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Economic Assimilation and the Labour Market Performance of British Refugees and Economic Migrants

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Abstract

The *Quarterly Labour Force Survey* contains useful information on the earnings and employment characteristics of immigrants and natives, including the country of origin of immigrants. This paper separates refugee and non-refugee immigrants using country of origin, UK arrival time and various immigration statistics on refugee sending countries. The labour market performance of these immigrant groups is compared. Refugee immigrants exhibit larger earnings penalties and higher unemployment propensities compared to non-refugee immigrants.

This suggests that economic migrants are volunteers and therefore self-select into those who will do well. Refugees are forced to move. As a consequence refugees are relatively poor labour market performers. Further ethnic comparisons demonstrate lower earnings and employment for non-whites relative to whites (refugees and non-refugees), over and above all other human capital and socio-economic characteristics. Non-white refugees and South Asians exhibit the largest ethnic penalties, where there is no evidence that ethnic unemployment penalties diminish for second generation UK born South Asians. Finally, earnings assimilation patterns of refugees differ to those of non-refugees and white immigrant earnings show signs of assimilating, whereas those for South Asians and other non-white immigrants do not.

Outline

Non-Technical Summary

British immigrants should not be treated as homogenous since migrants come to the UK under different circumstances. International migrants can be separated into two distinct groups. These are refugees and economic migrants. If economic migrants are volunteers they might be thought to self-select. However, refugees are forced to move. As a consequence, one might expect economic migrants to perform better in the labour market than refugees. As refugees are unable or unwilling to return to their country of origin for fear of persecution, it is suggested that they are more likely to remain in the country that provides refuge. Economic migrants however are free to return home whenever they like and may want to eventually return to their country of origin to retire with their family. As a consequence refugee migrants may be faced with a longer time horizon in the host country and hence be more inclined to become naturalised citizens and participate in the British education system. One economic implication of this is that the earnings and employment of refugee immigrants may be more likely to assimilate to those of the native born population than those of economic migrants. One aim of this study is to distinguish between refugee and economic migrants and investigate the economic assimilation of these two groups.

In addition to this, ethnicity is as important as immigrant status in determining economic performance and assimilation. The ethnic discrimination literature claims that earnings and employment assimilation differ between ethnic groups and that unexplainable ethnic disadvantages are apparent for some groups, where these are over and above all other human capital and socio-economic characteristics. A second aim of this study is to investigate ethnic variations within immigrant groups. This paper therefore looks at employment, economic activity and earnings, whilst distinguishing between UK born, refugee immigrants and economic immigrants (non-refugees), as well as between whites, non-whites and South Asians. The latter are separated from the other non-whites because of their colonial ties and because of their relatively poor performance in the British labour market.

Micro data from the *Quarterly Labour Force Survey* are used in conjunction with various immigration statistics. The latter data identify refugee sending countries so that immigrants can be separated into refugees and non-refugees using their country of origin and their UK arrival time. Immigrants from refugee sending countries are shown to exhibit larger earnings penalties and higher unemployment propensities than immigrants from non-refugee countries. Moreover, non-white refugees and South Asians suffer the greatest disadvantage, with no significant earnings or employment penalties to white non-refugees, relative to UK born whites. This demonstrates significant differences between the labour market performance of refugees and non-refugees, as well as between non-white immigrants compared to white immigrants (for refugees and non-refugees).

Refugee earnings cohort patterns are shown to differ to those for non-refugee immigrants. This indicates that refugees assimilate differently to economic migrants. Moreover, the assimilation pattern of immigrant earnings towards UK born earnings is much different for whites than for non-whites and South Asians. Finally, there are significant unexplainable earnings penalties to UK born South Asians and unexplainable unemployment penalties to UK born South Asians and non-whites, relative to native born whites. Since the UK born will not suffer the cultural and English language difficulties of immigrants, this in itself suggests the existence of some unexplainable ethnic component, part of which must contain elements of discrimination and non-assimilation.

1. Introduction

In recent years, many European countries have seen increasing numbers in asylum applications. Total applications to European Union states increased by 18 percent in 1999, most notably to Belgium, France and the United Kingdom.[1] Furthermore, the increasing numbers have been fairly substantial for the UK since applications for asylum (excluding dependants) rose by 25,000 between 1998 and 1999 to 71,000, whilst only 7,600 were removed or deported (only 10 percent of the total asylum applications that year).[2] Given the increasing numbers and the growing backlog of asylum decisions this group may form an important source of British labour in future years.

British immigrants should not be treated as homogenous since migrants come to the UK under different circumstances. International migrants and indeed asylum seekers can be separated into two distinct groups. These are refugees and economic migrants. If economic migrants are volunteers they might be thought to self-select, whereas refugees are forced to move. As a consequence, one might expect economic migrants to perform better in the labour market than refugees. Since refugees are unable or unwilling to return to their country of origin for fear of persecution, it is suggested that they are more likely to remain in the country that provides refuge. Economic migrants however are free to return home whenever they like and may want to eventually return to their country of origin to retire with their family. As a consequence refugee migrants may be faced with a longer time horizon in the host country and hence be more inclined to become naturalised citizens and participate in the British education system. One economic implication of this is that the earnings and employment of refugee immigrants may be more likely to assimilate to those of the native born population than those of economic migrants. One aim of this study is to distinguish between refugee and economic migrants and investigate the economic assimilation of these two groups. Based on data for British asylum applications and data from the United Nations High Commission for Refugees (UNHCR), a refugee variable is constructed based on an immigrant's country of origin and their year of arrival in the UK. Although coming from very different cultures and social norms, refugees have the common characteristic of not being able to return home as easily.

In conjunction with this, ethnicity is as important as immigrant status in determining economic performance and assimilation. The ethnic discrimination literature claims that

earnings and employment assimilation differ between ethnic groups. Furthermore, studies show unexplainable ethnic disadvantages to some groups, where these are over and above all other human capital and socio-economic characteristics.[3] A second aim of this study is to investigate ethnic variations within immigrant groups. This paper therefore looks at employment, economic activity and earnings, whilst distinguishing between UK born, refugee immigrants and economic immigrants (non-refugees), as well as between whites, non-whites and South Asians. The latter are separated from the other non-whites because of their colonial ties and because of their poor performance in the British labour market.[4]

There have been a number of studies investigating the labour market performance of British immigrants and the economic disadvantages of ethnic minorities, but few have attempted to distinguish between refugees and economic migrants. This paper shows that important differences exist in the performance of these immigrant groups and that economic assimilation differs between immigrant status and ethnicity. The paper is organised as follows. The next section reviews the empirical literature for the US and UK. Section 3 describes the data sources and provides the definition of a `refugee' that is used throughout the paper. The fourth section provides some descriptive statistics on the labour market performance of refugees and non-refugees as well as by ethnicity. Section 5 provides employment and economic activity probit results, whilst section 6 provides earnings equations. The final section concludes.

2. Empirical Literature

The pioneering work of Chiswick (1978) on the earnings assimilation of immigrants has generated much subsequent research. Chiswick estimates cross-sectional earnings regressions for US immigrants and finds that the initial earnings of newly arrived immigrants were about 17 percent less than native born workers. However, he goes on to show that the age profiles of earnings are steeper for immigrants than natives. He explains his findings in terms of human capital theory by hypothesising that immigrants earn less than natives at the time of arrival because of their lack of specific skills such as language proficiency. Once they acquire the necessary skills and accumulate country specific human capital Chiswick proposes that their earnings grow faster than native born workers. According to Chiswick, US immigrant earnings are greater than native born earnings after

15 years of residency. He demonstrates that after 30 years of living in the United States, a typical immigrant earns about 11 percent more than a native born worker.

According to Borjas (1985, 1987), it was the decline in the earnings enhancing characteristics of immigrants admitted into the United States that explained why earlier cohorts exhibited higher earnings than later cohorts. That is, earlier cohorts earn more at every point of their US labour market experience than more recent cohorts as a consequence of being from different waves of immigration. In the UK context, there were increases in immigrants from India, East Africa, the Caribbean and Pakistan during the 1960s and 1970s. However from the 1980s onward there were large declines in the flows of immigrants coming from India and East Africa and rises in the numbers coming from Europe. This may therefore explain differences in the labour market performance of UK immigration cohorts.[5]

More recent research takes into consideration country specific human capital and English language acquisition. Various US studies show a positive relationship between language skills and immigrant success. These include Grenier (1984), Chiswick (1986a, 1986b, 1991), and Chiswick and Miller (1994). British studies confirm this for UK immigrants. Most British studies use the *Fourth National Survey of Ethnic Minorities* (*FNSEM*) since it is unique in containing information on English language proficiency. Blackaby *et al.* (2001) find only a small language penalty for males, which is significantly less than the ethnic penalty and any other characteristic effect. Shields and Price (2001) indicate fluency as the second most important determinant of occupational success amongst British immigrant men. According to Leslie and Lindley (2001) show English fluency to have a significant impact on unemployment and economic inactivity, although fluency is shown to have a bigger impact on male unemployment and female inactivity. Lindley (2002a) demonstrates that lack of fluency has a significantly negative impact on the earnings of ethnic minority men and women.

Of course, spoken English and reading ability will increase with duration of stay.[6] Moreover, non-fluency will be much less for second generation immigrants than for their immigrant parents. Indeed the *FNSEM* shows that 48.9 percent of non-whites born abroad were fluent in English, whereas the figure for the UK born group was 94.3 percent.[7] In addition, there are ethnic earnings and unemployment penalties, which are over and above

all other socio-economic characteristics (including lack of English fluency). Leslie and Lindley (2001) demonstrate that British white males (females) enjoy 14.1 (12.2) percent lower unemployment rates than their non-white counterparts. Non-white male (female) unemployment falls by 4.7 (0.8) percent should they all have fluent language ability, whilst it falls a further 0.08 (5.7) percent should all other non-white characteristics be the same as whites. For males (females) the unemployment ethnic penalty is greater than the language penalty at 8.6 (5.7) percent. Overall, this suggests relatively large discrimination or non-assimilation effects over and above language fluency as far as unemployment is concerned. In Lindley (2002a), non-white immigrant males who arrived in the UK between 1990-1994 earned 0.436 log points (54.65 percent) less than native whites, over and above all other characteristics. This earnings penalty was shown to diminish across earlier arriving cohorts (35.26 percent for males who arrived between 1980-1989 and 12.64 percent for males who arrived between 1970-1979), with no significant ethnic penalty to UK born non-white males.

Brown (2000) and Lindley (2002b) consider the impact of religion on labour market outcomes. Again using the *FNSEM*, Brown (2000) shows that religion has a significant impact on the economic activity of British South Asians, whilst Lindley (2002b) shows religion to significantly effect the earnings and unemployment of all ethnic groups. It is Muslims that experience the largest unemployment and earnings religious penalties. However, differences between male (female) white and non-white unemployment of 21.5 (17.0) percent are mainly attributed to ethnicity for males and other characteristics (apart from religion) for females. Over and above all other socio-economic characteristics, male Muslims earn 12.97 percent less than non-religious white males. In addition, there are significant ethnic penalties to male non-white immigrants (13.65 percent) and British born non-white females (18.53 percent), relative to British born whites.

To date, most empirical research has failed to consider the important differences between refugees and economic migrants. A contributing factor is that data on immigrant status is not readily available. One exception is Khan (1997) who uses US data from the 1976 *Survey of Income and Education* and the 1980 *Census of Population*. Khan finds that Cuban and Vietnamese refugees have a higher probability of investing in schooling than other foreign born residents.

3. The data

This study uses micro data for males and females taken from Spring quarters of the *Quarterly Labour Force Survey* (QLFS) for 1995-2000. The *LFS* began in 1973 as a biennial continuous survey as part of Britain's obligations on joining the European Union. The survey became annual in 1983 and has been quarterly since 1992. The *QLFS* is a pseudo panel that follows the same individuals for 5 consecutive quarters. It currently includes a representative sample of approximately 60,000 households.

As with the British *Census of Population*, respondents in the *QLFS* are asked both their country of origin and also to which ethnic group they thought they belonged. This practice first began in 1979 and the ethnicity categories are 'white', 'Black-Caribbean', 'Black-African', 'Black-other', 'Indian', 'Pakistani', 'Bangladeshi', 'Chinese' and 'Other non-white ethnic group'. The *QLFS* categories for country of origin have been recently amended in response to the economic and political changes that have occurred in Europe and the Middle East. In 1993 African, South American and Middle Eastern categories were added to provide disaggregations of previously general continental groups. Further international disaggregations occurred in 1998. These were mainly for Eastern European and some African countries. In 1999 there were more disaggregations and these were mainly for Middle Eastern countries. See Appendix 1. As a consequence of these changes and in an attempt to obtain adequate sample sizes, this study pools Spring surveys for 1995-2000. This provides information on 643,792 UK born respondents and 78,461 immigrants, where there are 660,039 whites and 62,214 non-whites.

As with most other British surveys the *LFS* does not provide information on whether a respondent entered the UK as a refugee or as an economic migrant. It is necessary therefore to infer this is some way. The definition of a refugee immigrant used here is a foreign born respondent whose country of origin is described as a `refugee sending country' for their decade of arrival in the UK. The refugee sending countries are defined by two sources. The first source comes from the Department of Immigration, Asylum and Nationality at the Home Office. These are the main countries that supply asylum seekers to the UK and are taken from the research development statistics for asylum applications, decisions, appeals and numbers of asylum seekers.[8] The second source comes from UNHCR. These are based on the statistical overview on the country of origin of refugees.[9]

Any immigrant that arrives in the UK within a particular time period, where at least one of the above sources classes their country of origin as a refugee sending country during that time period, is coded as a refugee. This allowed the construction of a binary variable that takes the value of 1 if the respondent is a refugee and zero otherwise. So a refugee here refers to an individual whose country of origin can be associated with refugees within a given time period. A list of these countries is provided in Appendix 1.

The main advantage of the *QLFS* is that it contains a wealth of information on the employment, earnings (since 1992) and socio-economic characteristics of individuals over a number of years. Unemployed respondents are classified under the *International Labour Office* (*ILO*) definition of unemployment. This is not subject to the frequent revisions of the claimant count that refers only to those actually in receipt of benefit.[10] This enables the construction of a binary employment variable that takes the value of 1 if the respondent was employed and zero if unemployed. Employed consisted of those who categorised themselves in paid employment. The sample consists of whites and non-whites, where there are 18003 (11013) unemployed men (women) and 173556 (170321) employed men (women). The self-employed are excluded and the sample contains respondents aged between 16 and 65.

It is possible that refugee status may lead to withdrawal from labour market activity rather than unemployment. Consequently, an alternative binary variable for economic activity status was derived. The definition of active used here consists of those who were in paid employment or unemployed. Inactive includes those who were permanently sick or retired (but aged under 65) or looking after the family home or who classed themselves as doing something else. Full time students are not classed as inactive and are therefore excluded. There are 191330 (181140) economically active males (females) and 34102 (82320) economically inactive males (females), excluding students, the self-employed and those aged over 65.

Earnings are gross hourly wages and are taken from the last quarter before the respondent leaves the survey.[11] The wage data appears in 1995 prices and is deflated using the RPI from the Economic Trends Annual Supplement (2000). There are 173556 employed males and 170321 employed females. However, around 24 percent of observations have missing

earnings information and therefore the sample for earnings uses information on 132108 employed males and 133381 employed females only.

4. Descriptive statistics

Table 1 shows some descriptive statistics concerning the labour market status of the sample by immigrant group. The sample sizes refer to everyone (whites and non-whites) aged between 16 and 65 (except students and the self-employed) and are unweighted. These groups contain UK born, immigrants from South Asia (Indians, Pakistanis and Bangladeshis), immigrants from refugee sending countries (here denoted as refugees) and immigrants from other countries (non-refugees). Although South Asians belong in the refugee group, these are separated into their own immigrant group for two reasons. First, as a consequence of their colonial ties and therefore entry through the reunification of dependants. Secondly, because of their notoriously poor labour market performance. Males and females are shown separately.

The first column in Table 1 shows that immigrant refugees and non-refugees earn more on average than the UK born. However, differences in age structures should be remembered. The UK born will be much younger than the immigrant groups, on average. The first and second columns show the South Asian immigrants demonstrate the lowest average hourly wage rate and the highest average unemployment rate. What is more interesting is the refugee and non-refugee comparison. This shows that immigrants from refugee sending countries earn less on average and have a higher average unemployment rate than those immigrants from countries not associated with refugees. This provides some evidence that economic migrants do better than refugees, in terms of higher wages and lower unemployment. Of course one would expect this if economic migrants are volunteers and refugees are not. Economic migrants will self-select into those who do well, so that they perform relatively better in the labour market than refugees.

The third column of Table 1 shows economic activity rates for these immigrant groups. For both males and females, average activity rates are higher for those born in Britain than for immigrants. Of the immigrant groups, it is non-refugees that demonstrate the highest activity rates. This suggests than economic migrants are more assimilated in terms of economic activity than refugees and South Asians. However, it should be remembered that

some refugees (including some South Asians) may be asylum seekers and therefore not be entitled to engage in economic activity. Interestingly, average activity rates for South Asian women are particularly low. This is a consequence of culture, religion and poor English language ability. In some traditions there is no expectation that women should engage in market economic activity and therefore care should be taken to label inactivity as `disadvantage' since this may merely reflect a cultural difference.

Table 2 contains further labour market descriptive statistics where the immigrant groups are disaggregated further by ethnicity. The UK born are split into South Asians (of Pakistani, Bangladeshi and Indian ethnicity), other non-whites (Black African, Black Caribbean, Black other, Chinese and other non-white ethnicity) and whites. Immigrants are also split into South Asians, other non-white refugees, white refugees, other non-white non-refugees and white non-refugees. Further disaggregation into individual ethnic groups is not attempted as a consequence of small sample sizes. The final two columns in Table 2 demonstrate that cell sizes would be especially small amongst the UK born and the refugee groups. It is acknowledged that there are important labour market differences within the South Asian and non-white groups, however the aim of this study is to demonstrate broad differences between whites, non-whites and South Asians. Again males and females are shown separately and sample sizes are unweighted.

There are a number of comparisons to be made. First, one might compare the UK born groups with the immigrant groups to look for economic assimilation. For example, UK born South Asians display a higher average activity rate than those born abroad indicating economic assimilation between generations of immigrants. This is also the case for non-whites.

The convergence of UK born and immigrant earnings and unemployment rates is not obvious from the raw data. Across all ethnic groups, immigrants do better than their UK born counterparts in terms of higher average earnings and lower average unemployment rates. Again differences in the age structures of the UK born and immigrant samples must be remembered.

Comparing refugees and non-refugees supports the results from Table 1, where refugees are generally more disadvantaged than non-refugees, on average. Comparing between ethnic

groups shows that whites always do better than non-whites and this is across all immigrant groups (UK born, refugees and non-refugees). For both men and women, average earnings are always higher and average unemployment rates are always lower for whites than they are for non-whites. Furthermore, South Asians do the worst amongst all the ethnic groups and this is regardless of immigrant status or nationality. The only exception is that immigrant South Asians exhibit lower average unemployment than non-white refugees. This provides some initial evidence of ethnic disadvantage that is beyond immigrant status and country of origin.

5. Employment and economic activity

Employability and economic activity are estimated using Probit equations.[12] Tables 3 and 4 provide these estimates for males and females separately. The default category is married, living in the North of Britain, non-home owner, white and born in the UK, has other qualifications, lives in a household without children, in good health and who appeared in the 1995 Spring quarter of the *QLFS*. Again all the samples consist of working age respondents (aged between 16 and 65) and exclude the self employed. Only the key results concerning immigrant status and ethnicity are discussed here.

5.1 Employment

Table 3 provides the employment Probit estimates with marginal effects for 191559 males and 181334 females who are economically active. The first two columns refer to males and the second to females. All results are relative to the default category of UK born whites. The immigrant arrival time variables are statistically insignificant for both males and females. This fails to show that foreign born unemployment propensities are assimilating towards those born in the UK or whether there are unexplainable employment differences between cohorts.

Comparing UK born ethnic groups with their immigrant counterparts might be thought to indicate unemployment assimilation between first and second generations of immigrants. The insignificance of the immigrant white variables suggest that there are no differences between UK born and immigrant white unemployment probabilities. For non-whites, likelihood of unemployment is generally lower for the UK born (4.2 percent for men and

3.6 percent for women) compared to immigrants 7.5 (6.1) percent for refugee men (women) and 5.1 (1.5) percent for non-refugee men (women). This suggests employment assimilation. Interestingly, UK born South Asian men (women) are 11.42 (7.78) percent more likely to be unemployed, relative to UK born whites. Comparable numbers for immigrant South Asians are 9.45 (8.23) percent suggesting that immigrant South Asian men actually do better than those born in the UK. So the unexplainable unemployment penalty is greater for UK born South Asians, even though this group might be thought to be more culturally assimilated and be much more fluent in English.

Again one can compare within and between ethnic groups and immigrant status. Comparing within ethnicity and between immigrant groups demonstrates differences between immigrants from refugee sending countries (denoted as refugees) and immigrants from countries not typically associated with refugees (non-refugees). Table 3 shows that non-white refugee males (females) are 7.57 (6.12) percent more likely to be unemployed than UK born whites, compared to 5.06 (1.51) percent for non-white non-refugees. So male (female) non-white immigrants from refugee sending countries are 2.51 (4.61) percent more likely to be unemployed than those non-white immigrants from countries that are not classified as refugee sending countries.

Comparing between ethnicity and within immigrant groups shows no significant unemployment penalties to refugee and non-refugee whites, relative to UK born whites. Only South Asians and non-whites (UK born, refugees and non-refugees) exhibit higher unemployment propensities. Immigrant South Asian men (women) are 9.45 (8.23) percent more likely to be unemployed, whilst refugee non-white men (women) are 7.57 (6.12) percent, and non-refugee non-white men (women) are 5.06 (6.84) percent more likely to be unemployed, relative to UK born whites. So white/non-white unemployment differentials are apparent across all groups, including the UK born. This suggests the existence of some unexplainable ethnic disadvantage for all non-whites, which may well contain some elements of discrimination. Moreover, there is little evidence of employment assimilation amongst UK born and immigrant South Asians.

5.2 Economic Activity

Table 4 provides Probit estimates for the economic activity of 2255432 males and 263460 females, excluding students, the self employed and those aged above 65. For men, the

immigrant arrival time variables demonstrate economic assimilation over most recent four decades. So activity appears to diminish across immigrant cohort. There is no significant difference in immigrant and UK born activity rates for individuals that arrived prior to 1961. For women, it is inactivity that diminishes over arrival cohorts.

Looking at the ethnicity variables shows foreign born South Asians, female UK born South Asians and non-white male refugees have a lower propensity for economic activity. Again this will be picking up cultural, religious and language differences. Finally, white male refugees exhibit a higher propensity to be economically active, relative to British born non-whites.

6. Earnings

The framework used is human capital theory where an earnings function is used to explain gross hourly wages, correcting for employment selection.[13] The specification is typical of this type of work and includes a standard set of independent variables measuring human capital and other socio-economic characteristics. Justification can be found in Leslie (1998). These are age and its square, marital status, region of residence, housing tenure, highest educational qualifications, occupation, sector of employment, whether union member, firm size, regional unemployment rate and regional ethnic density.[14] Also included are 'immigrant UK arrival time' variables to measure assimilation and the effects of duration in the UK, as well as immigrant status and ethnicity variables. These are UK born South Asian, UK born non-white (not South Asian), foreign born South Asian, foreign born white refugee, foreign born non-white refugee (not South Asian), foreign born white non-refugee and foreign born non-white non-refugee. All results are relative to the excluded category of UK born whites.

The default category is married, living in the North of Britain, non-home owner, white and born in the UK, has other qualifications, employed as a skilled professional, in a firm with over 50 employees and who appeared in the 1995 Spring quarter of the *QLFS*. Separate functions are estimated for males and females since pooling and including a gender dummy is inadequate if the structural determinants of earnings are gender specific. Estimates are

corrected for employment selection and the identification restrictions for the earnings equation are health status and whether the individual lives in a household with children.

Since the immigrant and ethnicity variables are of primary interest only these are discussed here. The first column in Table 5 refers to 150111 males, whilst the second column refers to 144394 females.[15] For both males and females, the immigrant arrival time variables show an earnings premium to those the more recent cohorts, which diminishes the earlier is the cohort. This may indicate assimilation in earnings with longer duration in the UK supporting Chiswick (1978). However, since ethnicity is held constant, this could be associated with cultural differences between cohorts, where there is decline in unmeasurable earnings enhancing characteristics of immigrants migrating to the UK, supporting Borjas (1985, 1987) and Bell (1997).

Relative to UK born whites, there are earnings penalties to UK born South Asians, foreign born South Asians, all refugees, non-white non-refugees and female white non-refugees. The largest penalties are for immigrant South Asians at 31.3 percentage log points or 36.75 percent (20.1 percentage log points or 22.26 percent) lower earnings for men (women).[16] However, smaller earnings penalties of 16.4 (7.68) percent for UK born South Asian men (women) suggest that South Asian earnings are assimilating. The statistical insignificance of the UK born non-white variables also suggests that non-white earnings are not statistically different to those of UK born whites. This result could be picking up assimilation in English language abilities. Lindley (2002a) shows a significant earnings penalty to immigrant non-whites (including South Asians) that are not fluent in English.[17] Since UK born non-whites do not experience the same difficulty in English language non-fluency, any difference between immigrant and UK born earnings that are within ethnicity and over and above all other characteristics, could be partially attributed to a non-fluency earnings penalty.[18]

Comparing within ethnicity and between the immigrant groups demonstrates important differences between refugees and non-refugees. There is a significant earnings penalty to white male refugees (10.29 percent), but no such penalty to white male non-refugees. Also the earnings penalty is larger for non-white male refugees (30.86 percent) than is it for non-white male non-refugees (22.51 percent). A similar situation holds for females. This

suggests that immigrants from refugee sending countries earn less (8.35 percent for non-whites) than immigrants from countries that are not here classified as refugee sending.[19]

In addition one can compare between ethnicity and within the immigrant groups for evidence of unexplainable ethnic disadvantage, part of which would contain discrimination. That is, differences between the earnings of whites and non-whites that are over and above all other characteristics (including immigrant status and cohort effects) might be thought to demonstrate some evidence of discrimination. First, a significant penalty to UK born South Asians suggests some unexplainable ethnic disadvantage for this group. Second, for both refugees and non-refugees the earnings penalty for non-whites always exceeds that for whites. Non-white male (female) refugees earn 20.57 percent (11.68 percent) less than their white refugee counterparts.[20] Similarly, there is a significant earnings penalty to non-white non-refugees but not for white non-refugees, whilst non-white female non-refugees earn 5.35 percent less than white female non-refugees.[21]

The final row in Table 5 shows the correlation coefficients between the error terms of the employment selection equation and those of the earnings equation. These show that the correlation coefficients are insignificant for males and significantly negative for females. So selectivity has only a marginal effect on the estimated parameters for males, although female earnings would be higher for those who are unemployed, should they gain employment, relative to those who are already in jobs. Blackaby *et al*. (1999) suggest that this occurs since the unemployed have higher reservation wages than the employed and in turn would require a greater reward to enter into employment.

Table 6 provides key results for immigrants only (excluding South Asians).[22] Separate earnings functions for refugees and non-refugees are estimated. The aim is to establish whether refugee earnings are more likely to assimilate than are those of economic migrants. The sample here refers to immigrants only and therefore excludes the UK born. The specification is identical to the Table 5 except that there is now only one binary ethnicity variable `whether non-white' and immigrant cohort effects are relative to those who arrived before 1950. The first column refers to non-refugee immigrants, whilst the second column refers to refugee immigrants. Again males and females are estimated separately.

In the first column, the immigrant cohort variables provide some evidence of earnings convergence amongst immigrants, for both males and females. Relative to those who arrived before 1950, earnings premiums to later arrivals are either converging with duration in the UK (Chiswick explanation) or later cohorts have better unmeasurable earnings enhancing characteristics (ability, motivation or differences in culture) than earlier cohorts (Borjas and Bell explanation). More importantly, the final two columns demonstrate differences between refugees and non-refugees. There are significant and diminishing earnings premiums associated with earlier cohorts for non-refugees. The most recent male (female) non-refugee arrivals earn 29.25 (20.20) percent more than those who arrived before 1950. In contrast, refugees demonstrate no such significant earnings assimilation or cohort effects, which may well demonstrate the lack of an assimilation process and speed in their adjustment.

With regard to ethnic penalties, the results confirm those found in Table 5. The first column in Table 6 shows that non-white immigrant males (females) earn 19.76 (9.8) percent less than white immigrants, on average. The second column shows that earnings penalties to non-white non-refugees are similar at 18.76 (7.46) percent for men (women). However, the third column shows a lower earnings penalty to non-white refugee males of 10.37 percent, whereas there is no significant penalty to refugee females, relative to white refugees.

Interestingly, there are positive and significant employment selection effects for male refugees only. So male refugee earnings would be lower for those who are unemployed, should they gain employment, relative to those who are already in jobs. Likelihood ratio tests for the joint hypothesis of coefficient equality across the two latter equations suggest that the null hypothesis of common slope coefficients is rejected, and this is for males and females.[23]

Table 7 estimates separate earnings functions for white, non-white and South Asians. Again only the key results are presented here. Unlike Table 6, the sample now includes both immigrants and UK born. The aim here is to establish whether white immigrant earnings are more likely to assimilate to those of the native born population than are those of non-whites. Of course, ethnicity variables are dropped but instead each equation now includes a binary variable to measure `whether from a refugee sending country'. Also

`arrived UK pre 1950' is grouped with `arrived UK 1951-1960' for South Asian males. The first column refers to 142590 (137654) white males (females), the second to 4307 (4463) non-white males (females) and the third column to 3214 (2277) South Asians.

The first column shows that many cohorts of immigrant whites actually earn significantly more than native whites, with the most recent arrivals displaying the largest earnings premiums of 24.27 percent for males and 13.91 percent for females. Moreover, these premiums appear to assimilate towards native white earnings with earlier cohorts. The situation is very different for non-whites. Most immigrant non-white cohorts exhibit significant earnings penalties compared to non-white natives and there is little evidence of earnings assimilation or differences between cohorts. For South Asians, it is those who arrived before 1960 that exhibit the highest earnings penalties. Again this suggests that UK born South Asians do better than immigrant South Asians, but there is little evidence of earnings cohort or assimilation effects for this group.

The `refugee' variables demonstrate that only non-white refugee immigrants earn significantly less than other non-whites, and this is significant only at the 10 percent level. There is no such refugee penalty for whites. Finally, χ^2 likelihood ratio tests for the joint hypothesis of coefficient equality across the three equations suggest that the null hypothesis of common slope coefficients is rejected for both males and females.[24]

7. Conclusions

Immigrants from refugee sending countries exhibit larger earnings penalties and higher unemployment propensities than immigrants from non-refugee countries. This suggests economic migrants self-select, in contrast to refugees who are forced to move. As a consequence refugees perform relatively worse in the labour market. Moreover, non-white refugees and South Asians suffer the greatest disadvantage, with no significant earnings or employment penalties to white non-refugees, relative to UK born whites. This demonstrates significant differences between the labour market performance of all non-white immigrants compared to white immigrants (for refugees and non-refugees). Of course, such ethnic penalties will contain cultural, religious and linguistic differences that

cannot be measured using this data. However, part of these ethnic earnings and unemployment penalties can be attributed to discrimination and non-assimilation.[25]

Refugee earnings cohort patterns are different to those for non-refugee immigrants. There are earnings premiums to all non-refugees, relative to those who arrived before 1950. These earnings premiums are lower for earlier non-refugee immigration cohorts, with those who arrived more recently displaying the highest earnings premiums. In contrast, refugee immigrants demonstrate no significant earnings assimilation or arrival cohort pattern. So significant differences exist which indicate almost immediate earnings assimilation amongst refugees.

The assimilation and cohort pattern of immigrant earnings towards UK born earnings is much different for whites than for non-whites and South Asians. White immigrants exhibit earnings premiums relative to the earnings of the UK born, with some indication of assimilation or differences across arrival cohorts. Immigrant non-whites and South Asians earn less than their British born counterparts, although there is little indication of assimilation or differences across arrival cohorts. However if UK born South Asians and non-whites earn more than those born abroad this indicates assimilation across first and second generation immigrants and therefore in cultural differences and English language propensities.

Finally, there are significant unexplainable ethnic earnings penalties to UK born South Asians and unexplainable ethnic unemployment penalties to UK born South Asians and non-whites, relative to native born whites. Moreover, UK born Southern Asian men actually exhibit higher ethnic unemployment penalties than their immigrant counterparts. Since the UK born will not suffer the English language difficulties of immigrants, this in itself suggests the existence of some unexplainable ethnic component, part of which must contain elements of discrimination.

Table 1. Labour market descriptive statistics by immigrant groups.

Men

	Mean of Hourly wage	Mean of Unemployment Rate	Mean of Activity Rate[a]	Employed[b] N	Total[c] N
UK Born[d]:	7.579 (5.396)	0.09093	0.85073	124179	20895
Foreign Born:					
South Asians	6.717 (4.923)	0.16834	0.78671	1786	4304
Refugees (Excluding South Asians)	8.620 (6.680)	0.16432	0.81247	1390	2981
Non-Refugees	9.045 (7.233)	0.10941	0.84392	4753	9162
Total	7.614 (5.478)	0.09398	0.82095	132108	225432

Notes: Source: LFS Spring Quarters 1995-2000, unweighted. Standard deviations are in parentheses.
Earnings are in 1995 prices and are deflated using the RPI from ETAS (2000).
a This excludes full time students.
b This is the number of employed with available hourly wage data.
c This is the number of active and inactive.
d This includes both whites and non-whites.

Women

	Mean of Hourly wage	Mean of Unemployment Rate	Mean of Activity Rate[a]	Employed[b] N	Total[c] N
UK Born[d]:	6.671 (4.759)	0.05820	0.69623	124988	241545
Foreign Born:					
South Asians	6.239 (4.646)	0.13348	0.40184	1278	5313
Refugees (Excluding South Asians)	7.698 (5.173)	0.12290	0.59470	1435	3817
Non-Refugees	8.062 (6.225)	0.07591	0.66969	5680	12785
Total	6.741 (5.477)	0.09398	0.67447	133381	263460

Notes: Source: LFS Spring Quarters 1995-2000, unweighted. Standard deviations are in parentheses.
Earnings are in 1995 prices and are deflated using the RPI from ETAS (2000).
a This excludes full time students.
b This is the number of employed with available hourly wage data.
c This is the number of active and inactive.
d This includes both whites and non-whites.

Table 2. Labour market descriptive statistics by immigrant groups and ethnicity.

Men

	Mean of Hourly wage	Mean of Unemployment Rate	Mean of Activity Rate[a]	Employed[b] N	Total[c] N
UK Born:					
South Asians	6.181 (4.726)	0.21266	0.89017	596	1384
Other Non-Whites	6.651 (4.311)	0.20126	0.84509	1580	3557
Whites	7.601 (5.412)	0.08815	0.85056	122003	204044
Foreign Born:					
South Asians	6.717 (4.923)	0.16834	0.78671	1786	4304
Refugees: White	9.350 (6.263)	0.11802	0.81628	712	1339
Refugees: Non-White	7.892 (6.999)	0.20240	0.80937	678	1642
Non Refugees: White	9.380 (7.424)	0.08890	0.85619	3890	7107
Non Refugees: Non-Whites	7.622 (6.165)	0.18518	0.801456	863	2055
Total	7.614 (5.478)	0.09398	0.78096	132108	225432

Notes: Source: LFS Spring Quarters 1995-2000, unweighted. Standard deviations are in parentheses.
Earnings are in 1995 prices and are deflated using the RPI from ETAS (2000).
a This excludes full time students.
b This is the number of employed with available hourly wage data.
c This is the number of active and inactive.

Women

	Mean of Hourly wage	Mean of Unemployment Rate	Mean of Activity Rate[a]	Employed[b] N	Total[c] N
UK Born:					
South Asians	6.170 (4.724)	0.15154	0.68277	562	1469
Other Non-Whites	6.460 (4.105)	0.14053	0.69267	1810	4448
Whites	6.677 (4.769)	0.05609	0.69639	122616	235628
Foreign Born:					
South Asians	6.239 (4.646)	0.13348	0.40184	1278	5313
Refugees: White	8.171 (5.641)	0.07719	0.61889	810	1842
Refugees: Non-White	7.122 (4.474)	0.16902	0.57215	625	1975
Non Refugees: White	8.232 (6.313)	0.06875	0.68183	4486	9462
Non Refugees: Non-Whites	7.436 (5.848)	0.09808	0.63467	1194	3293
Total	6.741 (5.477)	0.09398	0.78096	133381	263460

Notes: Source: LFS Spring Quarters 1995-2000, unweighted. Standard deviations are in parentheses.
Earnings are in 1995 prices and are deflated using the RPI from ETAS (2000).
a This excludes full time students.
b This is the number of employed with available hourly wage data.
c This is the number of active and inactive.

Table 3. Employment Probits.
(Dep. Var. = 1 if employed, 0 if unemployed).

	Males		Females	
	Coefficient (Standard Error)	Marginal Effect	Coefficient (Standard Error)	Marginal Effect
Age	0.052 (0.004)*	0.0066733	0.036 (0.004)*	0.0035447
Age Squared	-0.0007 (0.0001)*	-0.000091	-0.0003 (0.0001)*	-0.0000329
Single	-0.474 (0.029)*	-0.0678088	-0.177 (0.029)*	-0.018163
Divorced	-0.419 (0.023)*	-0.0686948	-0.270 (0.023)*	-0.0305883
Midlands	0.124 (0.029)*	0.0148314	0.034 (0.022)	0.0032201
South East	0.225 (0.029)*	0.0271372	0.081 (0.018)*	0.0076135
South West	0.102 (0.082)	0.0122231	0.034 (0.030)	0.0032457
Home Owner	0.767 (0.032)*	0.1326738	0.604 (0.024)*	0.0776842
Highest Qualification: Higher	0.419 (0.032)*	0.0440357	0.342 (0.041)*	0.026653
Highest Qualification: Further	0.163 (0.015)*	0.0192311	0.195 (0.022)*	0.0172605
Whether has Children	-0.013 (0.013)	-0.0016681	-0.044 (0.016)*	-0.0043315
In bad health	-0.277 (0.015)*	-0.0408901	-0.295 (0.024)*	-0.0340861
Regional Unemployment Rate	-0.546 (0.404)	-0.0693986	-0.293 (0.316)	-0.0281568
Regional Ethnic Density	-0.348 (0.154)*	-0.044333	-0.158 (0.115)	-0.0151719
Arrived UK pre 1950	0.102 (0.194)	0.0119898	0.048 (0.121)	0.0045135
Arrived UK 1951-60	-0.047 (0.164)	-0.0062227	-0.061 (0.079)	-0.0061961
Arrived UK 1961-70	-0.156 (0.149)	-0.0221839	-0.030 (0.107)	-0.002963
Arrived UK 1971-80	-0.071 (0.168)	-0.0096171	-0.041 (0.085)	-0.0040885
Arrived UK 1981-90	-0.019 (0.162)	-0.0024736	-0.147 (0.086)	-0.0159476
Arrived UK 1991-2000	0.053 (0.173)	0.0065229	-0.057 (0.081)	-0.0058009
UK Born South Asians	-0.597 (0.086)*	-0.114239	-0.532 (0.035)*	-0.0778765
UK Born Non-Whites	-0.272 (0.078)*	-0.0420162	-0.297 (0.112)*	-0.0362425
Foreign Born South Asians	-0.521 (0.181)*	-0.0945241	-0.555 (0.112)*	-0.0822631
Refugees: White	-0.204 (0.146)	-0.0301745	-0.170 (0.095)	-0.0188986
Refugees: Non-White	-0.438 (0.160)*	-0.0757096	-0.446 (0.091)*	-0.0612879
Non-Refugees: White	0.108 (0.178)	0.0127196	0.005 (0.087)	0.0004925
Non-Refugees: Non-white	-0.317 (0.166)*	-0.0506173	-0.140 (0.079)*	-0.0150841
Year 1996	0.096 (0.020)*	0.0116571	0.085 (0.016)*	0.0078125
Year 1997	0.170 (0.029)*	0.0198424	0.091 (0.025)*	0.0083243
Year 1998	0.282 (0.035)*	0.0311173	0.168 (0.016)*	0.0146984
Year 1999	0.313 (0.048)*	0.0339299	0.178 (0.031)*	0.0155385
Year 2000	0.357 (0.051)*	0.0377221	0.205 (0.031)*	0.0175245
Constant	-0.017 (0.075)		0.314 (0.105)*	
Pseudo R^2	0.1494		0.1038	
Sample size	191559		181334	

Notes: Source: QLFS 1995-2000 Standard errors are in parentheses.
Sample excludes the self-employed and is for those aged between 16 and 65.
* Denotes statistical significance at the 5% level

Table 4. Activity Probits.
(Dep. Var. = 1 if active, 0 if inactive).

	Males		Females	
	Coefficient (Standard Error)	Marginal Effect	Coefficient (Standard Error)	Marginal Effect
Age	0.104 (0.006)*	0.021231	0.108 (0.004)*	0.037405
Age Squared	-0.001 (0.00007)*	-0.000335	-0.001 (0.0001)*	-0.000538
Single	-0.372 (0.041)*	-0.081159	0.328 (0.029)*	0.108279
Divorced	-0.217 (0.024)*	-0.048784	0.114 (0.014)*	0.038800
Midlands	0.167 (0.394)*	0.031808	0.099 (0.026)*	0.033833
South East	0.189 (0.038)*	0.037081	0.081 (0.028)*	0.027925
South West	-0.022 (0.095)	-0.004511	0.035 (0.057)	0.012109
Home Owner	0.477 (0.040)*	0.110200	0.644 (0.036)*	0.234562
Highest Qualification: Higher	0.570 (0.546)*	0.092612	0.682 (0.056)*	0.195211
Highest Qualification: Further	0.467 (0.027)*	0.079213	0.543 (0.027)*	0.168260
Whether has Children	-0.017 (0.020)	-0.003639	-0.068 (0.008)*	-0.023839
In bad health	-0.779 (0.059)	-0.202040	-0.472 (0.051)*	-0.173980
Regional Unemployment Rate	-0.095 (0.234)	-0.019456	-0.140 (0.227)	-0.048539
Regional Ethnic Density	-0.959 (0.167)*	-0.195097	-0.178 (0.163)	-0.061836
Arrived UK pre 1950	-0.026 (0.103)	-0.005383	-0.151 (0.062)*	-0.054371
Arrived UK 1951-60	0.025 (0.076)	0.005012	-0.042 (0.079)	-0.014724
Arrived UK 1961-70	0.111 (0.042)*	0.021218	-0.029 (0.045)	-0.010409
Arrived UK 1971-80	0.174 (0.060)*	0.032020	-0.046 (0.073)	-0.016411
Arrived UK 1981-90	0.138 (0.041)*	0.025938	-0.244 (0.084)*	-0.089395
Arrived UK 1991-2000	0.186 (0.057)*	0.033954	-0.229 (0.072)*	-0.083628
UK Born South Asians	-0.014 (0.075)	-0.002903	-0.327 (0.094)*	-0.121428
UK Born Non-Whites	0.024 (0.097)	0.004935	-0.072 (0.088)	-0.025390
Foreign Born South Asians	-0.265 (0.058)*	-0.062123	-0.634 (0.108)*	-0.242516
Refugees: White	0.049 (0.052)	0.009860	-0.006 (0.067)	-0.002101
Refugees: Non-White	-0.196 (0.040)*	-0.044419	-0.072 (0.056)	-0.025606
Non-Refugees: White	0.117 (0.043)*	0.022439	0.098 (0.057)	0.033213
Non-Refugees: Non-white	0.080 (0.050)	0.015694	0.083 (0.067)	0.028284
Year 1996	0.241 (0.021)*	0.044647	0.125 (0.010)*	0.042441
Year 1997	0.017 (0.036)	0.003556	0.024 (0.012)*	0.008379
Year 1998	0.047 (0.039)	0.009470	0.033 (0.015)*	0.011431
Year 1999	0.036 (0.042)	0.007366	0.065 (0.017)*	0.022342
Year 2000	0.082 (0.047)	0.016296	0.071 (0.023)*	0.024464
Constant	-0.416 (0.151)*		-1.728 (0.064)*	
Pseudo R^2	0. 2329		0.1585	
Sample size	225432		263460	

Notes: Source: QLFS 1995-2000 Standard errors are in parentheses.
Sample excludes the self-employed and is for those aged between 16 and 65.
* Denotes statistical significance at the 5% level

Table 5. Earnings functions. QLFS 1995-2000.
(Dependent variable log of hourly gross earnings).

Variable	Males	Females
Age	0.045 (0.002)*	0.027 (0.002)*
Age Squared	-0.001 (0.0001)*	-0.001 (0.0001)*
Single	-0.055 (0.008)*	-0.013 (0.012)
Divorced	0.035 (0.007)*	-0.032 (0.006)*
Midlands	-0.016 (0.012)	-0.010 (0.021)
South East	0.129 (0.021)*	0.107 (0.025)*
South West	0.006 (0.017)	0.015 (0.019)
Home Owner	0.186 (0.015)*	0.126 (0.013)*
Highest Qualification: Higher	0.282 (0.008)*	0.265 (0.009)*
Highest Qualification: Further	0.119 (0.008)*	0.099 (0.006)*
Manager	0.066 (0.017)*	-0.035 (0.018)
Semi-Skilled Professional	-0.080 (0.014)*	-0.078 (0.012)*
Clerical/Secretarial	-0.279 (0.013)*	-0.247 (0.011)*
Craft/Trade	-0.255 (0.015)*	-0.467 (0.014)*
Personal/Security	-0.272 (0.021)*	-0.419 (0.005)*
Semi-Skilled Sales	-0.046 (0.018)*	-0.096 (0.014)*
Manual Sales	-0.353 (0.020)*	-0.444 (0.016)*
Plant Operator	-0.336 (0.016)*	-0.444 (0.013)*
Other Manual	-0.394 (0.021)*	-0.511 (0.006)*
Construction Sector	-0.022 (0.011)*	-0.009 (0.013)
Service Sector	-0.015 (0.009)	-0.019 (0.005)*
Union member	0.085 (0.012)*	0.094 (0.009)*
Firm size (1-10 Employees)	-0.159 (0.012)*	-0.106 (0.006)*
Firm size (11-24 Employees)	-0.074 (0.011)*	-0.046 (0.007)*
Firm size (25-49 Employees)	-0.051 (0.008)*	-0.027 (0.006)*
Regional Unemployment Rate	-0.107 (0.043)*	0.0002 (0.034)
Regional Ethnic Density	0.599 (0.114)*	0.611 (0.116)*
Arrived UK pre 1950	0.015 (0.027)	0.045 (0.047)
Arrived UK 1951-60	0.078 (0.031)*	0.091 (0.044)*
Arrived UK 1961-70	0.074 (0.033)*	0.089 (0.032)*
Arrived UK 1971-80	0.080 (0.032)*	0.096 (0.038)*
Arrived UK 1981-90	0.063 (0.030)*	0.167 (0.043)*
Arrived UK 1991-2000	0.213 (0.026)*	0.192 (0.043)*
UK Born South Asians	-0.152 (0.060)*	-0.074 (0.027)*
UK Born Non-Whites	-0.036 (0.032)	-0.026 (0.024)
Foreign Born South Asians	-0.313 (0.038)*	-0.201 (0.069)*
Refugees: White	-0.098 (0.044)*	-0.094 (0.046)*
Refugees: Non-White	-0.269 (0.052)*	-0.195 (0.088)*
Non-Refugees: White	-0.007 (0.028)	-0.061 (0.028)*
Non-Refugees: Non-White	-0.203 (0.030)*	-0.110 (0.052)*
Year 1996	0.076 (0.008)*	0.030 (0.003)*
Year 1997	0.015 (0.008)	-0.068 (0.005)*
Year 1998	-0.022 (0.009)*	-0.086 (0.009)*
Year 1999	0.015 (0.009)*	-0.058 (0.007)*
Year 2000	0.026 (0.010)*	-0.046 (0.007)*
Constant	0.874 (0.042)*	1.307 (0.052)*
Correlation Coefficient ρ	0.094 (0.050)	-0.467 (0.051)*
N	150111	144394
Censored	18003	11013
Uncensored	132108	133381
R Squared		

Notes: Source: QLFS 1995-2000 Standard errors are in parentheses.
Earnings are in 1995 prices since they are deflated using the RPI from ETAS (2000).
Sample excludes the self-employed and is for those aged between 16 and 65.
* Denotes statistical significance at the 5% level

Table 6. Key results for earnings functions for separate immigrant groups.
QLFS 1995-2000.
(Dependent variable log of hourly gross earnings).

Males.

	All Immigrants	Non-Refugees	Refugees
Arrived UK 1951-60	0.0585 (0.034)	0.0377 (0.043)	0.0909 (0.075)
Arrived UK 1961-70	0.0626 (0.037)	0.0467 (0.046)	0.0267 (0.077)
Arrived UK 1971-80	0.0771 (0.037)*	0.0598 (0.042)	0.0596 (0.075)
Arrived UK 1981-90	0.0998 (0.043)*	0.0967 (0.046)*	0.0678 (0.129)
Arrived UK 1991-2000	0.2570 (0.038)*	0.2566 (0.055)*	0.1137 (0.110)
Non-white	-0.1804 (0.019)*	-0.1720 (0.019)*	-0.0987 (0.024)*
Correlation Coefficient ρ	0.0842 (0.150)	0.0794 (0.195)	0.1807 (0.024)*
N	7387	5599	1788
Censored	1244	846	398
Uncensored	6143	4753	1390
R Squared			

Notes: Source: QLFS 1995-2000 Standard errors are in parentheses.
Earnings are in 1995 prices since they are deflated using the RPI from ETAS (2000).
Sample consists of immigrants only, where this excludes the self-employed and is for those aged between 16 and 65.
* Denotes statistical significance at the 5% level
The Likelihood Ratio value for coefficient equality across the two refugee and non-refugee equations is 190.06, with χ^2 (36 d.o.f. Critical value 43.73).

Females.

	All Immigrants	Non-Refugees	Refugees
Arrived UK 1951-60	0.0763 (0.036)*	0.0712 (0.036)	0.0599 (0.063)
Arrived UK 1961-70	0.0906 (0.028)*	0.0843 (0.030)*	0.0769 (0.078)
Arrived UK 1971-80	0.0951 (0.036)*	0.1001 (0.045)*	0.0641 (0.062)
Arrived UK 1981-90	0.1540 (0.042)*	0.1740 (0.049)*	0.1138 (0.063)
Arrived UK 1991-2000	0.1714 (0.041)*	0.1840 (0.054)*	0.1415 (0.054)*
Non-white	-0.0940 (0.031)*	-0.0720 (0.018)*	-0.0678 (0.045)
Correlation Coefficient ρ	0.1319 (0.071)	0.1103 (0.087)	-0.5561 (0.333)
N	8044	6330	1714
Censored	929	650	279
Uncensored	7115	5680	1435
R Squared			

Notes: Source: QLFS 1995-2000 Standard errors are in parentheses.
Earnings are in 1995 prices since they are deflated using the RPI from ETAS (2000).
Sample consists of immigrants only, where this excludes the self-employed and is for those aged between 16 and 65.
* Denotes statistical significance at the 5% level
The Likelihood Ratio value for coefficient equality across the two refugee and non-refugee equations is 133.572, with χ^2 (36 d.o.f. Critical value 43.73)

Table 7. Key results for earnings functions for separate ethnic groups.
QLFS 1995-2000.
(Dependent variable log of hourly gross earnings).

Males.

	Whites	Non-whites	South Asians
Arrived UK pre 1950	0.0023 (0.021)	0.0076 (0.407)	-
Arrived UK 1951-60	0.0379 (0.017)*	-0.0077 (0.027)	-
Arrived UK pre 1960	-	-	-0.1761 (0.049)*
Arrived UK 1961-70	0.0342 (0.024)	-0.0998 (0.046)*	-0.1247 (0.046)*
Arrived UK 1971-80	0.0172 (0.029)	-0.0841 (0.040)*	-0.0424 (0.043)
Arrived UK 1981-90	0.0617 (0.032)*	-0.0899 (0.016)*	-0.0955 (0.028)*
Arrived UK 1991-2000	0.2173 (0.042)*	0.0041 (0.070)	-0.0277(0.061)*
Refugee	-0.0218 (0.024)	-0.0398 (0.021)**	-
Correlation Coefficient ρ	0.0927 (0.045)*	0.4927 (0.188)*	0.1130 (0.174)
N	142590	4307	3214
Censored	15985	1186	832
Uncensored	126605	3121	2382
R Squared			

Notes: Source: QLFS 1995-2000 Standard errors are in parentheses.
Earnings are in 1995 prices since they are deflated using the RPI from ETAS (2000).
Sample excludes the self-employed and is for those aged between 16 and 65.
* Denotes statistical significance at the 5% level
** Denotes statistical significance at the 10% level.
The Likelihood Ratio value for coefficient equality across the three white, non-white and South Asian equations is 502.93, with χ^2 (37 d.o.f. Critical value 43.73)

Females.

	Whites	Non-whites	South Asians
Arrived UK pre 1950	-0.0142 (0.030)	0.0851 (0.184)	0.2272 (0.042)*
Arrived UK 1951-60	0.0015 (0.019)	0.0896 (0.038)*	-0.0174 (0.087)
Arrived UK 1961-70	0.0199 (0.018)	0.0309 (0.020)	-0.1183 (0.026)*
Arrived UK 1971-80	0.0251 (0.016)	0.0049 (0.032)	-0.0724 (0.048)*
Arrived UK 1981-90	0.1251 (0.027)*	-0.0039 (0.022)	0.0112 (0.048)
Arrived UK 1991-2000	0.1303 (0.021)*	-0.0079 (0.028)	0.0212 (0.053)
Refugee	-0.0054 (0.015)	-0.0502 (0.019)*	-
Correlation Coefficient ρ	-0.4691 (0.049)*	0.3546 (0.149)*	0.3116 (0.196)
N	137654	4463	2277
Censored	9742	834	437
Uncensored	127912	3629	1840
R Squared			

Notes: Source: QLFS 1995-2000 Standard errors are in parentheses.
Earnings are in 1995 prices since they are deflated using the RPI from ETAS (2000).
Sample excludes the self-employed and is for those aged between 16 and 65.
* Denotes statistical significance at the 5% level
The Likelihood Ratio value for coefficient equality across the three white, non-white and South Asian equations is 330.23, with χ^2 (37 d.o.f. Critical value 43.73)

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Appendix 1. Asylum Sending Countries.

The countries listed below refer to the country of birth variable CRYO in the QLFS 1995-2000. Those countries coded as refugee sending countries are in bold. These are coded separately for two periods of arrival in the UK. The first is for the period 1990-2000. The second is for those who arrived prior to 1990. Asylum statistics for the UK prior to 1980 are not available.

(1) Refugee sending countries as specified by the UNHCR, Refugees and others of concern (1990-1999).

(2) Main asylum sending countries as specified by the asylum applications statsistics in the UK, excluding dependants by nationality (1991-2000).

(3) Refugee sending countries as specified by the UNHCR, Refugees and others of concern (1980-1989).

(4) Main asylum sending countries as specified by the asylum applications statsistics in the UK, excluding dependants by nationality (1985-1990).

Spring 1992 - Winter 1992

(1) United Kingdom/Great Britain
(6) Irish Republic (inc. pns)
(7) Channel islands
(8) Isle of Man
(11) Australia
(12) Canada
(13) New Zealand
(14) Kenya (2) (4)
(15) Uganda (2) (4)
(16) Tanzania (2)
(17) Malawi
(18) Zambia
(19) Zimbabwe
(20) Botswana, Lesotho and Swaziland
(21) Gambia (2)
(22) Ghana (1) (2) (3) (4)
(23) Nigeria (1) (2) (3) (4)
(24) Sierra Leone (1) (2) (4)
(25) Barbados
(26) Jamaica
(27) Trinidad & Tobago
(28) West Indies (Associated States)
(29) West Indies (so stated)
(30) Other Caribbean Commonwealth

(31) Belize
(32) Guyana
(33) Bangladesh (1) (2) (3)
(34) India (1) (2) (3) (4)
(35) Sri Lanka (1) (2) (3) (4)
(36) Hong Kong
(37) Malaysia
(38) Singapore
(39) Cyprus
(40) Gibraltar
(41) Malta & Gozo
(42) Seychelles
(43) Mauritius
(44) Other New Commonwealth
(45) Algeria (1) (2)
(46) Morocco
(47) Tunisia
(48) Libya
(49) Egypt
(50) Republic of South Africa
(51) Other Africa (foreign nes)
(52) United States of America
(53) (Other) Caribbean
(54) (Other) Central America
(55) (Other) South America
(56) Pakistan (1) (2) (3) (4)
(57) Burma/Myanmar
(58) China (1) (2)
(59) Japan
(60) Philippines
(61) Vietnam (1) (3)
(62) Iran (1) (2) (3) (4)
(63) Israel
(64) Other Middle East nes
(65) Other Asia (foreign nes)
(66) Belgium
(67) Denmark
(68) France (inc. Monaco)
(69) Italy
(70) Luxembourg
(71) Netherlands
(72) Federal Republic of Germany
(73) Germany (pns)
(74) Albania (1) (2)
(75) Bulgaria (1) (3) (4)
(76) German Democratic Republic
(77) Czechoslovakia (2) (3)
(78) Hungary (3)
(79) Poland (1) (2) (3)
(80) Romania (1) (2) (3) (4)

(81) Austria
(82) Switzerland
(83) Greece
(84) Portugal (inc. Azores & Madeira)
(85) Spain (inc. Balearic & Canary Islands)
(86) Finland
(87) Norway
(88) Sweden
(89) (Other) Yugoslavia (1) (2) (3) (4)
(90) Other Europe nes
(91) Turkey (1) (2) (3) (4)
(92) Former USSR etc. (1) (2) (4)
(93) Rest of the World nes
*(94) At sea/in the air
*(95) Stateless

Added Spring 1993

(96) Angola (1) (2) (3) (4)
(97) Ethiopia (1) (2) (3) (4)
(98) Somalia (1) (2) (4)
(99) Zaire (4)
(100) Cuba
(101) Mexico
(102) Argentina
(103) Brazil
(104) Chile (3)
(105) Columbia (2) (4)
(106) Uruguay
(107) Venezuela
(108) Iraq (1) (2) (3) (4)
(109) Lebanon (1) (3) (4)
(110) Indonesia
(111) Korea
(112) Macao/Macau
(113) Liechtenstein
(114) Andorra
*(115) At sea/In the air
*(116) Stateless
Added Spring 1998

(115) Belarus
(116) Bosnia (Yugoslavia) (1) (2) (3) (4)
(117) Croatia (1) (2) (3) (4)
(118) Czech Republic (2) (3)
(119) Estonia (1) (2) (4)
(120) Macedonia (1) (2) (3) (4) (Yugoslavia)
(121) Lithuania (1) (2) (4)
(122) Latvia (1) (2) (4)

(123) Moldova (1) (2) (4)
(124) Russia (1) (2) (4)
(125) Slovak Republic (2) (3)
(126) Slovenia
(127) Ukraine (2) (4)
(128) San Marino
(129) Vatican City
(130) Sudan (1) (2)
(131) Cambodia (Khmer Republic) (3)
(132) Indonesia
(133) Micronesia
*(134) At sea/In the air
*(135) Stateless

Added Spring 1999

(134) St. Pierre and Miquelon
(135) Greenland
(136) Bermuda
(137) Taiwan
(138) Laos
(139) Afghanistan, Bhutan, Republic of the Maldives, Nepal (1) (2) (3)
(140) Thailand
(141) Armenia, Azerbaijan and Georgia (1)
(142) Kazakhstan, Kyrgistan, Tajikistan, Turkmenistan, Uzbekistan (1)
*(143) At sea/In the air/Oil rig
*(144) Stateless

Abbreviations: pns = part not stated, nes = not elsewhere stated.

Note: Those from Pakistan, Bangladesh and India are coded separately as South Asians.

See volume 5 (LFS Classifications) of the LFS User Guide for full alpha/numeric breakdowns.

[1] See Immigration Research and Statistics Service, Home Office (2000).
[2] Illegal immigrants are removed, whilst overstayers are deported. See Immigration Research and Statistics Service, Home Office (2000).
[3] See Blackaby et al. (2001), Shields and Price (2001), Leslie and Lindley (2001), Lindley (2002a) and Lindley (2002b).
[4] See Leslie and Lindley (2001) and Lindley (2002b).
[5] See Bell (1997).
[6] See Chiswick (1991).
[7] See Leslie and Lindley (2001).
[8] These were taken from Table 2.1, Applications received for asylum in the United Kingdom, excluding dependants by nationality, (1985-1993), (1989-1997), (1991-2000). The countries listed are the largest asylum sending countries. The tables were collected from various asylum statistics published by the Home Office.
[9] These were kindly provided by the UNHCR in Tables V1.5 Origin of asylum applicants by year of application, (1980-1989), (1990-1999).
[10] See the Department of Employment Gazette (July 1992, pp. 349). Garside (1980) documents the changes in the Department of Employment claimant count series up to 1979. There have been at least eight changes since this date. The *ILO* measure is comparable with unemployment measures of other countries such as the United States and is used by the *Monetary Policy Committee* for its monthly assessment of the economy. To be classified as unemployed in *ILO* terms, it is necessary to have looked for work at some point in the previous four weeks.
[11] The hourly wage data is provided in the first and the fifth quarter of the each individual's panel for those in the 1997-2000 *QLFS,* and the fifth quarter of the individual's panel for those in the 1995 and 1996 *QLFS*. Wage data is therefore taken from the last quarter before the respondent leaves the survey.
[12] In the probit model employment status is governed by a latent index variable measuring `employablity', E_i^*, where $E_i^*=\alpha X_i+ \varepsilon_i$ is the latent employment model. E_i^* is explained by a characteristic vector, X_i and an unexplained residual component, ε_i. In practice one cannot observe employablity. One can only observe whether the individual is employed or not. This can be captured by a binary variable, E_i , which takes the value unity if the individual is employed and zero if they are unemployed. The observed binary outcome is related to E_i^* in the following way. $E_i = 1$ if $E_i^* > 0$ and the individual is employed or $E_i = 0$ if $E_i^* \leq 0$ and the individual is unemployed. The statistical model that underlies this is probabilistic. If the residual term is assumed to be logistically distributed then the probability of the ith individual being employed is given by $P(E_i) = \frac{1}{1 + \exp - (\alpha \ X_i)}$. If the residual term is normally distributed then a probit model is used. Greene (1997) provides an excellent discussion.
[13] See Heckman (1979) for a discussion of this now standard procedure.
[14] Since ethnic minorities are concentrated in local enclaves with high levels of unemployment, the relationship between employment and earnings might be especially significant. Local unemployment rate variables provide the local unemployment rate in the region that the respondent resides in. Similarly the regional ethnic density provides the proportion of ethnic minorities in the region that the respondent resides in. These regions are North, