FISCAL STUDIES, vol. 26, no. 4, pp. 423–470 (2005) 0143-5671

Immigrants in the British Labour Market*

CHRISTIAN DUSTMANN† and FRANCESCA FABBRI‡

*†Department of Economics and Centre for Research and Analysis of Migration (*CR*e*AM*), University College London; Institute for Fiscal Studies (c.dustmann@ucl.ac.uk)*
*‡Department of Economics, University of Munich; Centre for Research and Analysis of Migration (*CR*e*AM*), University College London (Francesca. Fabbri@lrz.uni-muenchen.de)*

Abstract

The main objective of this paper is to provide a comprehensive description of the economic outcomes and performance of Britain's immigrant communities today and over the last two decades. We distinguish between males and females and, where possible and meaningful, between immigrants of different origins. Our comparison group is white British-born individuals. Our data source is the British Labour Force Survey. We first provide descriptive information on the composition of immigrants in Britain, and how this has changed over time, their socio-economic characteristics, their industry allocation and their labour market outcomes. We then investigate various labour market performance indicators (labour force participation, employment, wages and self-employment) for immigrants of different origins, and compare them with British-born whites of the same age, region and other background characteristics. We find that over the last 20 years, Britain's immigrant population has changed in origin composition and has dramatically improved in skill composition – not dissimilar from the trend in the British-born population. We find substantial differences in economic outcomes between white and ethnic minority immigrants. Within these

*The paper draws on earlier work that received financial support from the British Home Office (Home Office Online Report 05/03). The authors are grateful to one anonymous referee for helpful comments and suggestions. Dustmann gratefully acknowledges the support of the Economic and Social Research Council (grant RES-000-23-0332). Fabbri gratefully acknowledges financial support from the Munich Graduate School of Economics / Deutsche Forschungsgemeinschaft.

JEL classification number: J15.

groups, immigrants of different origins differ considerably with respect to their education and age structure, their regional distribution and their sector choice. In general, white immigrants are more successful in Britain, although there are differences between groups of different origins. The investigation shows that immigrants from some ethnic minority groups, and in particular females, are particularly disadvantaged, with Pakistanis and Bangladeshis at the lower end of this scale.

I. Introduction

According to the 2004 Labour Force Survey, 10 per cent of the British working-age population were born in another country. Foreign-born individuals (to whom we will refer as 'immigrants' below) differ from British-born individuals as well as among each other in education, demographic structure, culture and skills. These differences may partly determine economic success as well as social adaptation and integration. One important prerequisite for migration policy is to understand how immigrants perform in the labour market, and how this relates to origin as well as to their individual and family characteristics.

The main objective of this paper is to inform about the economic performance of Britain's immigrant communities. We use the British Labour Force Survey (LFS) for the years 1979–2004. Our analysis adds to the literature and the debate on migration by providing a comprehensive picture of many different aspects of labour market performance and behaviour of immigrants in Britain today and over the last 25 years. We break the immigrant population down by (groups of) origin countries to illustrate the heterogeneity in economic outcomes. Our analysis is not restricted to ethnic minority immigrants, but considers also white immigrants of different origins. Also, we do not restrict our investigation to male immigrants, but consider both men and women.

We define an immigrant as an individual who was born outside Britain. We investigate four different performance indicators: (i) labour force participation; (ii) employment; (iii) wages; and (iv) self-employment. Our comparison group is white British-born individuals. Where possible and meaningful, we distinguish between immigrants of different origins. In particular, we distinguish between ethnic minority and white immigrants. Within the first group, we further distinguish between black Caribbeans, black Africans, Indians, Pakistanis, Bangladeshis, African Asians, Chinese and other ethnic minorities. The second group consists of white individuals and we distinguish between individuals born in the Old Commonwealth (including South Africa), the New Commonwealth (including Pakistan), Ireland, the European Union (as of before the 2004 enlargement), non-EU

Europe (i.e. Eastern Europe, Israel, Turkey, Switzerland and Norway) and other countries.[1]

Our analysis distinguishes between males and females. To investigate the relationship between economic outcomes and individual characteristics, such as education, age and length of residence, we use regression analysis. Our analysis is purely descriptive, in the sense that we do not attempt to address issues such as selective labour force participation. When we compare the wages of female immigrants with those of British-born individuals, for example, we do not account for the possibility that women who work are selected from the overall population of females on characteristics other than education, age, years of residence and other observable demographic indicators. Thus, our analysis answers questions about differences in wages between British-born white females and female immigrants *who are working*, but not between British-born white females and female immigrants who are randomly drawn from the respective populations. To answer questions of the latter type requires an analysis that is beyond the scope of this paper.

When immigrants arrive in the destination country, their labour market productivity is likely to be different from that of British-born individuals. This may be due to differences in the level of education, socio-economic characteristics, demographic composition or fluency in the host-country language. But even when comparing immigrants with British-born individuals who are identical in observed characteristics, there may still be differences in labour market outcomes. One reason for this is that the skills that immigrants have acquired in their home country are usually not directly transferable to the host economy. Over time, immigrants may adjust their skills to the requirements of the host-country labour market and, in addition, acquire new skills. This may eventually lead to immigrants' economic performance becoming more similar to that of their British-born peers.

Differences in demographics, education or skills may not be the only reason why immigrants differ in their labour market outcomes from British-born individuals. Upon arrival, and when given the choice, they may settle in areas that are economically strong. Consequently, when comparing immigrants with British-born individuals, selective settlement may lead to more favourable labour market outcomes for immigrants than for British-born individuals. We present results on economic outcomes for the different immigrant groups relative to native-born individuals conditional and unconditional on observable characteristics and regional information.

We commence with a brief review of the previous literature for Britain and a description of our main data source (Section II). We then provide descriptive information on the composition of immigrants in Britain and

[1]See the Appendix for details on geographical distribution and a list of variables used in the analysis.

how this has changed over time, their socio-economic characteristics and their labour market outcomes (Section III). Next, we investigate the various labour market performance indicators for immigrants of different origins and compare them with those for British-born whites of the same age, region and other background characteristics (Section IV). Finally, in Section V, we conclude.

II. Previous literature and data

1. Previous literature

There is an extensive literature on immigrants' labour market performance. Chiswick's (1978) paper, which investigates the earnings assimilation of immigrants to the earnings of natives over the migration cycle, was seminal to this literature. Many subsequent papers have been published in this area, and in particular the work by Borjas has added some very important methodological and conceptual advances (see Borjas (1985, 1987, 1994 and 1999)). The earnings assimilation of immigrants has been investigated not only for the US but also for many other countries, such as Canada, Australia, Germany and Israel.[2] Not only earnings or wages of immigrants have been investigated in the literature, but also employment, labour force participation and self-employment. More recently, researchers have investigated the assimilation patterns of families of immigrants for Canada (Baker and Benjamin, 1997), the US (Blau et al., 2003), Australia (Meng and Gregory, 2005) and Britain (Dustmann and Fabbri, 2005).

Below we briefly survey the recent literature on British data.

Employment and participation

The early literature in Britain on employment and participation differentials compares the outcomes for whites with those for ethnic minorities. Distinctions between immigrant and British-born minorities have rarely been drawn, but more recent work shows that this distinction is crucial.

Based on the 1991 UK Census of Population, Blackaby et al. (1997) investigate the incidence of unemployment. They find that the foreign-born ethnic minorities have a higher unemployment rate than British-born minorities. They find no evidence that the latter perform worse than white British-born individuals. They also find substantial differences between different ethnic groups. Their results suggest that Pakistanis and Bangladeshis have particularly low employment probabilities. Wheatley Price (2001) uses Quarterly Labour Force Survey data for the years 1993 and 1994. He finds that white and non-white immigrants initially have a

[2]See, among others, Antecol, Cobb-Clark and Trejo (2003), Green and Green (1995), Dustmann (1993), Eckstein and Weiss (2004) and Zimmermann and Bauer (2002).

lower probability of being employed than white British-born individuals. While this disadvantage decreases over time for white immigrants, it does not disappear for non-white immigrants. In an analysis of ethnic minority immigrants and ethnic minority British-born individuals, and based on data from the Fourth National Survey on Ethnic Minorities (FNSEM) and the Family and Working Life Survey (FWLS), Dustmann and Fabbri (2003) find that minority immigrants have lower employment probabilities than white British-born individuals and minority British-born individuals. This disadvantage falls slightly over time. They also find differences between ethnic groups. They confirm the findings by Blackaby et al. for Pakistani and Bangladeshi immigrants.[3]

Wages

The first study on the earnings adaptation of immigrants in Britain was by Chiswick (1980), who analyses the 1972 General Household Survey (GHS). He finds that there is no significant earnings gap between white immigrants and white British-born individuals, but a 25 per cent gap between white British-born individuals and non-white immigrants. He finds no evidence for adaptation of non-white immigrants. He also finds no wage gap between white and non-white British-born individuals.

More recently, Bell (1997) has performed a more exhaustive analysis, pooling 20 consecutive cross-sections of the GHS (1973 to 1992). He distinguishes between West Indian, Indian, and white and Old Commonwealth immigrants. He finds different adaptation rates and entry wage differentials across these groups. While ethnic minority immigrants have an initial wage disadvantage that slowly decreases, white immigrants have initially higher wages but adapt downwards. Bell attributes this negative adaptation to the possibility that white migrants who remain in Britain are negatively selected. Denny, Harmon and Roche (1997), also using GHS data (from 1974 to 1993), find similar results. In particular, they find a large wage differential between non-white immigrants and white British-born individuals, but no wage gap between white British-born individuals and white immigrants. Dustmann and Fabbri (2003) analyse minority immigrants, based on data from the FNSEM and the FWLS. Their findings confirm results of earlier studies, indicating that minority immigrants earn substantially lower wages at entry than white British-born individuals. This initial gap decreases slightly but does not close.

Finally, in a very recent report, Kyambi (2005) provides a thorough descriptive analysis of the changes in economic performance of 'new' immigrants (i.e. those arrived in Britain after 1990) between 1994 and 2004. She finds that 'new' immigrants are less likely to be employed than older

[3]See also Leslie and Lindley (2001) and Clark and Drinkwater (2005).

immigrants. Furthermore, her findings provide further evidence that earnings vary widely depending on the country of origin.

Self-employment

Work on the self-employment of immigrants is scarce. For the US, Borjas (1986) analyses self-employment probabilities for immigrants and US-born individuals. Borjas and Bronars (1989) extend this analysis, looking at self-employment probability differentials among different ethnic groups. For the UK, there are only two papers that study self-employment probabilities, and only for ethnic minorities. Clark and Drinkwater (1998) use the GHS and Clark and Drinkwater (2000) the FNSEM. They find that ethnic minority immigrants are more likely to be self-employed than ethnic minority British-born individuals. They also find that ethnic concentration affects self-employment rates negatively – which contrasts with findings by Borjas (1986).

2. The data

Our database is the British Labour Force Survey for the years 1979–2004. The LFS is a continuous household survey, which provides a wide range of data on labour market statistics and related topics such as training, qualifications, income and disability. The LFS has been running since Spring 1992 in its present form, although a LFS has been carried out in Britain since 1973. Between 1973 and 1983, a biennial survey was carried out during the spring. In 1984, the survey became annual. In Spring 1992, for the first time, the data were made available quarterly, with a quarterly sample size approximately equivalent to that of the previous annual data, thus becoming the Quarterly Labour Force Survey. Each quarter, interviews are achieved at about 59,000 addresses with about 138,000 respondents.

A core of questions covering household and family structure, basic housing information and demographic details of individuals in the households are included in every survey, together with non-core questions which vary from quarter to quarter.

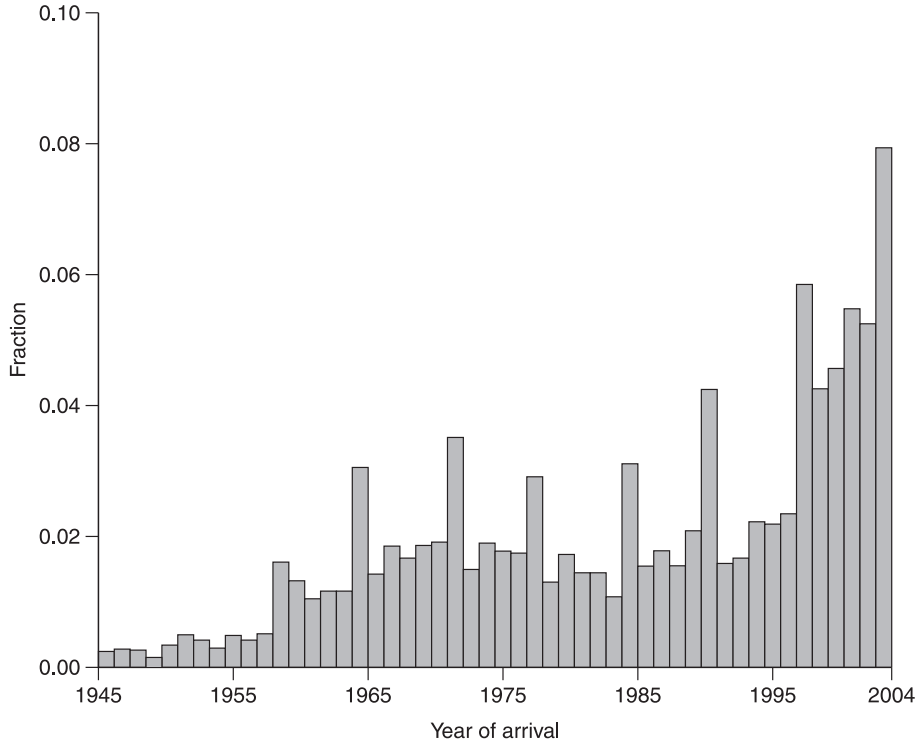
III. Immigrants in Britain

1. Composition and arrival

Figure 1 outlines the historical pattern of immigration into Britain for the population of foreign-borns in 2004, using data taken from the 2004 LFS. We focus on the population of working age (men aged 16–64 and women aged 16–59). The graph shows that a large fraction of working-age

FIGURE 1

Distribution of immigrants by year of entry



Note: Men aged 16–64; women aged 16–59.
Source: Labour Force Survey, 2004.

immigrants in 2004 are recent arrivals. Around 8 per cent of all immigrants arrived within the last year, and around 40 per cent arrived within the last 10 years.

