	0.252 (0.435)	0.301 (0.459)	0.403 (0.491)	0.386 (0.487)	0.150 (0.358)	0.101 (0.301)	0.161 (0.368)
North of England (%)	0.408 (0.492)	0.579 (0.494)	0.320 (0.467)	0.328 (0.47)	0.311 (0.463)	0.551 (0.498)	0.393 (0.489)	0.302 (0.459)	0.256 (0.436)	0.477 (0.499)
London (%)	0.335 (0.472)	0.190 (0.393)	0.502 (0.5)	0.477 (0.5)	0.474 (0.5)	0.118 (0.323)	0.319 (0.466)	0.278 (0.448)	0.341 (0.474)	0.073 (0.26)
South of England (%)	0.209 (0.407)	0.154 (0.362)	0.154 (0.362)	0.187 (0.39)	0.166 (0.372)	0.204 (0.403)	0.200 (0.4)	0.332 (0.471)	0.301 (0.459)	0.295 (0.456)
Remainder of UK (%)	0.047 (0.213)	0.076 (0.266)	0.023 (0.152)	0.008 (0.09)	0.048 (0.214)	0.126 (0.332)	0.088 (0.284)	0.088 (0.283)	0.102 (0.303)	0.156 (0.363)
Sample size	2,026	1,036	596	369	1,449	1,698	1,255	2,665	1,847	138,826

Source: QLFS 1992-2010, own elaborations. Standard deviation in parentheses. The sample is composed by males 16-64 who are ILO unemployed and report a job search method. SNm=1 indicates social network as main job search method; SNa=1 indicates social networks as any job search method. IN=Indian; PA=Pakistani, BN=Bangladeshi, BC= Black Caribbean, BA=Black African, PO=Polish, EE= Other East Europe, WE= West Europe, UC=US and New Commonwealth, WB=White British-born. Occup 1=Managers, Directors and Senior Official; Occup 2=Professional Occupations; Occup 3=Associate Professional and Technical Occupations; Occup 4=Administrative and Secretarial Occupations, Occup 5=Skilled Trades Occupations; Occup 6=Caring, Leisure and Other Service Occupations; Occup 7=Sales and Customer Service Occupations, Occup 8=Process, Plant and Machine Operatives; Occup 9=Elementary Occupations.

In terms of residential patterns of employed individuals, Table 4 shows that Poles are by far the most dispersed group of immigrants, with a geographical distribution resembling the group of White British-born. The other immigrant groups are heavily clustered in a few areas, and particularly in London.^{vii}

An interesting dimension of social networks relates to the potential variation depending on individuals' geographical location. We explore this aspect in Table 5. For White British-born, there is no significant difference in the share of the unemployed using social networks as their main job search method by region. With the sole exception of Eastern Europeans, there is no evidence that immigrants in London rely more on their social networks as their main job search method when compared to other regions. A similar conclusion is reached when observing the figures for any job search method. Finally, there is a slight tendency for the group of White British-born residing in the North of England to be more successful in securing jobs through their contacts, when compared to those living in the South and London. A similar pattern is only observed among a few immigrant groups, such as those from South Asia. Overall, finding a job through the network does not seem to be related to the individual's geographical location.

Table 5: Summary statistics: social network use and job success by region (%)

Use/success	Region	IN	PA	BN	BC	BA	PO	EE	WE	UC	WB
SNm=1	North of England	11.54	14.54	25.00	16.00	6.88	6.48	4.69	9.04	6.17	9.54
	London	8.63	12.62	23.31	8.58	8.73	3.57	23.61	11.26	9.15	10.20
	South of England	13.56	10.31	28.57	6.25	2.41	13.79	8.51	6.48	9.74	8.27
	Remaining of UK	5.56	55.56	0.00	0.00	4.00	5.56	9.52	7.00	8.70	9.68
SNa=1	North of England	67.31	77.74	77.94	60.00	56.88	42.59	50.00	69.88	63.58	68.13
	London	70.05	66.99	77.51	67.38	62.80	42.86	70.39	62.61	69.51	68.10
	South of England	72.03	71.13	85.71	56.25	60.24	37.93	51.06	63.16	62.34	66.83
	Remaining of UK	66.67	86.11	66.67	50.00	44.00	50.00	76.19	62.00	68.12	69.31
REF=1	North of England	31.08	36.67	52.88	28.10	14.41	31.09	27.18	25.75	22.03	29.62
	London	25.48	24.37	45.82	34.09	20.52	32.34	43.00	19.57	20.63	27.24
	South of England	18.87	35.00	47.83	28.99	19.92	27.95	29.08	26.07	21.76	27.80
	Remaining of UK	16.67	43.04	57.14	0.00	27.14	29.44	33.33	22.22	26.46	30.89

Source: QLFS 1992-2010, own elaborations. The sample is composed by males 16-64 who are ILO unemployed and report a job search method. SNm=1 indicates social network as main job search method; SNa=1 indicates social networks as any job search method. IN=Indian; PA=Pakistani, BN=Bangladeshi, BC= Black Caribbean, BA=Black African, PO=Polish, EE= Other East Europe, WE= West Europe, UC=US and New Commonwealth, WB=White British-born. Figures in italics indicate cells with less than 50 observations.

EMPIRICAL ANALYSIS

In this section, we estimate probit regression models in order to understand the main determinants of using a social network as a job search method and of finding a job through the social network. First, we consider the determinants of using the social networks as the “main” job search method ($SNm = 1$); we then investigate what explains the choice of social network use as “a” method ($SNa = 1$):

$$Prob(Y = 1) = \Phi(\alpha + X' \beta)$$

Where $Y \in 2\{SN m, SN a\}$.

In the specifications, we employ control variables such as age, age squared, marital status, the number of children less than 16 years of age, education, geographical location, and, for immigrants, years in the UK.

Second, we estimate the determinants of finding employment through social networks ($REF = 1$), controlling for a similar set of covariates as above:

$$Prob(REF = 1) = \Phi(\alpha + Z' \delta) \quad (2)$$

Unlike previous studies, we estimate each of the above specifications by ethnic group. For each group, Table 6 presents the results of the probit model for using social networks as the main job search method. For White British-born, the estimates suggest that the use of social networks as main method increases with age, yet at a decreasing rate. This might capture that individuals may accumulate contacts over the years and hence increasingly use their networks as they age. A negative relationship between years of education and social network use emerges: less educated

individuals are more likely to rely on personal contacts as their main job search method, although coefficients are not always statistically significant for the immigrant groups. Previous studies have found that social networks are particularly important for less educated workers (Battu et al., 2011 and Boheim and Taylor, 2001). Regarding years in the UK, the findings indicate a negative relationship for three immigrant groups: Pakistanis, Bangladeshis and Western Europeans. For these groups, newly arrived immigrants are more likely to rely on social networks as a main source for information concerning jobs.

Table 6: Probit regression of main job search method - marginal effects

	IN	PA	BN	BC	BA	PO	EE	WE	UC	WB
Age (years)	0.019* (0.010)	0.008 (0.009)	0.036* (0.019)	-0.010 (0.010)	-0.005 (0.006)	0.017 (0.011)	0.011 (0.015)	-0.003 (0.005)	-0.014** (0.007)	0.002*** (0.001)
Age squared	-0.024* (0.012)	-0.007 (0.011)	-0.048* (0.025)	0.011 (0.012)	0.009 (0.008)	-0.021 (0.014)	-0.012 (0.020)	0.004 (0.007)	0.021** (0.009)	-0.002** (0.001)
Married (dummy)	0.017 (0.038)	0.069* (0.036)	0.058 (0.073)	-0.041 (0.036)	-0.034 (0.025)	-0.021 (0.041)	-0.058 (0.055)	0.012 (0.035)	0.037 (0.038)	-0.003 (0.004)
Children < 16 (#)	-0.002 (0.013)	-0.017* (0.010)	-0.025* (0.015)	-0.002 (0.022)	0.011 (0.009)	-0.019 (0.027)	0.036 (0.024)	-0.012* (0.007)	0.029** (0.014)	0.003** (0.001)
Years of education	-0.004 (0.003)	-0.008 (0.005)	-0.008 (0.006)	0.002 (0.010)	-0.002 (0.003)	-0.015** (0.006)	-0.008 (0.006)	-0.010** (0.004)	0.003 (0.005)	-0.008*** (0.001)
Years in UK	0.002 (0.001)	-0.003** (0.002)	-0.006** (0.003)	0.002 (0.001)	-0.002 (0.001)	0.002 (0.002)	0.004 (0.003)	-0.002* (0.001)	-0.000 (0.001)	
London (dummy)	-0.016 (0.024)	-0.030 (0.034)	-0.010 (0.047)	-0.054 (0.038)	0.017 (0.022)	-0.047 (0.029)	0.144** (0.046)	0.026 (0.027)	0.011 (0.030)	0.010* (0.005)
R ²	0.03	0.03	0.08	0.04	0.03	0.15	0.13	0.05	0.08	0.02
Sample size	946	896	627	424	1025	183	429	901	549	70315
Pred. Prob.	0.10	0.14	0.22	0.09	0.07	0.05	0.13	0.08	0.07	0.09

Robust standard errors in parentheses, clustered at the individual level. */**/** indicate significance at the 10%/5%/1% level. IN=Indian; PA=Pakistani, BN=Bangladeshi, BC= Black Caribbean, BA=Black African, PO=Polish, EE= Other East Europe, WE= West Europe, UC=US and New Commonwealth, WB=White British-born.

Table 7 reports the estimates of the regression analysis for the choice of using social networks as a job search method among many. Interestingly, three groups (Indians, immigrants from Eastern Europe, and from the US and other OECD countries) exhibit a positive relationship between years in the UK and the use of social networks as a job search method. It seems that despite the intensive use of networks decreases with the stay in the UK (as reported above), the use of personal contacts might become cheaper or easier when compared to other methods, possibly because such groups accumulate more contacts over time.

When examining the determinants of finding employment through personal contacts, Table 8 indicates that young White British-born are less likely to success in finding jobs through contacts than older ones. Furthermore, it is more likely that the less educated are more successful, with strong evidence for this pattern also among most groups of immigrants. Concerning the years of stay in the UK, the estimates suggest that immigrants from South Asia and Black immigrants who recently arrived in the UK are relatively more likely to find employment through personal contacts. However, this is not the case for other immigrant groups, particularly for those from Eastern Europe and the US and other OECD countries. It is important to underscore that Battu et al. (2011) find that a lower degree of assimilation amongst non-whites results in a greater reliance on friends and family as a job search method. However, their result is partly driven by including Non-White British born, who, as seen earlier in Tables 3 and 4, display different patterns than Non-White immigrants.

Table 7: Probit regression of any job search method - marginal effects

	IN	PA	BN	BC	BA	PO	EE	WE	UC	WB
Age (years)	0.026 ** (0.012)	0.029 ** (0.011)	-0.001 (0.017)	-0.020 (0.017)	-0.015 (0.012)	0.022 (0.030)	0.022 (0.021)	0.011 (0.010)	-0.003 (0.014)	0.010 *** (0.001)
Age squared	-0.037 ** (0.015)	-0.037 ** (0.014)	0.000 (0.023)	0.022 (0.020)	0.019 (0.015)	-0.033 (0.041)	-0.045 (0.030)	-0.018 (0.015)	0.003 (0.019)	-0.015 *** (0.001)
Married (dummy)	0.164 ** (0.059)	0.019 (0.048)	0.130 (0.087)	0.015 (0.067)	-0.030 (0.050)	0.148 (0.113)	0.023 (0.079)	0.070 (0.055)	0.059 (0.065)	0.038 *** (0.006)
Children < 16 (#)	-0.024 (0.022)	0.006 (0.013)	-0.011 (0.014)	0.004 (0.039)	-0.012 (0.020)	-0.095 (0.078)	0.004 (0.035)	-0.002 (0.018)	0.043 (0.030)	0.000 (0.002)
Years of education	-0.003 (0.006)	0.001 (0.006)	0.007 (0.007)	0.006 (0.012)	0.009 * (0.005)	-0.022 (0.017)	-0.000 (0.010)	-0.006 (0.007)	0.005 (0.007)	-0.012 *** (0.001)
Years in UK	0.004 ** (0.002)	-0.001 (0.002)	0.004 (0.003)	-0.000 (0.003)	0.001 (0.003)	0.004 (0.008)	0.016 ** (0.005)	-0.001 (0.002)	0.006 ** (0.002)	
London (dummy)	0.042 (0.039)	-0.108 ** (0.052)	-0.035 (0.047)	0.046 (0.062)	-0.006 (0.043)	-0.111 (0.125)	0.101 (0.067)	-0.061 (0.050)	0.073 (0.054)	0.001 (0.008)
R^2	0.04	0.06	0.08	0.04	0.03	0.04	0.07	0.04	0.05	0.02
Sample size	946	896	627	424	1025	183	429	901	549	70315
Pred. Prob.	0.70	0.76	0.80	0.64	0.61	0.42	0.63	0.66	0.66	0.68

Robust standard errors in parentheses, clustered at the individual level. */**/** indicate significance at the 10%/5%/1% level. IN=Indian; PA=Pakistani, BN=Bangladeshi, BC= Black Caribbean, BA=Black African, PO=Polish, EE= Other East Europe, WE= West Europe, UC=US and New Commonwealth, WB=White British-born.

Overall, the regression estimates highlight that the two main determinants of finding jobs through informal methods are education and – for immigrants – the duration of stay in the UK. We further investigate these aspects in Table 9, reporting the predicted probabilities for selected values of these characteristics. A number of interesting patterns emerge. First, for all groups – including the White British-born – less educated individuals (those with less than 12 years of education) are substantially more likely to find employment through social networks compared to individuals with more than 12 years of education. These differences are particularly large for the immigrants from South Asia. Secondly, there is a strong effect of years of stay in the UK on finding employment through informal channels. For South Asians and Black immigrants, the reliance on networks declines with years in the UK for both the less and more educated. However, for the remaining immigrant groups (with the exception of the Poles), obtaining a job through contacts increases with the time spent in the UK. Moreover, around half of the low educated newly arrived Indians, Bangladeshis and Pakistanis obtained jobs through their networks as compared to a third of the low educated White British-born. Bangladeshis appear to be the most likely group to find a job through the network, even for those more educated and even after having resided in the UK for longer than 10 years. In summary, the findings suggest substantial variation in obtaining a job through the social network among different immigrant groups and between immigrants and White British-born.

Table 8: Probit regression of job finding method - marginal effects

	IN	PA	BN	BC	BA	PO	EE	WE	UC	WB
Age (years)	-0.009 (0.010)	-0.006 (0.013)	-0.009 (0.023)	-0.022 (0.018)	-0.000 (0.009)	-0.033 ** (0.014)	0.005 (0.014)	-0.001 (0.006)	-0.002 (0.008)	-0.005 *** (0.001)
Age squared	0.013 (0.012)	0.018 (0.017)	0.018 (0.031)	0.031 (0.023)	0.001 (0.012)	0.046 ** (0.020)	-0.009 (0.020)	-0.001 (0.009)	0.001 (0.010)	0.005 *** (0.001)
Married (dummy)	-0.001 (0.036)	0.080 * (0.048)	0.066 (0.089)	0.017 (0.069)	-0.067 ** (0.032)	0.014 (0.038)	-0.057 (0.045)	0.031 (0.029)	0.022 (0.032)	-0.006 (0.004)
Children < 16 (#)	0.017 (0.015)	-0.011 (0.014)	0.014 (0.018)	-0.024 (0.037)	0.004 (0.012)	0.000 (0.023)	0.016 (0.024)	0.000 (0.011)	0.024 * (0.014)	0.007 *** (0.002)
Years of education	-0.029 *** (0.004)	-0.030 *** (0.005)	-0.019 ** (0.008)	-0.014 (0.010)	-0.006 (0.004)	-0.024 *** (0.006)	-0.022 *** (0.006)	-0.012 *** (0.003)	-0.015 *** (0.004)	-0.020 *** (0.001)
Years in UK	-0.004 ** (0.001)	-0.005 ** (0.003)	-0.004 (0.003)	-0.006 ** (0.002)	-0.002 (0.002)	-0.002 (0.003)	0.006 ** (0.003)	0.001 (0.001)	0.002 * (0.001)	
London (dummy)	-0.012 (0.026)	-0.079 * (0.046)	-0.056 (0.054)	0.067 (0.064)	0.024 (0.028)	0.052 (0.053)	0.140 *** (0.041)	-0.035 (0.024)	0.028 (0.027)	0.004 (0.006)
R ²	0.06	0.07	0.04	0.04	0.02	0.03	0.04	0.02	0.02	0.01
Sample size	2026	1036	596	369	1449	1698	1255	2665	1847	138826
Pred. Prob.	0.25	0.33	0.49	0.30	0.18	0.30	0.33	0.23	0.21	0.29

Robust standard errors in parentheses, clustered at the individual level. */**/** indicate significance at the 10%/5%/1% level. IN=Indian; PA=Pakistani, BN=Bangladeshi, BC= Black Caribbean, BA=Black African, PO=Polish, EE= Other East Europe, WE= West Europe, UC=US and New Commonwealth, WB=White British-born.

Table 9: Predicted probabilities

Education	Years in the UK	IN	PA	BN	BC	BA	PO	EE	WE	UC	WB
≤ 12 years	≤ 3 years	0.445	0.485	0.584	0.430	0.227	0.359	0.329	0.270	0.233	0.319
	> 10 years	0.351	0.430	0.532	0.279	0.184	<i>0.291</i>	0.493	0.288	0.294	
> 12 years	≤ 3 years	0.226	0.308	0.415	<i>0.340</i>	0.189	0.244	0.242	0.186	0.164	0.236
	> 10 years	0.176	0.238	0.359	0.233	0.158	<i>0.213</i>	0.358	0.225	0.218	

Source: QLFS 1992-2010, own elaborations. Figures refer to predicted probabilities of REF=1. IN=Indian; PA=Pakistani, BN=Bangladeshi, BC= Black Caribbean, BA=Black African, PO=Polish, EE= Other East Europe, WE= West Europe, UC=US and New Commonwealth, WB=White British-born. Figures in italics represent predictions based on cells with less than 50 observations.

It is important to highlight that the estimates of our analysis need to be interpreted as correlations, and might not capture the precise causal impact of certain determinants. There could be factors that are unobservable in the data (such as personal traits and non-cognitive skills), which might contribute to co-determining social network use or whether individuals find a job through the network. For example, low ability individuals might exert weaker efforts in their job search activity, and at the same time might be less capable of advertising their skills through formal channels. The presence of unobserved ability would result in overestimating the correlation between education and finding a job through the network. Moreover, the different role observed by the years since migration could capture that immigrants belong to different cohorts of arrival, or alternatively could simply result from differences among these groups in terms of culture and social skills. Finally, the self-selection in both immigration and return migration patterns could also play a major influence. If immigrants of certain characteristics – for instance, the newly arrived and low educated, who lack a good network – are more likely to return back to their home, the estimated correlation between finding a job through the network and education or years since immigration would overstate the real effect.

CONCLUSION

This paper examines immigrants' social network and labour market outcomes in the UK, contributing to a very small economic literature on the subject. First, it explores what determines social network use in the labour market, not only as a main method of job search but also as a method of job search among others. Therefore our approach contrasts previous studies (Frijters et al., 2005 and Battu et al., 2011) which only considered social networks as a main job search method. Second, we compare the social network effects on labour market outcomes in terms of job finding rates between male immigrants and White British-born. Frijters et al. (2005) represents the only previous paper examining immigrants, with others (Battu et al., 2011 and Patacchini and Zenou, 2012) tending to combine foreign-born and British-born ethnic groups. Furthermore, unlike previous studies, we estimate our models for each immigrant group separately, thus allowing us to distinguish between the various effects on social network use by group. We focus, separately for each immigrant group, on the role played by formal education and the assimilation of immigrants into the UK labour market, as represented by the years since immigration.

Using the UK Quarterly Labour Force Survey from 1992 to 2010, our findings indicate that immigrants are more likely to use social networks as a main tool for searching for jobs. However, when considering the use of personal contacts as a method among many, non-White immigrants are as likely as White British-born to seek job information through their social networks. Remarkably, immigrants exhibit a very similar probability of finding employment through the social networks to White British-born. However, substantial differences emerge among immigrant groups in terms of the incidence of social network use and success rate in securing employment through personal networks. Our findings indicate that less educated individuals are more likely to obtain employment through personal contacts. Finally, the role of the years of stay in the UK on obtaining a job through the network differs across immigrant groups, exhibiting a declining pattern over time for South Asian immigrants, with the opposite pattern found for other groups, such as Eastern and Western Europeans. This is an interesting finding, given that previous studies find a negative effect that is driven by not distinguishing between the various immigrant/ethnic groups.

To summarise, our findings indicate a great heterogeneity among immigrant groups in social network use and job search success through network use. Moreover, networks seem to be relied on for job search, not only by immigrants but also by natives. Furthermore, the use of social networks in the labour market is not a sufficient indication of a lack of integration, as some immigrant groups rely more on their personal contacts the longer they stay in the UK.

Overall, our results shed light on the important role played by social networks in the labour market, underscoring the need to further understand the impact of networks on the quality and payoff of jobs found through those personal channels, in order to assess the efficiency of those informal methods relative to more formal and potentially more expensive ones.

ACKNOWLEDGEMENTS

Financial support from the ESRC and the NORFACE research programme on Migration in Europe - Social, Economic, Cultural and Policy Dynamics is gratefully acknowledged.

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ⁱ See Hills et al. (2010) for a thorough description of economic inequality in the UK.

ⁱⁱ McCollum and Findlay (2010) provide useful insights on employer perspectives for using informal methods of hiring immigrant labour in the UK.

ⁱⁱⁱ This is surprising given the growing literature showing the role played by networks in the migration decision, see, e.g., Faist (2008) and van Dalen and Henkens (2012).

^{iv} For non-White immigrants, i.e., IN, PA, BN, BC and BA, we do not restrict analysis to migrants from any particular geographical origin (e.g., Indians could come from East Africa).

^v Data on compulsory education starting age is found at <http://ddp-ext.worldbank.org/ext/DDPQQ/member.do?method=getMembers&userid=1&queryId=189>. See Manacorda et al. (2012) for a discussion about measuring education among immigrants.

^{vi} Besides being a recent cohort of immigrants to the UK, one possibility of the low sample size of Poles is that due to Poland's geographical proximity, unemployed immigrants might be more likely to return back home and hence would not appear in the LFS.

^{vii} See McCulloch (2007) for a description of the patterns of ethnic segregation in England.