Figure 2 charts the year of arrival of immigrant groups in 2004 from different origin countries. Notice that these graphs illustrate the historical immigration pattern of immigrants who are resident in Britain in 2004, not the pattern of inflows, due to mortality and return migration. Figures are, however, likely to be shaped by historical immigration events (see Hatton and Wheatley Price (2005) for background information).

Of those immigrants resident in 2004, individuals from the Caribbean and Ireland and white individuals born in New Commonwealth countries started to arrive immediately after the war. Those who came in the 1960s and 1970s were mainly arrivals of Asian origin born in Africa (African Asians).[4] Most of the resident Bangladeshi immigrant community arrived in

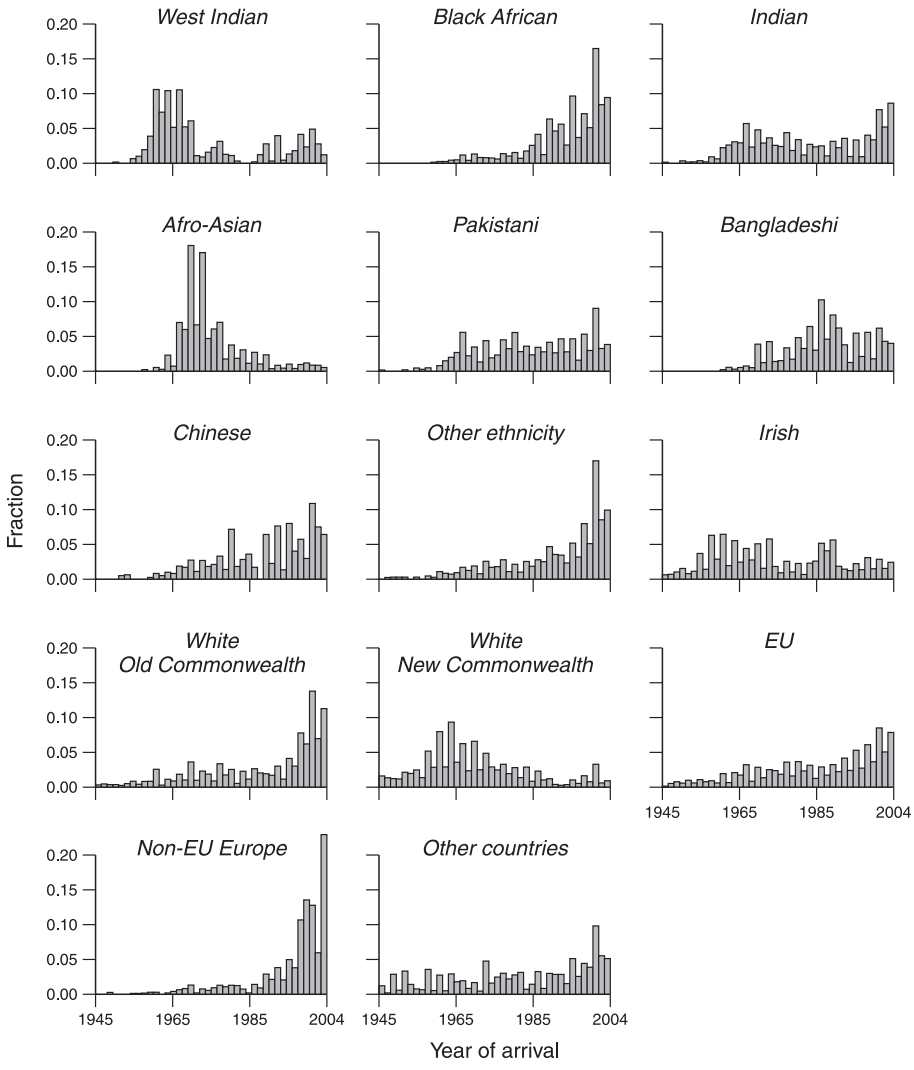
[4]This large number of African Asians was due to the expulsion of British passport holders from East and Central Africa in the early 1970s.

the 1980s. Many immigrants from the European Union (before enlargement) and the Old Commonwealth countries (including the US) arrived in the 1980s.

One immigrant group of interest is immigrants coming from non-EU (before the 2004 enlargement) Europe. This group includes immigrants from Israel, Albania, Bulgaria, former Czechoslovakia, Hungary, Poland, Romania, Switzerland, Norway, former Yugoslavia, Turkey, former

FIGURE 2

Year of arrival by origin



Note: Men aged 16–64; women aged 16–59.
Source: Labour Force Survey, 2004.

USSR and other European countries (not specified in the LFS).[5] This aggregation is somewhat arbitrary, but it is necessary due to the small number of respondents coming from the listed countries. However, when possible and meaningful, we will distinguish between individuals coming from 'new accession' countries and Romania and Bulgaria (which are candidate countries for EU accession) and individuals coming from other non-EU countries.

The most recent arrivals are black Africans, individuals of other ethnicities (which are not specified in the LFS) and individuals from non-EU (before enlargement) Europe. Polish immigrants (who represent 25 per cent of this subsample) make up most arrivals in 2003 and 2004.

2. Characteristics of immigrants and British-born individuals

In Table 1, we highlight some simple stylised facts about the various minority groups in Britain. The numbers are taken from the 1983 and 2004 Labour Force Surveys and refer to the population of working age (year of arrival and education data are only available in full from 1983 onwards). In the first two columns of the table, we report figures for British-born whites and individuals who are foreign-born. The other columns split the foreign-born into groups of various origins.

In 1983, around 8 per cent of the working-age population were born outside Britain. The largest immigrant community at that time was those of Irish origin, some 1.4 per cent of the working-age population, or around 0.6 million individuals. Next came members of the Afro-Asian community (1 per cent) and white individuals born in New Commonwealth countries (1.1 per cent).[6]

By 2004, the total immigrant stock rose to around 10.5 per cent of the working-age population. The largest immigrant group is now individuals born in the European Union (excluding Ireland), at around 1.4 per cent of the population. The shares of immigrants from black Africa, India, Pakistan,

[5]The LFS identifies countries that belonged to the former USSR and former Yugoslavia individually only after 1998.

[6]New Commonwealth countries include India, Africa, West Indies, Pakistan and Bangladesh, and we distinguish between white and non-white immigrants from these countries.

TABLE 1

Immigrants and British-born whites in Britain (population of working age)

	British-born whites	*Immigrants*	*West Indian*	*Black African*	*Indian*	*Afro-Asian*	*Pakistani*	*Bangladeshi*	*Chinese*	*Other non-white*	*Irish*	*Old Comm.*	*New Comm.*	*EU*	*Non-EU European*	*Other white*
Percentage of population																
1983	92	7.6	0.7	0.1	0.4	1.0	0.5	0.1	0.2	0.02	1.4	0.3	1.1	0.9	0.4	0.8
2004	87	10.5[a]	0.3	0.8	0.9	0.3	0.7	0.4	0.3	1.2	0.6	1.1	0.7	1.4	0.7	0.3
Median age																
1983	37	38	42	35	35	30	34	33	33	25	44	35	35	41	54	36
2004	40	38	47	36	42	45	38	34	39	35	48	35	43	35	31	40
Median no. of years since migration																
1983	–	19	22	15	15	11	10	14	10	4	26	18	24	22	35	13
2004	–	15	37	9	20	32	19	17	12	8	31	8	37	14	5	18
Median entry age																
2004	–	22	15	27	27	16	21	20	21	25	19	25	6	22	25	23
Percentage with entry age under 16																
2004	–	27	50	9	21	48	29	33	15	15	31	26	75	33	6	35
Percentage graduates (men)																
1983	10	14	4	18	16	7	16	11	19	25	4	38	21	15	12	25
2004	18	23	15	26	24	28	15	7	40	21	19	29	32	24	12	38

	British-born whites	*Immigrants*	*West Indian*	*Black African*	*Indian*	*Afro-Asian*	*Pakistani*	*Bangladeshi*	*Chinese*	*Other non-white*	*Irish*	*Old Comm.*	*New Comm.*	*EU*	*Non-EU European*	*Other white*
Percentage no qualifications (men)																
1983	45	49	65	13	46	68	32	81	56	31	71	21	30	42	57	29
2004	13	17	20	10	22	15	34	41	15	17	26	4	9	10	23	7
Percentage graduates (women)																
1983	4	8	1	6	10	4	8	2	9	14	3	15	12	10	15	20
2004	16	18	14	15	16	16	6	3	25	18	18	25	28	23	14	26
Percentage no qualifications (women)																
1983	51	50	51	57	42	42	65	75	90	54	48	60	18	32	44	44
2004	15	20	14	18	31	17	48	60	18	19	23	5	11	12	17	12
Percentage in London																
1983	10	36	59	66	43	17	53	52	34	22	34	29	34	28	28	23
2004	8	45	64	64	42	57	26	63	44	53	33	38	28	36	57	43
Percentage married same																
1983	99.7	96	86	70	94	96	95	99	88	100	99	99	99	99	99	99
2004	99	86	66	81	90	84	92	91	67	53	95	98	97	94	96	96

[a]The total percentage of immigrants is slightly higher than the sum of the origin percentages as some immigrants do not report country of origin.
Notes: All figures are population-weighted. Married includes cohabitees and is conditional on being married.
Source: Labour Force Surveys.

Bangladesh, EU countries, non-EU European countries[7] and Old Commonwealth countries all grew over this period, whilst the shares of black Caribbean, Irish and African-Asian immigrants and whites from New Commonwealth countries fell. Notice that the change in the composition of the immigrant population of working age may not only be due to immigration and demographic developments, but also to (differential) return migration.

Between 1983 and 2004, the median age of the immigrant population has remained constant at 38, whereas that of British-born whites has increased from 37 to 40.

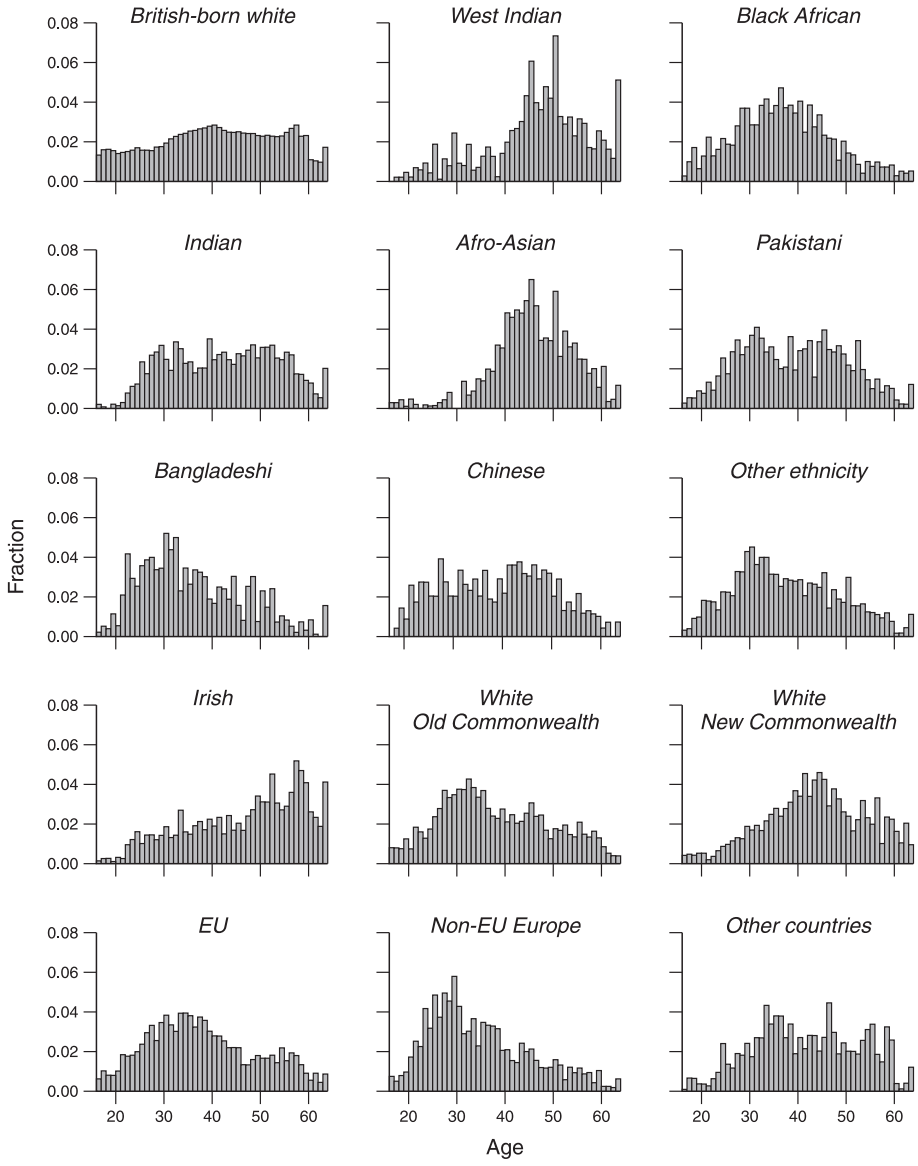
We also report in Table 1 the median number of years since migration for the total immigrant population, and distinguish between different origin groups, for the years 1983 and 2004. The average immigrant had already spent around 19 years in Britain in 1983 and around 15 years in 2004. This average conceals some large differences across the various groups, reflecting the history and geographic pattern of immigration into Britain over the past 50 years. Members of the West Indian community and whites from New Commonwealth countries have been in Britain the longest, around 37 years on average in 2004. They are followed by the African-Asian and Irish communities, with medians of 32 and 31 years of residence in 2004 respectively. The most recent immigrants, on average, come from Poland.

We report in the next panel of the table the age at which immigrants enter Britain. The numbers show that the median age at arrival of the working-age population residing in Britain in 2004 was 22. Again, there is large variation across the various immigrant groups that we identify. Looking at the distribution of age at entry, we find that 80 per cent of immigrants resident in 2004 came to Britain before the age of 30. Furthermore, around a third of all immigrants arrived as children (LFS, 2004), defined as individuals who arrived before the age of 16. Again, there is considerable heterogeneity across the different groups. Nearly half of all black Caribbeans and three-quarters of whites from New Commonwealth countries arrived as children, compared with 9 per cent and 6 per cent of immigrants from black Africa and non-EU Europe respectively. With the exception of the group of whites born elsewhere, the fraction of child immigrants has risen over time, presumably, in part, because the families of original immigrants become eligible for settlement.

[7]Within this group, Polish immigrants represent the largest portion (25 per cent), followed by immigrants from former USSR countries (18 per cent), from former Yugoslavia (16 per cent) and from Turkey (11 per cent).

FIGURE 3

Distribution of immigrants by age, 2004



Source: Labour Force Survey.

Figure 3 graphs the distribution of the various immigrant communities by age for the year 2004. Since the West Indian community and whites from New Commonwealth countries have been in Britain the longest, their age distribution is skewed to the right, with correspondingly fewer arrivals now

in their teens or twenties. In contrast, the age profiles of black African, Bangladeshi and non-EU European immigrants are skewed to the left, with much higher concentrations of individuals in the younger age range, reflecting their more recent entry into Britain.

Table 1 also outlines the different levels of educational attainment between immigrants and white British-born individuals, and across immigrant groups. It is apparent that the immigrant community as a whole is generally more educated than British-born whites. Among males in 1983, only 10 per cent of British-born whites had graduated, while this is the case for 14 per cent of the immigrant population. By 2004, the percentage of graduates had increased to 18 per cent in the British-born male white population and to 23 per cent in the male immigrant population. At the lower end of the education distribution, the relative numbers are quite similar: 45 per cent of British-born white men and 49 per cent of foreign-born men had no educational qualification in 1983; these numbers have dramatically decreased for both populations, to 13 per cent and 17 per cent respectively. This indicates a significant improvement in the lower end of the skill distribution of immigrants to Britain.

When we break down the numbers on educational attainment for male immigrants according to the various origin groups, we see that there have been significant improvements for nearly all groups at the lower end of the skill distribution. On the other hand, there are large differences in the percentages of graduates according to country of birth. For instance, only 4 (15) per cent of men from the West Indies had graduated in 1983 (2004), whereas 16 (24) per cent of male immigrants from India had a degree.

Several immigrant groups have a much greater proportion of graduates than British-born whites do, and a correspondingly lower share of those with no qualifications. In 2004, 32 per cent of white men from New Commonwealth countries living in Britain had a degree, compared with 18 per cent of British-born white men. In contrast, among men, the West Indian, Pakistani, non-EU European and, particularly, Bangladeshi communities had a lower proportion of graduates than the British-born white male community and a much larger share of individuals with no formal qualifications. Among non-EU Europeans, low levels of education can be found mostly among immigrants from Eastern European countries and Turkey. In 2004, 41 per cent of all male Bangladeshi immigrants had no formal qualifications, compared with 13 per cent of British-born white men and 10 per cent of men in the black African group. The shares of women in the Bangladeshi and Pakistani communities with no qualifications are more than twice those in the British-born white female community. For women, the differences across years and origin groups are similar to those for men, but the qualification levels are generally lower.

Another interesting feature revealed by Table 1 is the stark concentration of immigrants in the capital. In 2004, London contained around 13 per cent of the total population but more than 40 per cent of all immigrants. Comparing 2004 and 1983, the concentration of immigrants in the capital appears to have increased. As employment prospects, and particularly wage levels, vary between London and elsewhere, this regional concentration of immigrants has to be taken into account in the analysis of wage and employment differentials. We address this issue in Section IV.

The bottom two rows of Table 1 highlight the proportion of each group who have married within the same ethnic group. Around 14 per cent of immigrants have married outside their ethnic group. Amongst immigrants, marriage or cohabitation with someone from outside the ethnic group is quite common amongst members of the West Indian and Chinese communities and less so in the Pakistani and Bangladeshi communities.

3. Participation and employment

We next examine differences in labour force participation and employment between British-born whites and the foreign-born. We distinguish between foreign-born whites and foreign-born non-whites. We exclude students to remove any effects of increased participation in tertiary education. We define the participation rate as the ratio of economically active individuals to the total population. Economically active individuals include individuals currently unemployed but looking for a job. We define the employment rate as the ratio of individuals working to individuals participating. Accordingly, the unemployment rate equals one minus the employment rate and the inactivity rate equals one minus the participation rate. Our results are reported in Figures 4 (employment rates) and 5 (participation rates).

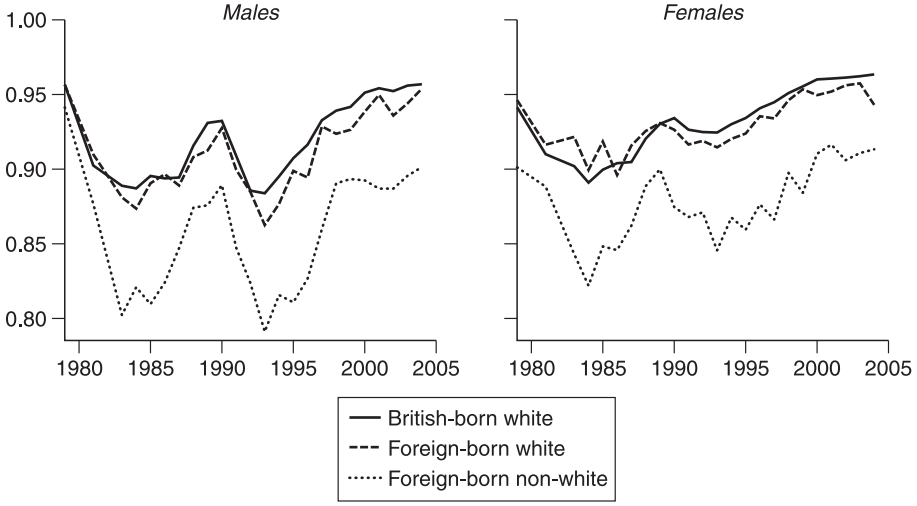
As Figure 4 shows, non-white immigrants have, on average, a dramatically lower employment rate than British-born white individuals. Employment rates for foreign-born whites are very similar to those for British-born whites. Differences are more accentuated for men than for women. For men, the employment gap does not appear to be present in the late 1970s, when information on immigrants was first collected in the LFS.

Over time, through two major economic recessions and subsequent recoveries, employment rates for non-white immigrants have displayed more volatility than those for British-born whites or white immigrants. In bad times, employment rates for non-white immigrants fall further, but recovery is also faster. This pattern, which holds for both males and females, is quite remarkable, and suggests that ethnic minority immigrants lose employment faster than British-born whites but also re-enter employment faster in an upward trend.

In Figure 5, we show participation rates for men and women, using the same grouping as for employment rates. Male participation rates are falling over the entire period considered, but they have fallen most amongst non-

FIGURE 4

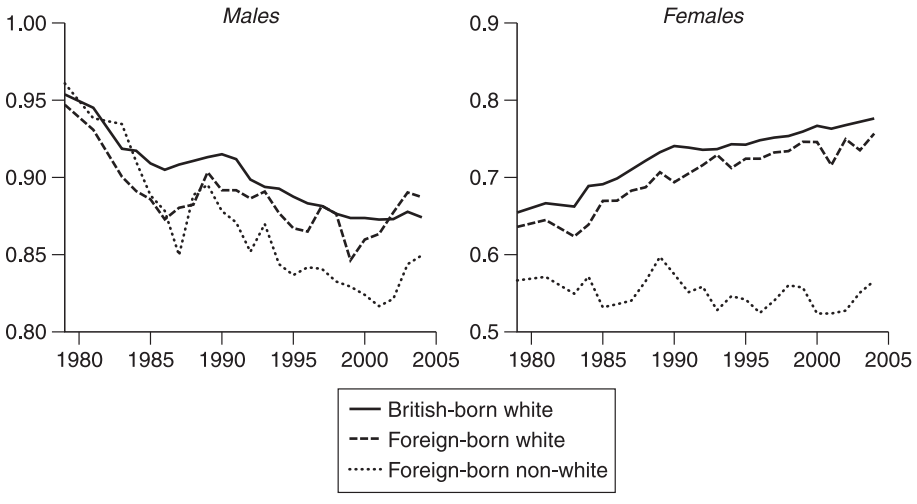
Employment rates: British-born whites and immigrants



Source: Labour Force Survey.

FIGURE 5

Participation rates: British-born whites and immigrants



Source: Labour Force Survey.

white immigrants. Especially in the 1990s, participation rates for non-white immigrants fell more sharply than those for white immigrants and for British-born whites. Notice, however, that the participation of white and non-white immigrants has recovered in the past five years. Amongst women, non-white immigrants have much lower participation rates than whites. Moreover, non-white immigrants do not, on average, appear to have contributed to the large rise in female participation over the last 25 years. These averages may be shaped by the changing composition of the immigrant population over time. As we show in Table 2, these averages also conceal large differences across different groups.

In Table 2, we report employment and participation figures for the different ethnic groups that constitute the non-white population. Employment and participation rates are lower among some communities, particularly black Africans, Bangladeshis and Pakistanis, than among others.

TABLE 2

Employment and participation rates for British-born whites and immigrants

Per cent

	British-born white	*West Indian*	*Black African*	*Indian*	*African-Asian*	*Pakistani*	*Bangladeshi*	*Chinese*	*Other ethnic minority immigrants*
Men									
Employment									
1979	96	95	90	96	92	91	100	100	94
1992	89	77	69	86	92	75	64	94	82
2004	95	90	86	96	94	90	86	94	89
Participation									
1979	95	96	98	96	97	98	93	100	95
1992	90	81	88	84	95	77	83	91	88
2004	87	81	90	86	90	80	85	92	82
Women									
Employment									
1979	94	91	88	91	90	68	67	98	91
1992	92	89	73	88	88	75	49	90	86
2004	96	89	88	93	96	79	88	93	89
Participation									
1979	65	78	74	54	66	15	24	53	50
1992	74	72	70	64	71	17	15	60	65
2004	78	83	64	62	69	23	18	72	58

Notes: Excludes those in full-time education. All figures are population-weighted.
Source: Labour Force Surveys.

The difference in participation between the Pakistani and Bangladeshi communities on the one side, and white British-born individuals and other communities on the other, is most dramatic for females. Less than one in four Pakistani and Bangladeshi women participate in the labour market in most years. Furthermore, of those who do participate, Pakistanis and Bangladeshis have the lowest employment rates.

4. Sector allocation and origin

What can explain the large variation in participation and employment rates, as well as the greater susceptibility to the economic cycle, amongst the non-white immigrant community? If certain groups were younger, had fewer qualifications or were resident in areas where labour demand was weak, then this could help explain these differences. For example, since minority groups tend to be younger, a higher share of these groups will be in the age range 16–24, an age group that is historically vulnerable to unemployment. Differential levels of educational attainment will also affect the chances of being in work. We investigate these issues in more detail in the next section, where we condition on individual characteristics, thereby adjusting for differences in socio-economic characteristics between the various immigrant groups and white individuals.

We first provide some descriptive information on immigrants' economic activity in Britain. We consider the occupational status of immigrants and compare it with that of British-born whites. Again, we look at these features at two points in time: 1979 and 2004. We report some summary statistics for men and women in Tables 3 and 4 respectively. We first discuss the results for males.

The first two rows of Table 3 outline the share of employed individuals in each group who are classified as self-employed. A greater proportion of immigrant males than of British-born white men are in self-employment. Splitting up these averages across ethnic groups shows considerable variation in self-employment rates, with larger concentrations of self-employed men among the Indian, African-Asian, Pakistani, Chinese, Irish and non-EU European communities.

Part-time work seems to be more widespread in the immigrant community, but again the patterns differ widely according to origin. A very high proportion of male immigrant employees from the black African, Pakistani, Chinese and especially Bangladeshi communities work part-time.

Temporary working appears highest among employees from Bangladesh and Europe outside the European Union. This may be explained in part by working-visa restrictions for citizens of countries from the latter group.

The next two panels of Table 3 investigate sector allocation of foreign-born and British-born male employees (i.e. conditional on being employed).[8] Between 1979 and 2004, there is a remarkable increase in the proportion of foreign-born individuals in the finance sector and in the health, retail and hotel/restaurant sectors.

The allocation to sectors differs quite substantially across origin groups. In 2004, more than half of all Bangladeshi men in employment work in the hotel and restaurant sector, compared with just 3 per cent of British-born whites. A large percentage of individuals from the Old Commonwealth work in the finance sector. Fifteen per cent of Indian employed men and 18 per cent of male employees from black Africa work in the health sector, compared with only 4 per cent of the British-born white population. For 2004, we also report the fraction of individuals working in the public sector. This is fairly equal for British-born whites and immigrants.

We report the results for women in Table 4. The large concentration of some groups in the health and education sectors is interesting. As for men, there is quite a lot of variation across origin groups. The strong concentration of females from some origin groups in the health sector is worthy of note. Nearly half of the women of black African origin work in this sector, compared with one in five of British-born white female employees. There is a similarly high concentration for women from the West Indies.

As for males, female immigrants from India, Pakistan and Bangladesh or of African-Asian descent were heavily concentrated in the manufacturing sector in 1979, but their concentrations have dropped considerably more in these sectors by 2004 than those of British-born whites. There is a relative increase in their concentrations in sectors such as health and finance.

Overall, the sectoral allocation of Britain's immigrants differs considerably by origin, with particular groups being very concentrated in some sectors. Furthermore, over the last two decades, the sector allocation has changed substantially, with a movement away from manufacturing, and into finance and health, in particular for women.

[8]Sector allocation of the self-employed is investigated in Table 5 later.

TABLE 3

Employment patterns of immigrants and British-born whites in Britain: men (population of working age)

Per cent

	British-born whites	*Immigrants*	*West Indian*	*Black African*	*Indian*	*African-Asian*	*Pakistani*	*Bangladeshi*	*Chinese*	*Other non-white*	*Irish*	*Old Comm.*	*New Comm.*	*EU*	*Non-EU European*	*Other white*
Self-employed																
1979	9	10	3	2	11	9	10	12	27	10	9	9	15	16	9	11
2004	16	17	16	6	18	22	28	11	21	13	25	16	17	14	29	16
Part-time																
1979	0.5	1	0.5	1	0.2	0.4	1	2	2	2	1	1	1	2	1	n/a
2004	8	11	9	16	11	4	14	29	17	14	5	9	8	8	9	11
Temporary																
2004	5	9	9	13	13	2	5	15	6	12	4	11	3	7	15	5

	British-born whites	*Immigrants*	*West Indian*	*Black African*	*Indian*	*African-Asian*	*Pakistani*	*Bangladeshi*	*Chinese*	*Other non-white*	*Irish*	*Old Comm.*	*New Comm.*	*EU*	*Non-EU European*	*Other white*
Industry sector, 1979																
Manufacturing	40	44	52	41	55	71	44	65	13	30	36	29	32	47	60	30
Construction	9	8	8	3	4	1	1	n/a	1	3	23	5	6	4	7	4
Transport	9	10	15	15	13	11	10	6	3	7	10	12	9	6	7	4
Retail	8	7	4	9	8	4	19	9	6	6	5	9	10	7	3	7
Hotel/Restaurant	0.5	4	1	5	2	1	1	12	50	6	1	2	5	14	2	3
Finance	4	3	1	3	1	3	6	n/a	n/a	6	2	4	5	2	1	4
Education	4	3	1	3	1	2	1	n/a	3	5	2	12	5	3	5	6
Health	2	4	2	5	5	2	4	6	5	12	2	5	4	3	2	1
Industry sector, 2004																
Manufacturing	22	16	22	7	21	15	27	9	8	16	14	11	18	18	16	15
Construction	10	5	7	2	4	7	1	1	1	1	19	6	4	4	14	5
Transport	10	10	18	14	10	16	13	5	10	8	14	7	10	9	10	8
Retail	15	13	13	16	10	24	17	15	7	13	9	11	10	12	15	6
Hotel/Restaurant	3	10	4	5	9	n/a	9	57	25	10	5	4	4	11	13	12
Finance	15	20	12	21	20	19	16	6	19	23	13	29	22	23	15	29
Education	5	6	7	7	3	4	3	1	8	5	6	8	6	7	6	10
Health	4	9	9	18	15	5	5	1	11	12	7	6	7	6	3	7
Public	12	9	6	9	6	6	7	5	9	9	10	14	17	9	5	7

TABLE 4

Employment patterns of immigrants and British-born whites in Britain: women (population of working age)

Per cent

	British -born whites	*Immigrants*	*West Indian*	*Black African*	*Indian*	*African-Asian*	*Pakistani*	*Bangladeshi*	*Chinese*	*Other non-white*	*Irish*	*Old Comm.*	*New Comm.*	*EU*	*Non-EU European*	*Other white*
Self-employed																
1979	2	2	1	n/a	3	2	n/a	n/a	6	2	1	2	3	3	2	2
2004	6	9	3	2	7	17	5	11	11	7	5	11	9	10	18	15
Part-time																
1979	39	33	27	28	16	20	22	n/a	23	31	51	28	30	36	38	27
2004	40	26	21	22	22	32	16	10	30	22	33	26	34	34	29	34
Temporary																
2004	6	11	6	16	9	5	9	11	15	11	3	14	10	12	16	8

	British -born whites	*Immigrants*	*West Indian*	*Black African*	*Indian*	*African-Asian*	*Pakistani*	*Bangladeshi*	*Chinese*	*Other non-white*	*Irish*	*Old Comm.*	*New Comm.*	*EU*	*Non-EU European*	*Other white*
Industry sector, 1979																
Manufacturing	25	30	33	26	58	45	54	50	10	22	24	10	24	27	11	16
Retail	17	10	7	5	5	n/a	18	25	7	12	10	8	9	13	12	12
Hotel/Restaurant	5	6	2	4	1	n/a	n/a	25	42	4	4	3	7	7	3	3
Finance	6	4	3	1	2	n/a	6	n/a	7	8	3	9	6	5	3	10
Education	14	10	5	6	2	4	n/a	n/a	2	7	14	18	9	15	10	14
Health	9	18	32	40	12	4	9	n/a	15	22	19	22	13	13	6	7
Industry sector, 2004																
Manufacturing	8	7	2	3	16	10	8	10	2	7	7	6	5	9	7	7
Retail	17	13	6	13	16	21	17	17	9	12	9	11	8	5	5	7
Hotel/Restaurant	5	6	3	8	4	1	4	10	28	6	5	3	2	7	12	6
Finance	14	17	13	10	14	17	9	19	20	14	15	24	17	20	20	18
Education	15	14	15	4	13	9	23	23	9	11	19	17	19	16	10	17
Health	20	24	41	47	20	18	21	12	17	34	29	16	25	12	14	15
Public	13	11	18	7	11	19	15	8	11	8	11	13	15	9	9	7

Notes to Tables 3 and 4: All figures are population-weighted and exclude those in full-time education. Figures on self-employed, part-time and temporary work are percentages of all individuals in paid work. Figures on industry sector are percentage of all employees in each origin category. Part-time workers are all employees.
Source to Tables 3 and 4: Labour Force Survey.

IV. Economic performance of British-born and foreign-born individuals

We have illustrated in the previous section that rates of employment, unemployment and economic activity differ substantially between foreign-born and British-born individuals. We have also demonstrated large differences with respect to some key characteristics, and even larger differences in individual characteristics, as well as in economic outcomes, across groups of different origins. Some of the difference in economic performance between British-born whites and the different groups of foreign-borns may be explained by differences in individual characteristics. We address this issue in this section.

We analyse how different immigrant groups differ from British-born whites, and how these differences change when we compare individuals with the same set of observable characteristics. We use regression analysis to control for differences in observable variables, such as age, education and region of settlement.

The first two performance indicators we analyse are employment and labour force participation. We then investigate the differences in self-employment probabilities between the different immigrant groups and British-born individuals. Finally, we look at wages. In our analysis, we shall distinguish between males and females. Furthermore, as mentioned above, we will focus the discussion on differentials between the various immigrant groups, all relative to white British-born individuals, conditional and unconditional on regional and individual characteristics. We use graphical representations to display our results.

The period we consider in our analysis is the last 13 years of the LFS: 1992 to 2004. There are two reasons for this. First, more recent data may give us more appropriate answers to current-day questions related to immigration. Second, in 1992, the Labour Force Survey was converted from a yearly cross-sectional survey data-set into a quarterly rotating panel, where each individual participates for five consecutive quarters. Furthermore, information on wages – which form the most important indicator for economic success – is only available for this period. Individuals are asked about their earnings in the last quarterly wave from 1992 to 1996, and in the first and the last waves of the survey from 1997 onwards.

The graphs we present report regression-based estimates of the differential effects of the respective outcome between an immigrant of a respective group (as indicated in the graphs) and a white British-born individual. White British-born individuals are represented by the horizontal line through zero. The entries in the graphs represent the point estimate of the difference between the respective immigrant group and British-born

whites, and the 95 per cent statistical confidence interval, which is represented by a vertical line.

Immigrants from Eastern European 'new accession' countries (as of 2004) and candidate countries for future accession are not all identifiable in the LFS before 1998.[9] In most of our analysis, we aggregate these countries together with other non-EU European countries (Israel, Albania, Switzerland, Norway, other former Yugoslavia, other former USSR and other Europe) into the category 'non-EU Europe'. In addition, we estimate outcome differentials from 1998 to 2004, where we compare immigrants only from accession countries with British-born whites. We discuss the results from these estimates in the text. Note, however, that this period includes mainly pre-accession years; the results should therefore not be interpreted as outcome differentials between British-born whites and new immigrants from the accession countries post-accession. The data available are still not sufficient to perform robust analysis on the latter group, as we only have less than one year of LFS data available to date. Regression specifications are otherwise the same as for the full sample.

The upper panels of Figures 6 to 9 report results for males and the lower panels report results for females. The left-hand panels report unconditional differences which only correct for changes over time (the numbers refer to a base year, which we choose to be 1992). Part of these differences could still be due to differences in the age composition, education or regional distribution between immigrants and British-born individuals. Therefore, in the right-hand panels of the graphs, we report differences that compare an immigrant from a respective ethnic group with a white British-born individual of the same age, education and regional distribution.

Full specifications of our regressions and results are reported in the tables in the Appendix.

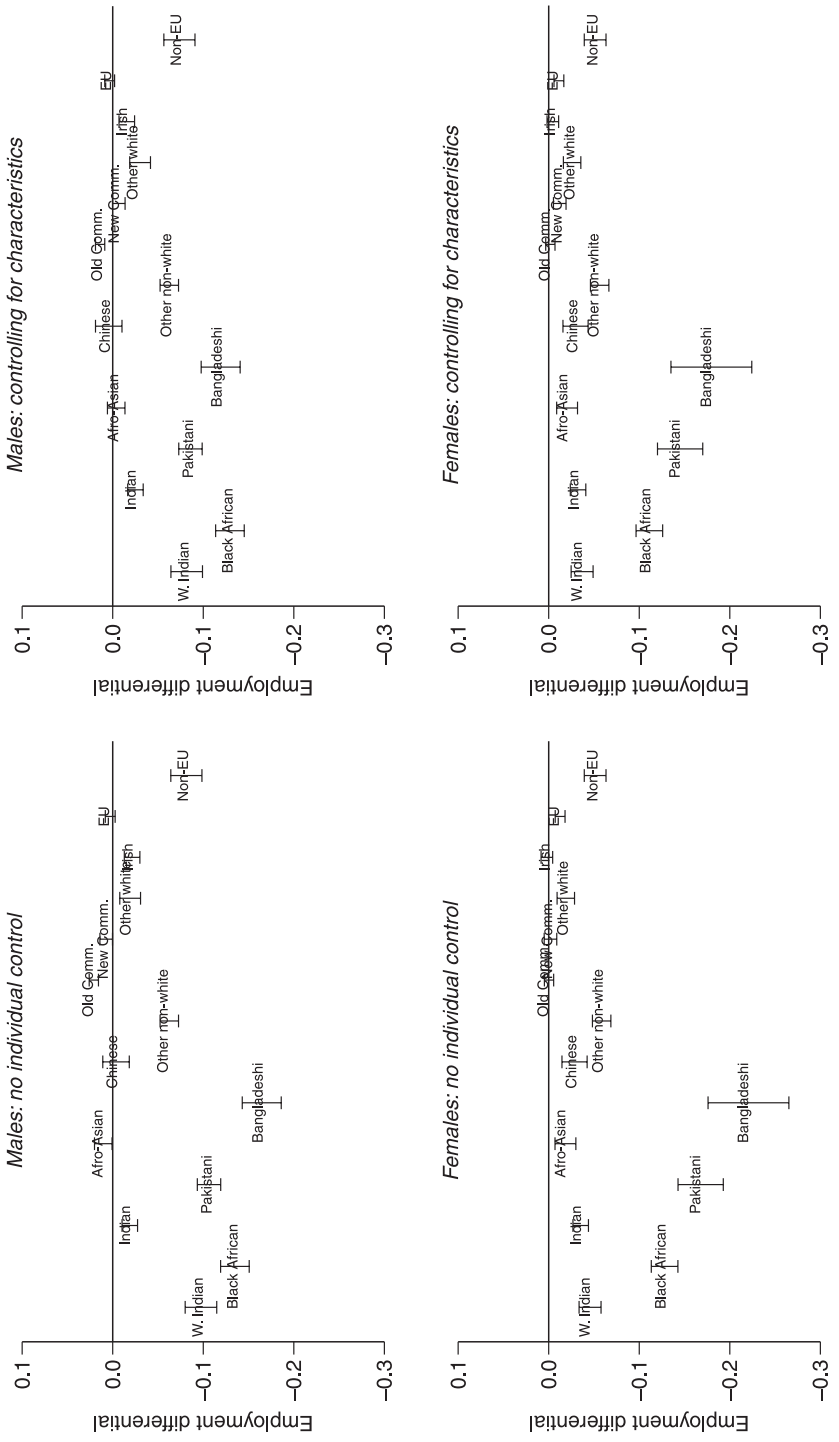
1. Employment

We commence by discussing employment probabilities (defined as the probability of an individual being employed rather than unemployed) for males (upper two panels in Figure 6). We have ordered the origin countries such that ethnic minority immigrants are in the left-hand area of the graphs and white immigrants are in the right-hand area. The upper-left graph reports simple average differences, where we only condition on time effects, which include the year of the survey and the quarter of the interview (first column in Table A1).

[9]Eastern European 'new accession' countries as of 2004 are the Czech Republic, Slovakia, Slovenia, Hungary, Poland, Estonia, Latvia and Lithuania. Candidate countries are Bulgaria and Romania.

FIGURE 6

Employment differentials: immigrants and white British-born individuals



The entries indicate that individuals from the black Caribbean, Pakistani, black African and Bangladeshi communities have significantly lower employment probabilities than most white immigrants, who are similar in this respect to the British-born white population. Exceptions are white individuals from non-EU European countries.

In the upper-right graph, we report results where we keep location choice and individual characteristics constant. We therefore compare male immigrants and white British-born men with the same age and education who are located in the same region (second column in Table A1). Coefficient estimates change slightly, and the difference from the white British-born population narrows for the Bangladeshis.

Figure 6 indicates that some immigrant groups have substantially lower probabilities of being employed than white British-born individuals. The five most disadvantaged groups are black Caribbeans, black Africans, Pakistanis, Bangladeshis and non-EU Europeans. Among non-EU Europeans, immigrants from 'new accession' and candidate countries have a smaller (but still significant) disadvantage, of 2 percentage points, than the 6 percentage point disadvantage of the other non-EU European group. On the other hand, most white immigrants, and immigrants from the Indian, Chinese and Afro-Asian communities, have virtually identical employment probabilities to the white British-born.

We report the results for females in the lower two panels of Figure 6 (third and fourth columns in Table A1). The picture that emerges is quite similar to that for males, but the divergence across the different groups is larger. Again, the most disadvantaged groups are Pakistanis, Bangladeshis, black Africans and, to a minor extent, black Caribbeans. Also again, most white immigrant groups are very similar to British-born whites.

2. Participation

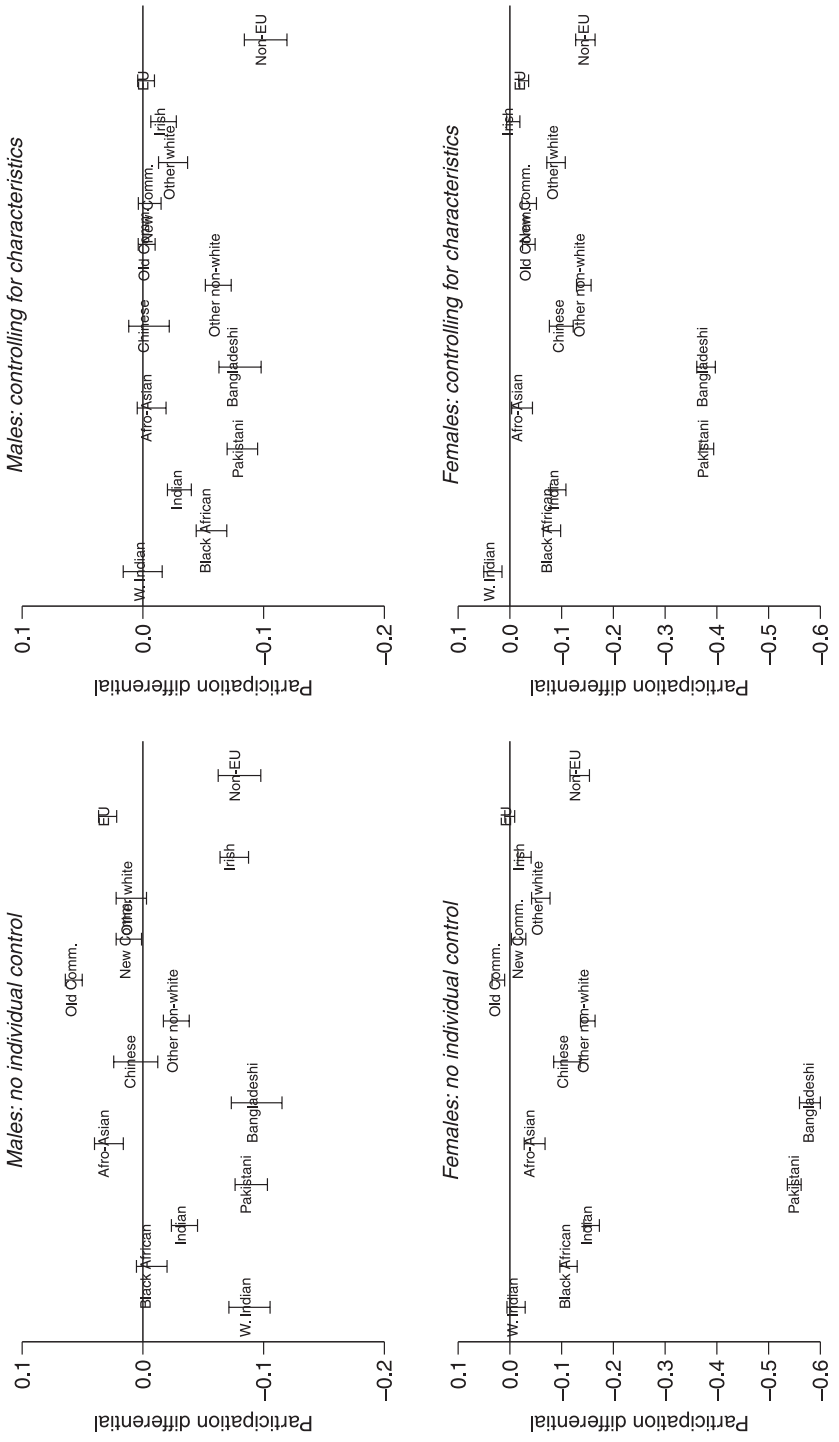
Above, we investigated the probability of an individual being in employment, given that he or she is in the labour force. We now look at the individual's decision on whether or not to participate in the labour market. Both employed individuals and those who are unemployed but looking for a job fall into the category of participation; individuals who are not employed and not looking for a job are economically inactive.

In Figure 7, we report participation differentials between British-born whites and the foreign-born. The structure of the graph is the same as for the employment one. More detailed regression results, on which these graphs are based, are presented in Table A2.

For males, the unconditional participation probabilities (upper-left panel) for many immigrant groups are significantly lower than those for the British-

FIGURE 7

Participation differentials: immigrants and white British-born individuals



born white population. The differentials are quite substantial, with, for instance, black Caribbeans, Pakistanis and Bangladeshis having participation probabilities that are about 8–10 percentage points lower than those for British-born whites; white Irish and non-EU Europeans have similarly low participation probabilities. However, among non-EU Europeans, the differential is smaller for 'new accession' and candidate countries (3 percentage points) than for other Europeans (8 percentage points).

There is quite some change in differentials across groups once we condition on region and individual characteristics (upper-right panel), suggesting that differences in observables explain some of the differences in the previous panel. However, many immigrant groups still have participation probabilities that are about 9 percentage points lower than those for white British-born individuals. Again, Pakistanis, Bangladeshis and white Europeans from outside the EU have the lowest participation probabilities. However, when we distinguish between 'new accession' and candidate countries and other non-EU European countries, we again find that the differential in participation is lower for the former group, at 4 percentage points, than for the latter, at 10 percentage points. The participation probabilities of some other groups, such as the black Africans, whites from Old Commonwealth countries and Afro-Asians, deteriorate relative to those of British-born whites, suggesting that education or age structure as well as regional allocation may boost their relative participation probabilities on average.

Overall, these results suggest that characteristics such as education and age and regional distribution only explain a small part of participation differentials. Differences in observables favour some immigrant groups. Among some ethnic communities, a far larger proportion of male immigrants than of British-born whites with the same demographic characteristics are economically inactive.

More dramatic is the comparison for females. Here, individuals from the Pakistani and Bangladeshi communities clearly stand out, with unconditional participation probabilities that are more than 50 percentage points lower than those of native-born whites. But also other groups, such as black Africans, Indians and the Chinese, have substantially lower participation probabilities. The conditional estimates in the lower-right panel change this picture only slightly. The differential for Pakistani and Bangladeshi women reduces now to 38 percentage points, suggesting that some of the overall disadvantage for these groups is explained by unobservables. However, the remaining differences are still substantial. Among non-EU Europeans, and similarly to males, participation differentials are smaller for immigrants from 'new accession' and candidate

countries (7 percentage points) than for other non-EU Europeans (15 percentage points). Significant and sizeable differences remain for some of the other groups of women once we condition on observables.

3. Self-employment

We now turn to self-employment, again using British-born whites as a reference group. We also investigate sectoral allocation of the self-employed, to see whether immigrants' activities in self-employment are concentrated in the same sectors as British-born individuals' activities.

It is not unreasonable to hypothesise that some immigrant groups may have a comparative advantage in engaging in certain self-employment activities – it is well known, for instance, that the arrival of Indian restaurants has changed the standards of English cuisine, with some dishes of clearly Indian origin considered as national dishes today. Expertise and know-how in this sector are unlikely to be challenged by British-born white individuals. Furthermore, immigrants may also have an advantage when catering for other immigrants – they may be more skilled in understanding their preferences and tastes than individuals from the white British-born community.

This last point has been put forward by Borjas (1986) in an early comparison of self-employment probabilities for individuals from distinguishable groups in the same country. He analyses differences in self-employment propensities between foreign-born and US-born workers, using US census data, finding that immigrants are more likely to be self-employed than US-born individuals with similar levels of skills. Borjas explains this with what he calls *enclave effects*: immigrants create enclaves by concentrating in geographical areas; such enclaves then provide self-employment opportunities for other members of the respective ethnic group. In these enclaves, US-born individuals lack knowledge of language and preferences of potential customers and therefore have a disadvantage when competing for the same self-employment opportunities.

Borjas and Bronars (1989) extend this analysis. They do not separate according to immigration status but according to race and ethnic affiliation. Across ethnic/racial groups, they find that minorities have lower rates of self-employment. If self-employed, they have lower incomes than white self-employed workers. The authors explain these findings by consumer discrimination that reduces the gains from self-employment for minorities.

This evidence from the US suggests that individuals from minorities have a general disadvantage when they compete for self-employment opportunities against individuals from majorities with the same characteristics and in the same sector. This disadvantage is reinforced if potential customers discriminate against self-employed minority workers.

However, individuals from minorities may have advantages over majorities in self-employment sectors where customers discriminate against majorities. This could, for instance, be the case when potential customers are mainly from minority groups, or where minority individuals have clear technological advantages in production.

We commence our analysis by investigating the choice of sector for British-born white and immigrant self-employed men; we break the immigrant sample down further into white immigrants and minority immigrants, and consider some origin countries in more detail (see Table 5). White British-born individuals are heavily concentrated in construction, which is the largest sector, with 32 per cent, followed by banking, finance and insurance (17 per cent) and distribution, hotels and restaurants (16 per cent). This pattern contrasts sharply with the overall sector allocation of immigrants, who are heavily concentrated in distribution, hotels and restaurants – 31 per cent of self-employed immigrants are active in this sector. When we further distinguish between white and ethnic minority immigrants, we see that it is mainly ethnic minority individuals who are

TABLE 5

Self-employment sector choice: British-born white and immigrant men

Per cent

	White British-born	*Immigrants*	*White immigrants*	*Minority immigrants*	*Pakistani*	*Chinese*	*African-Asian*	*Indian*	*Irish*
Agriculture and fishing	6.8	1.5	2.8	0.13	–	0.15	0.73	–	2.1
Energy and water	0.30	0.28	0.34	0.22	–	0.15	0.07	0.45	0.24
Manufacturing	8.0	6.3	7.5	5.0	3.8	3.1	6.8	6.9	4.6
Construction	31.8	16.2	24.1	8.0	3.0	1.6	6.6	11.0	54.6
Distribution, hotels and restaurants	16.4	30.6	19.1	42.7	34.2	76.1	50.8	42.2	9.3
Transport and communication	7.2	11.9	5.5	18.6	46.4	4.3	4.9	9.8	5.2
Banking, finance, insurance etc.	17.3	18.0	22.2	13.5	6.9	7.3	15.9	13.5	10.2
Public administration, education and health	4.8	7.5	7.6	7.4	3.4	4.9	10.1	12.1	6.3
Other services	7.4	7.5	10.6	4.2	2.1	2.1	4.1	4.1	7.4
Workplace outside UK	0.04	0.25	0.33	0.18	0.19	0.30	0.07	–	0.19

Note: Figures are percentages of all self-employed individuals in each origin category.
Source: Labour Force Survey, 1992–2004.

concentrated in this sector – the concentration of white individuals is more spread out and not too dissimilar from that of the white British-born.

Also in Table 5, we consider four groups of ethnic minority immigrants who are strongly represented in the self-employment sector: Pakistanis, Chinese, Asians of African origin and immigrants from India. The large concentration in distribution, hotels and restaurants is visible for all groups, but very strong for the Chinese and the African Asians. There are also interesting differences between the groups. Most notable is the large percentage of Pakistanis who are active in the transport and communication sector. In the last column of the table, we present the sector allocation for an interesting group of white immigrants: the Irish. They are heavily concentrated in construction, with 55 per cent being active in this sector. Overall, these numbers indicate a very unequal distribution of individuals of different ethnic origins in different self-employment occupations.

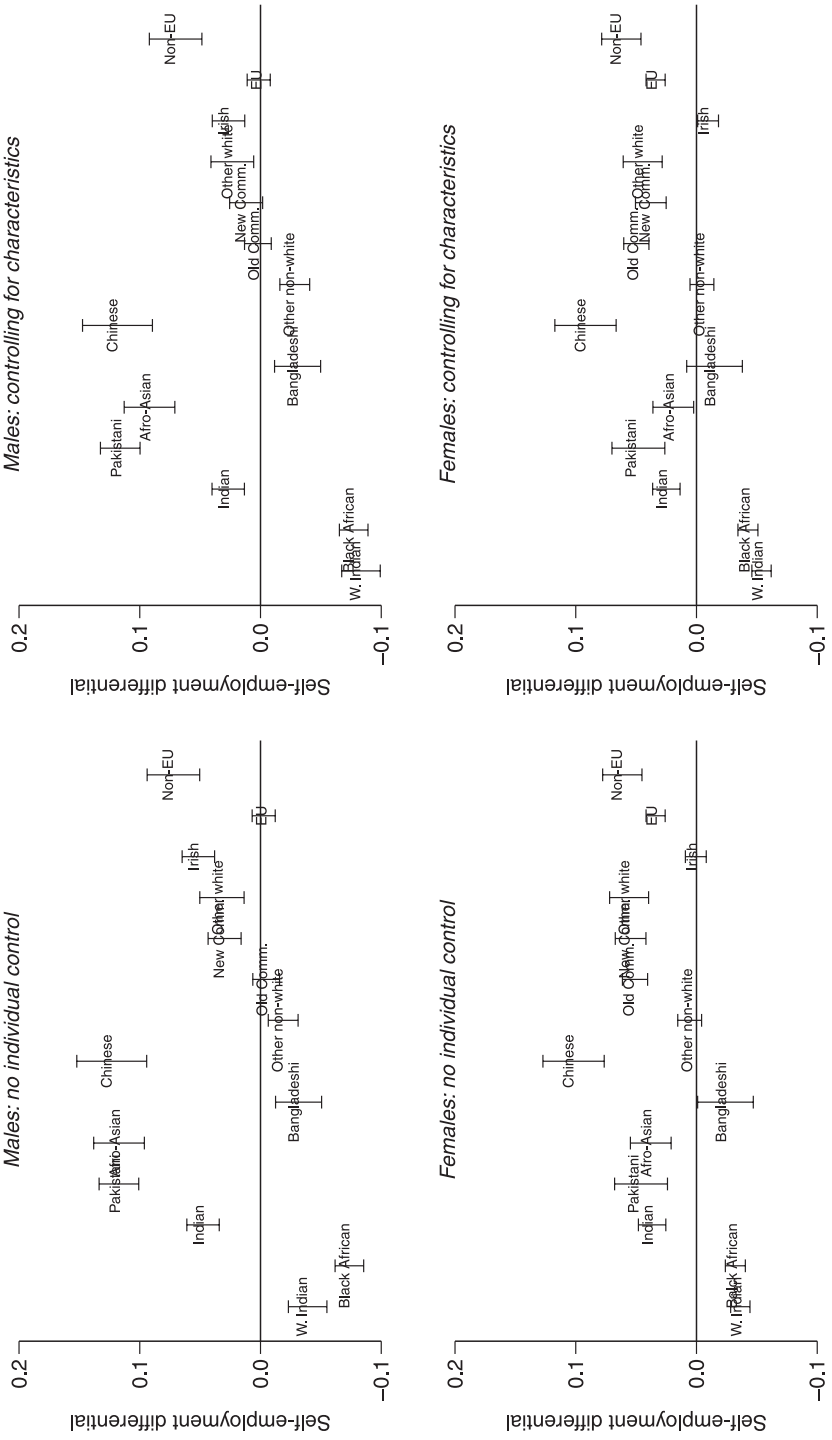
While the figures in Table 5 were conditional on being self-employed, we now compare overall self-employment probabilities for immigrants with those for British-born whites, where we distinguish, as before, between different origin countries.

The graphs in Figure 8 show the probabilities of being self-employed for immigrants of different origins, relative to British-born whites. The presentation of results is the same as in the previous subsections on employment and participation, with more detailed regression results being presented in Table A3. Entries differ quite considerably for immigrants of different origins. For the male sample, it seems that individuals from the Pakistani, Chinese and Afro-Asian communities have the highest probabilities of being engaged in self-employment activities. In general, the variation in probabilities is much greater for individuals from ethnic minority groups (in both directions), while white immigrants are quite homogeneous in this respect and show self-employment probabilities that are hardly different from those of British-born whites. Immigrants from non-EU European countries are an exception. More detailed analysis within this group shows that self-employment probabilities are 5 percentage points higher for immigrants from 'new accession' and candidate countries and 9 percentage points higher for other Europeans, compared with British-born whites. For both immigrant groups, these differentials are significant. There are only slight differences between the conditional and unconditional results for all immigrant groups.

The graphs for women are interesting. Females from nearly all immigrant groups, including the white immigrants, exhibit larger probabilities of being self-employed than the white British-born reference group. The overall pattern of self-employment probabilities is not dissimilar from that for

FIGURE 8

Self-employment differentials: immigrants and white British-born individuals



males, where the Chinese have the highest probabilities of engaging in self-employment activities and black individuals from the Caribbean and Africa have the lowest probabilities. Similar to males, the white foreign-born groups are quite homogeneous.

These findings suggest large differences in self-employment probabilities as well as self-employment sector choice between immigrants and British-born whites, as well as across the different immigrant origin groups. The findings are consistent with the hypothesis that immigrants have an advantage over majorities in self-employment sectors where customers discriminate against majorities – such as the distribution, hotels and restaurants sector, where we see a heavy concentration of immigrants from certain minority groups. Future work should investigate this in more detail.

4. Wages

We now turn to analysing wage differentials between immigrants and white British-born individuals. Over the last 13 years, the quarterly LFS has contained information on gross hourly wages (obtained from information on gross weekly wage and number of hours worked weekly), but only for the fifth quarterly wave (1992–96) or for the first and fifth quarterly waves (1997 onwards). The database is now sufficiently large to analyse wages for different immigrant groups. The breakdown according to origin seems to be very important in the British case, since the economic behaviour of the immigrant population is so heterogeneous, as we have illustrated above. Our measure for earnings is the gross hourly wage.

Again, we commence by investigating the differences in wages between different immigrant groups and British-born white individuals, estimating similar models to those above. We use the same graphical presentation for the relative earnings advantages or disadvantages of the foreign-born, and the same origin classification as above.

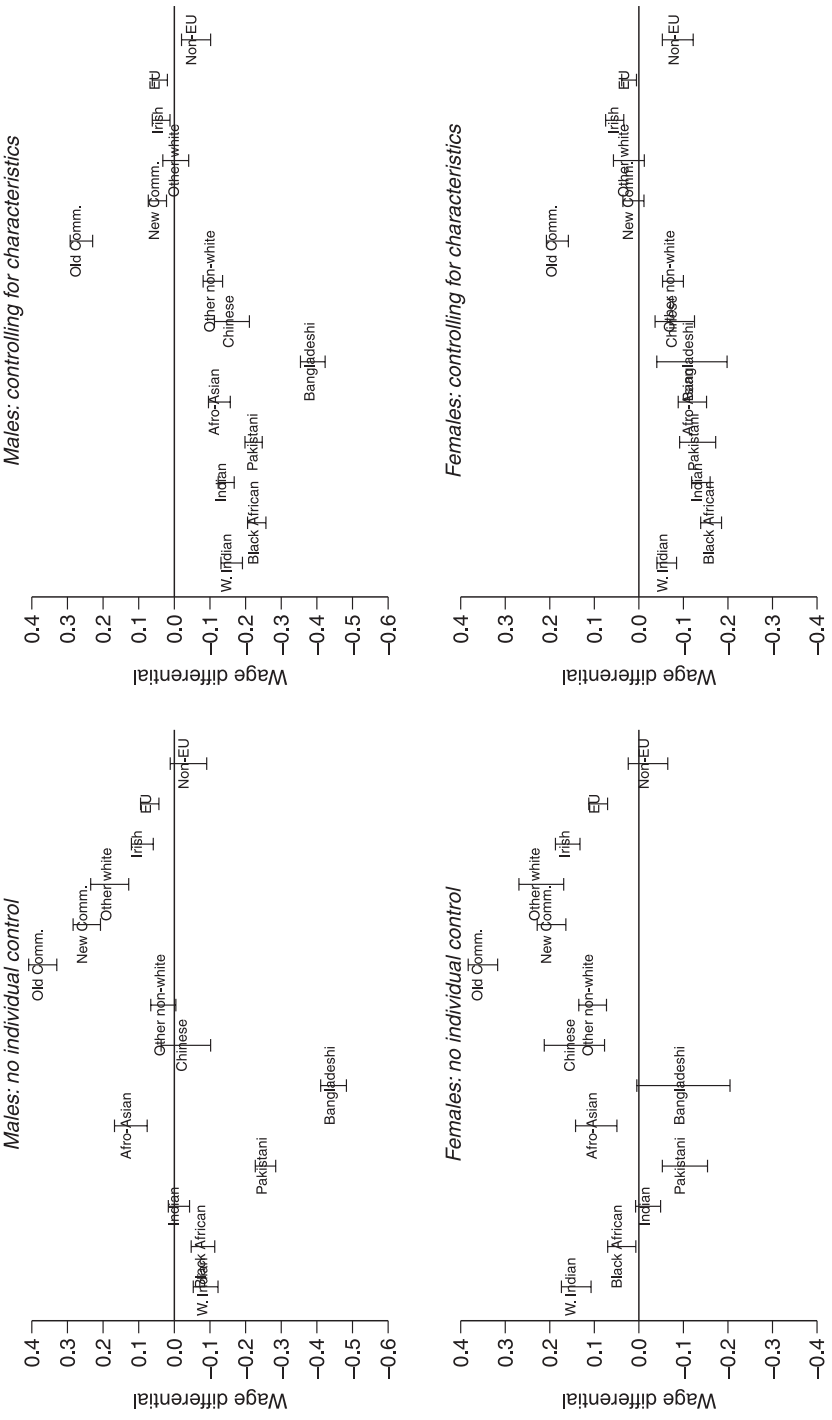
Notice that, although we report results where we condition on individual characteristics, we do not include the years of residence in the regressions. As a consequence, the coefficients we obtain compare British-born individuals and foreign-born individuals with the same characteristics, where the foreign-born are evaluated at the average number of years of residence in Britain for the respective group.

Figure 9 summarises our main results. More detailed regression results, on which these graphs are based, are presented in Table A4. We first discuss the male immigrants.[10]

[10]We compute percentage differences in wages as $\left(e^{\hat{\beta}}-1\right)\times 100$, where $\hat{\beta}$ is the estimated parameter of the respective origin dummy.

FIGURE 9

Wage differentials: immigrants and white British-born individuals



The upper-left panel reports unconditional results. The most obvious feature of the graph is the apparent difference between ethnic minority immigrants and white immigrants, with large wage advantages for some white immigrant groups and large disadvantages for some ethnic minority groups. The wage differences between non-white immigrants and the white British-born increase for most groups when we condition on individual characteristics and regional distribution, which is explained to some extent by the fact that ethnic minority immigrants are concentrated heavily in high-wage areas such as London. Conditional on individual characteristics and region, all non-white immigrant male groups have average wages that are more than 10 per cent lower than those of the white British-born population.

The differentials for some ethnic minority groups are substantial. Unconditional on individual characteristics and region, Bangladeshis and Pakistanis earn respectively about 44 per cent and 25 per cent lower wages than white British-borns; when we condition on individual characteristics and region, these differences reduce to 38 per cent and 22 per cent, which are still large. On the other hand, white immigrants earn similar wages to comparable British-born men, with some groups earning significantly higher wages, even conditional on observed characteristics. For instance, individuals from the Old Commonwealth countries earn, on average, 26 per cent higher wages than comparable British-born individuals. Non-EU Europeans are the only white immigrants with an earnings disadvantage with respect to white natives. However, this disadvantage is driven solely by Europeans not from 'new accession' or candidate countries; immigrants from 'new accession' and candidate countries do not perform significantly differently from white natives.

For women, the patterns are similar but the overall differentials are smaller. There is a large change in numbers when we condition on observables – again, this is largely due to immigrants, in particular those from ethnic minority populations, being concentrated in London and other metropolitan areas where wages are higher. As for men, we see again a divide between immigrants from minority groups and white immigrants in their wage position relative to white British-born individuals. Immigrants from all the minority groups have, on average, lower wages than white British-born females, adjusting for observable characteristics and region, while immigrants from most white groups have higher wages, except for immigrants from non-EU European countries. However, as for men, there is no significant disadvantage for female immigrants from 'new accession' and candidate countries.

V. Summary and conclusions

This paper provides a comprehensive picture of the labour market outcomes of immigrant groups in Britain relative to the British-born white population, today and over the last two decades. Drawing on data from the Labour Force Survey over the period from 1979 to 2004, we describe basic features of foreign-born individuals in Britain, their allocation to different labour market segments, how their employment and participation probabilities have changed over time, and how particular outcomes compare with those for British-born whites. Four indicators of economic performance are investigated in more detail, pooling data over the last decade: (i) employment; (ii) labour force participation; (iii) self-employment; and (iv) wages. Our analysis distinguishes between males and females and between groups of different origins.

Our main findings can be summarised as follows:

- More than one-third of all working-age immigrants living in Britain in 2004 have arrived over the last 10 years. The composition of the immigrant population over the last two decades has changed, with many of the recent arrivals coming from the Old Commonwealth, European Union countries and non-EU European countries (Poland in particular).
- In 2004, foreign-born individuals constituted about 10.5 per cent of the working-age population in Britain. On average, immigrants living in Britain in 2004 have spent 15 years here, but there are large differences across the different origin groups.
- Many immigrants arrive at a very young age: of the working-age population in 2004, about 27 per cent arrived before the age of 16.
- The immigrant community as a whole is well educated. In 2004, there were 5 per cent more graduates among immigrant men than among white British-born men. There is, however, large variation according to country of birth.
- Immigrants are heavily concentrated in the capital. In 2004, 8 per cent of British-born whites of working age lived in London, compared with 45 per cent of the foreign-born. The concentration of foreign-born individuals in London increased between 1983 and 2004.
- Employment and participation rates of foreign-born ethnic minority individuals are considerably lower than those of British-born whites. These differences have increased substantially since 1979. Employment and participation of minority immigrants are more volatile over the economic cycle. The labour market outcomes of foreign-born white immigrants are very similar to those of British-born white individuals. Women from the Bangladeshi and Pakistani communities have the lowest participation rates among ethnic minority individuals.

- Sector allocation differs substantially across immigrant communities.

Investigating the economic performance of foreign-born individuals compared with British-born whites, we look at employment, participation, self-employment and wages. The analysis distinguishes between different origin groups and between men and women, with and without conditioning on socio-economic characteristics and regional distribution. Our main findings can be summarised as follows:

- Comparing white British-born individuals with immigrants of the same age, education and geographical distribution, we find that white immigrants have similar employment probabilities to British-born whites. Minority immigrants have, on average, lower employment probabilities, with black Africans, Bangladeshis, Pakistanis and black Caribbeans being the most disadvantaged. This is true for both men and women.
- Participation rates differ substantially between immigrant communities, with some (predominantly the white communities) being similar to British-born whites, and others (predominantly immigrants from some ethnic minority communities) having substantially lower participation probabilities, even if we allow for differences in socio-economic characteristics and regional distribution. Pakistanis, Bangladeshis and white immigrant men from other European countries (excluding 'new accession' and candidate EU countries) are the most disadvantaged groups.
- Turning to self-employment, there is a strong concentration in particular sectors, depending on origin. Among self-employed male immigrants from the ethnic minority communities, 43 per cent are active in the distribution, hotels and restaurants sector (compared with 16 per cent in the British-born white population). White immigrants are concentrated in the construction sector, the banking, finance and insurance sector and the distribution, hotels and restaurants sector. Compared with British-born whites with the same characteristics, white male immigrants have slightly higher probabilities of being self-employed. There is large variation across minority immigrants: while Pakistanis, Afro-Asians and the Chinese are more likely to be self-employed, black Caribbeans and black Africans are less likely to be self-employed, compared with white British-born individuals.
- For wages, there is a dividing line between white and non-white immigrants. While individuals from most white immigrant communities have, on average, higher wages than British-born whites with the same characteristics, immigrants from all ethnic minority communities have lower wages. This is true for both men and women, with the differences

being more accentuated for men. Wage differentials are substantial, reaching about 40 per cent for male Bangladeshis.

Possibly the strongest finding of this paper is that immigrants in Britain are far from homogeneous. Immigrants of different origins differ substantially with respect to their education and age structure and their regional distribution, sector choice and time of residence in Britain. But these observable differences explain only a part of the differences in economic outcomes. We do not have a simple answer for why there are large remaining differences between immigrants of different origins, conditional on observable characteristics. One reason may be language proficiency. Results from Dustmann and Fabbri (2003) indicate that language proficiency is lowest among those groups that exhibit the largest disadvantages in the labour market, and that language is an important determinant for economic success. More and better data, which allow language ability to be linked to economic outcomes, would be helpful to quantify more precisely the degree to which the disadvantages of some groups relate to language.

Other reasons for the relative disadvantages of some groups may relate to culture and religion. The very low participation probabilities of Bangladeshi and Pakistani women may be partly explained by these factors.

Reasons for the divergence in economic success may also relate to discrimination. Our analysis is not intended to investigate this issue and does not provide any hard evidence for this hypothesis. But the large differences in the probabilities of being employed across immigrant groups, conditional on being in the labour force, are indicative for demand factors playing some role. Further analysis in this area is necessary to investigate the precise nature of this relationship.

The findings that immigrants are quite active in self-employment activities, and that they concentrate in different sectors according to their origin, may be related to comparative advantages in certain sectors. One popular hypothesis is that immigrants choose to become self-employed because the labour market discriminates against them. Our findings seem not to be compatible with this hypothesis. While both Pakistanis and Bangladeshis are among those groups with the lowest employment and participation rates, and the lowest wages, there is a large difference in the probability of being self-employed, with Pakistani men having, on average, a 12 percentage point higher probability of being self-employed than British-born white individuals, while Bangladeshis have a 3 percentage point lower probability than British-born white men. Self-employed immigrants are likely to make important contributions to the British economy, by providing work opportunities and by enriching consumer choice by offering goods and

services in areas where they have expertise. To quantify these effects is important and a further important area for detailed future research.

Our study also provides a first step into the analysis of immigrants coming from 'new accession' and candidate countries. As EU enlargement happened in the last few months of our sample period, we have not been able to provide analysis of the economic outcomes for immigrants from these countries after accession; we have instead provided figures pooling data for the period between 1998 and 2004. More detailed research on this group, based on more data points post-accession, will soon be possible.

Appendix

Technical details

In much of our investigation, we use regression analysis to compare the economic outcomes of the different immigrant groups with those of British-born whites. The conditional outcome differentials are based on the following regression model:

$$(1) \qquad O_{it} = a_0 + x'_{it}\mathbf{a_1} + OR'_{it}\mathbf{a_2} + R'_{it}\mathbf{a_3} + Y'_{it}\mathbf{a_5} + u_{it}$$

where O_{it} is the respective outcome measure for individual i in period t, x_{it} is a vector of individual-specific characteristics, such as age, education and whether the job is a part-time job, R_{it} is a vector of dummy variables, reflecting the region of residence of individual i in period t, and Y_{it} is a set of year and quarter dummies. The set of variables OR_{it} are dummy variables for the respective origin of the immigrant.

We estimate the regression in (1), pooling immigrants and British-born individuals. The graphs we present in Section IV are based on estimated parameters $\hat{\mathbf{a}}_2$. They measure the difference in outcomes between a white British-born individual (reference group) and an individual from the respective immigrant community, conditional on other regressors. The graphs in the left-hand panels of the figures are based on regressions that only include the set of origin dummies and year and quarter dummies.

Glossary

Origin variables and ethnicity

In much of the analysis, we group immigrants by country-of-origin category. Sample size requires us to pool countries of origin. We also distinguish between white and non-white immigrants (for example, we distinguish between white immigrants born in New Commonwealth countries and

'ethnic' Indians, 'ethnic' Bangladeshis, etc.) to understand whether these two groups perform differently.

The immigrant groups we use in the analysis are as follows:

Black Caribbean: individuals declaring to belong to this ethnic group, and born in the West Indies and other Caribbean Commonwealth;
Black African: individuals declaring to belong to this ethnic group, and born on the African continent;
Indian: individuals declaring to belong to this ethnic group, and born in India;
Afro-Asian: individuals declaring to belong to the Indian or Pakistani ethnic groups, but born in Africa;
Pakistani: individuals declaring to belong to this ethnic group, and born in Pakistan;
Bangladeshi: individuals declaring to belong to this ethnic group, and born in Bangladesh;
Chinese: individuals declaring to belong to this ethnic group, and born in China (including Taiwan and Hong Kong);
Other ethnic: individuals reporting to be of a different ethnicity from the ones reported above.
Irish: white individuals born in Ireland;
EU: white individuals born in the European Union as before the 2004 enlargement;
Non-EU Europe: white individuals born in non-EU European countries (Israel, Albania, Bulgaria, former Czechoslovakia, Hungary, Poland, Romania, Switzerland, Norway, former Yugoslavia, Turkey, former USSR, other Europe);
Old Comm: white individuals born in the Old Commonwealth and the US;
White New Comm: white individuals born in the New Commonwealth (including Pakistan and South Africa);
Other countries: white individuals born in other countries.

Other variables
Age: Age of individual.
Age^2/100: Age of individual squared and divided by 100.
Married: Dummy variable equal to 1 if the individual is married or cohabiting.
No. of children: Number of dependent children under 18 in the family.
Degree: Dummy equal to 1 if the individual has a first or higher degree or other degree-level qualification.
A-level: Dummy equal to 1 if the individual has a higher-education qualification below degree level, or A levels or equivalent.

O-level: Dummy equal to 1 if the individual has O levels or equivalent or any other professional-vocational qualifications.

Tables

Notes to Tables A1–A4: Reference category – British-born whites, no qualification. Robust standard errors reported. All specifications include year and quarter dummies. * – significant at 5 per cent level. ** – significant at 1 per cent level.

TABLE A1

Employment: immigrants vs. white British-born

	Males		Females	
Variable	*Coefficient (Standard error)*	*Coefficient (Standard error)*	*Coefficient (Standard error)*	*Coefficient (Standard error)*
Black Caribbean	–0.097	–0.082	–0.045	–0.038
	(0.008)**	(0.008)**	(0.006)**	(0.006)**
Black African	–0.135	–0.130	–0.128	–0.112
	(0.008)**	(0.008)**	(0.007)**	(0.007)**
Indian	–0.020	–0.026	–0.035	–0.034
	(0.004)**	(0.004)**	(0.004)**	(0.004)**
Pakistani	–0.107	–0.087	–0.167	–0.146
	(0.006)**	(0.006)**	(0.013)**	(0.012)**
Afro-Asian	0.010	–0.006	–0.018	–0.021
	(0.005)*	(0.005)	(0.006)**	(0.006)**
Bangladeshi	–0.165	–0.120	–0.220	–0.181
	(0.011)**	(0.011)**	(0.022)**	(0.022)**
Chinese	–0.004	0.003	–0.027	–0.030
	(0.007)	(0.007)	(0.007)**	(0.007)**
Other ethnic	–0.063	–0.064	–0.057	–0.058
	(0.005)**	(0.005)**	(0.005)**	(0.005)**
Old Commonwealth	0.021	0.012	0.000	–0.002
	(0.003)**	(0.003)**	(0.003)	(0.003)
White New Commonwealth	0.007	–0.008	–0.002	–0.013
	(0.004)	(0.004)*	(0.004)	(0.003)**
Irish	–0.027	–0.021	0.004	–0.003
	(0.005)**	(0.004)**	(0.003)	(0.003)
EU	0.002	0.002	–0.012	–0.012
	(0.003)	(0.003)	(0.002)**	(0.002)**
Non-EU European	–0.082	–0.074	–0.052	–0.051
	(0.008)**	(0.008)**	(0.006)**	(0.006)**
Other	–0.020	–0.032	–0.019	–0.026
	(0.006)**	(0.006)**	(0.005)**	(0.005)**
Age	–	0.009	–	0.008
		(0.000)**		(0.000)**
Age^2 / 100	–	–0.010	–	–0.009
		(0.000)**		(0.000)**
Married	–	0.078	–	0.045
		(0.001)**		(0.001)**
No. of children	–	–0.011	–	–0.014
		(0.000)**		(0.000)**
Degree	–	0.103	–	0.059
		(0.001)**		(0.001)**
A-level	–	0.086	–	0.055
		(0.001)**		(0.001)**
O-level	–	0.069	–	0.038
		(0.001)**		(0.001)**
Region dummies	No	Yes	No	Yes
Intercept	0.899	0.629	0.934	0.710
	(0.001)**	(0.004)**	(0.001)**	(0.004)**
No. of observations	1,630,106	1,626,968	1,367,681	1,365,709
R^2	0.01	0.06	0.01	0.04

TABLE A2

Participation: immigrants vs. white British-born

Variable	Males		Females	
	Coefficient (Standard error)	*Coefficient (Standard error)*	*Coefficient (Standard error)*	*Coefficient (Standard error)*
Black Caribbean	–0.089 (0.009)**	–0.000 (0.008)	–0.013 (0.009)	0.033 (0.009)**
Black African	–0.008 (0.006)	–0.057 (0.006)**	–0.113 (0.008)**	–0.080 (0.008)**
Indian	–0.035 (0.005)**	–0.031 (0.005)**	–0.158 (0.007)**	–0.094 (0.007)**
Pakistani	–0.090 (0.007)**	–0.082 (0.006)**	–0.549 (0.007)**	–0.382 (0.006)**
Afro-Asian	0.028 (0.006)**	–0.008 (0.006)	–0.048 (0.010)**	–0.023 (0.010)*
Bangladeshi	–0.094 (0.010)**	–0.081 (0.009)**	–0.579 (0.010)**	–0.380 (0.009)**
Chinese	0.005 (0.009)	–0.005 (0.008)	–0.110 (0.012)**	–0.100 (0.012)**
Other ethnic	–0.028 (0.005)**	–0.062 (0.005)**	–0.150 (0.007)**	–0.143 (0.007)**
Old Commonwealth	0.057 (0.004)**	–0.003 (0.003)	0.022 (0.006)**	–0.036 (0.005)**
White New Commonwealth	0.011 (0.005)*	–0.006 (0.005)	–0.017 (0.007)*	–0.038 (0.007)**
Irish	–0.098 (0.006)**	–0.020 (0.005)**	–0.034 (0.007)**	–0.001 (0.006)
EU	0.028 (0.004)**	–0.002 (0.003)	0.001 (0.005)	–0.028 (0.005)**
Non-EU European	–0.080 (0.009)**	–0.101 (0.009)**	–0.135 (0.009)**	–0.146 (0.009)**
Other	0.009 (0.006)	–0.024 (0.006)**	–0.060 (0.009)**	–0.089 (0.008)**
Age	–	0.021 (0.000)**	–	0.016 (0.000)**
Age^2 / 100	–	–0.036 (0.000)**	–	–0.027 (0.000)**
Married	–	0.073 (0.001)**	–	0.018 (0.001)**
No. of children	–	–0.007 (0.000)**	–	–0.079 (0.001)**
Degree	–	0.149 (0.002)**	–	0.286 (0.002)**
A-level	–	0.126 (0.002)**	–	0.241 (0.002)**
O-level	–	0.113 (0.002)**	–	0.188 (0.002)**
Region dummies	No	Yes	No	Yes
Intercept	0.894 (0.001)**	0.566 (0.004)**	0.750 (0.002)**	0.468 (0.006)**
No. of observations	1,855,606	1,852,189	1,819,131	1,816,924
R^2	0.003	0.17	0.02	0.12

TABLE A3

Self-employment: immigrants vs. white British-born

	Males		Females	
Variable	*Coefficient (Standard error)*	*Coefficient (Standard error)*	*Coefficient (Standard error)*	*Coefficient (Standard error)*
Black Caribbean	–0.038	–0.082	–0.036	–0.054
	(0.008)**	(0.008)**	(0.004)**	(0.004)**
Black African	–0.073	–0.077	–0.032	–0.043
	(0.006)**	(0.006)**	(0.004)**	(0.004)**
Indian	0.047	0.027	0.036	0.025
	(0.007)**	(0.007)**	(0.006)**	(0.006)**
Pakistani	0.117	0.116	0.046	0.048
	(0.008)**	(0.008)**	(0.011)**	(0.011)**
Afro-Asian	0.116	0.091	0.038	0.019
	(0.011)**	(0.010)**	(0.008)**	(0.008)*
Bangladeshi	–0.031	–0.030	–0.024	–0.015
	(0.009)**	(0.010)**	(0.011)*	(0.011)
Chinese	0.123	0.118	0.101	0.091
	(0.014)**	(0.014)**	(0.013)**	(0.013)**
Other ethnic	–0.019	–0.028	0.006	–0.005
	(0.006)**	(0.006)**	(0.005)	(0.005)
Old Commonwealth	–0.005	0.002	0.051	0.050
	(0.006)	(0.006)	(0.005)**	(0.005)**
White New Commonwealth	0.029	0.012	0.054	0.038
	(0.007)**	(0.007)	(0.006)**	(0.006)**
Irish	0.062	0.032	–0.006	–0.019
	(0.007)**	(0.007)**	(0.004)	(0.004)**
EU	–0.003	0.002	0.034	0.033
	(0.005)	(0.005)	(0.004)**	(0.004)**
Non-EU European	0.072	0.071	0.061	0.062
	(0.011)**	(0.011)**	(0.008)**	(0.008)**
Other	0.032	0.023	0.056	0.044
	(0.009)**	(0.009)**	(0.008)**	(0.008)**
Age	–	0.009	–	0.004
		(0.000)**		(0.000)**
Age^2 / 100	–	–0.006	–	–0.002
		(0.000)**		(0.000)**
Married	–	0.016	–	0.014
		(0.001)**		(0.001)**
No. of children	–	0.009	–	0.014
		(0.001)**		(0.000)**
Degree	–	–0.030	–	0.043
		(0.002)**		(0.002)**
A-level	–	–0.000	–	0.029
		(0.002)		(0.001)**
O-level	–	–0.027	–	0.010
		(0.002)**		(0.001)**
Region dummies	No	Yes	No	Yes
Intercept	0.155	–0.095	0.067	–0.075
	(0.001)**	(0.005)**	(0.001)**	(0.004)**
No. of observations	1,630,106	1,626,968	1,367,681	1,365,709
R^2	0.002	0.04	0.002	0.02

TABLE A4

Wages: immigrants vs. white British-born

Variable	Males		Females	
	Coefficient (Standard error)	*Coefficient (Standard error)*	*Coefficient (Standard error)*	*Coefficient (Standard error)*
Black Caribbean	–0.093 (0.019)**	–0.173 (0.018)**	0.132 (0.015)**	–0.063 (0.012)**
Black African	–0.085 (0.018)**	–0.260 (0.016)**	0.039 (0.015)**	–0.176 (0.014)**
Indian	–0.015 (0.015)	–0.156 (0.013)**	–0.020 (0.014)	–0.149 (0.012)**
Pakistani	–0.295 (0.019)**	–0.249 (0.015)**	–0.108 (0.028)**	–0.141 (0.023)**
Afro-Asian	0.114 (0.020)**	–0.134 (0.017)**	0.092 (0.021)**	–0.127 (0.018)**
Bangladeshi	–0.590 (0.032)**	–0.482 (0.027)**	–0.104 (0.058)	–0.126 (0.045)**
Chinese	–0.033 (0.036)	–0.176 (0.029)**	0.136 (0.030)**	–0.084 (0.024)**
Other ethnic	0.031 (0.017)	–0.114 (0.015)**	0.100 (0.014)**	–0.079 (0.013)**
Old Commonwealth	0.315 (0.015)**	0.228 (0.013)**	0.301 (0.012)**	0.168 (0.011)**
White New Commonwealth	0.219 (0.015)**	0.044 (0.013)**	0.181 (0.014)**	0.012 (0.011)
Irish	0.089 (0.015)**	0.033 (0.012)**	0.161 (0.012)**	0.059 (0.010)**
EU	0.066 (0.012)**	0.038 (0.010)**	0.089 (0.010)**	0.022 (0.008)**
Non-EU European	–0.040 (0.026)	–0.063 (0.021)**	–0.020 (0.023)	–0.092 (0.019)**
Other	0.166 (0.023)**	–0.006 (0.018)	0.199 (0.020)**	0.022 (0.017)
Age	–	0.084 (0.001)**	–	0.065 (0.001)**
Age^2 / 100	–	–0.093 (0.001)**	–	–0.072 (0.001)**
Married	–	0.131 (0.002)**	–	0.049 (0.003)**
Degree	–	0.753 (0.004)**	–	–0.188 (0.004)**
A-level	–	0.338 (0.003)**	–	0.775 (0.004)**
O-level	–	0.191 (0.003)**	–	0.386 (0.003)**
Part-time	–	–0.203 (0.005)**	–	0.200 (0.003)**
Region dummies	No	Yes	No	Yes
Intercept	2.230 (0.010)**	0.148 (0.013)**	1.989 (0.009)**	0.420 (0.012)**
No. of observations	314,996	314,996	318,267	318,267
R^2	0.02	0.38	0.02	0.35

References

Antecol, H., Cobb-Clark, D. and Trejo, S. (2003), 'Immigration policy and the skills of immigrants to Australia, Canada, and the United States', *Journal of Human Resources*, vol. 38, pp. 192–218.

Baker, M. and Benjamin, D. (1997), 'The role of the family in immigrants' labor-market activity: an evaluation of alternative explanations', *American Economic Review*, vol. 87, pp. 705–27.

Bell, B. (1997), 'The performance of immigrants in the United Kingdom: evidence from the GHS', *Economic Journal*, vol. 107, pp. 333–44.

Blackaby, D., Drinkwater, S., Leslie, D. and Murphy, P. (1997), 'A picture of male and female unemployment among Britain's ethnic minorities', *Scottish Journal of Political Economy*, vol. 44, pp. 182–97.

Blau, F., Kahn, L., Moriarty, J. and Souza, A. P. (2003), 'The role of the family in immigrants' labor-market activity: an evaluation of alternative explanations: comment', *American Economic Review*, vol. 93, pp. 429–47.

Borjas, G. (1985), 'Assimilation, changes in cohort quality, and the earnings of immigrants', *Journal of Labor Economics*, vol. 3, pp. 463–89.

— (1986), 'The self-employment experience of immigrants', *Journal of Human Resources*, vol. 21, pp. 485–506.

— (1987), 'Self-selection and the earnings of immigrants', *American Economic Review*, vol. 77, pp. 531–53.

— (1994), 'The economics of immigration', *Journal of Economic Literature*, vol. 32, pp. 1667–717.

— (1999), 'The economic analysis of immigration', in O. Ashenfelter and D. Card (eds), *Handbook of Labor Economics*, vol. 3A, Amsterdam: North-Holland.

— and Bronars, S. (1989), 'Consumer discrimination and self-employment', *Journal of Political Economy*, vol. 97, pp. 581–605.

Chiswick, B. (1978), 'The effect of Americanization on the earnings of foreign-born men', *Journal of Political Economy*, vol. 86, pp. 897–921.

— (1980), 'The earnings of white and coloured male immigrants in Britain', *Economica*, vol. 47, pp. 81–7.

Clark, K. and Drinkwater, S. (1998), 'Ethnicity and self-employment in Britain', *Oxford Bulletin of Economics and Statistics*, vol. 60, pp. 383–407.

— and — (2000), 'Pushed out or pulled in? Self-employment among ethnic minorities in England and Wales', *Labour Economics*, vol. 7, pp. 603–28.

— and — (2005), 'Dynamics and diversity: ethnic employment differences in England and Wales, 1991–2001', IZA, Discussion Paper no. 1698.

Denny, K., Harmon, C. and Roche, M. (1997), 'The distribution of discrimination in immigrant earnings: evidence from Britain 1974–93', Institute for Fiscal Studies, Working Paper no. 97/19.

Dustmann, C. (1993), 'Earnings adjustment of temporary migrants', *Journal of Population Economics*, vol. 6, pp. 153–68.

— and Fabbri, F. (2003), 'Language proficiency and labour market performance of immigrants in the UK', *Economic Journal*, vol. 113, pp. 695–717.

— and — (2005), 'Gender and ethnicity: married immigrants in Britain', *Oxford Review of Economic Policy*, vol. 21, no. 3.

Eckstein, Z. and Weiss, Y. (2004), 'On the wage growth of immigrants: Israel, 1990–2000', *Journal of the European Economic Association*, vol. 2, pp. 665–95.

Green, A. and Green, D. A. (1995), 'Canadian immigration policy: the effectiveness of the point system and other instruments', *Canadian Journal of Economics*, vol. 4, pp. 1006–41.

Hatton, T. and Wheatley Price, S. (2005), 'Migration, migrants, and policy in the United Kingdom', in K. F. Zimmermann (ed.), *European Migration: What Do We Know?*, Oxford: Oxford University Press.

Kyambi, S. (2005), *Beyond Black and White: Mapping New Immigrant Communities*, Technical Report, London: Institute for Public Policy Research.

Leslie, D. and Lindley, J. (2001), 'The impact of language ability on the employment and earnings of Britain's ethnic communities', *Economica*, vol. 68, pp. 587–606.

Meng, X. and Gregory, R. (2005), 'Intermarriage and the economic assimilation of immigrants', *Journal of Labor Economics*, vol. 23, pp. 135–75.

Wheatley Price, S. (2001), 'The employment adjustment of male immigrants to the English labour market', *Journal of Population Economics*, vol. 14, pp. 193–200.

Zimmermann, K. and Bauer, T. (2002), *The Economics of Migration*, Cheltenham: Edward Elgar.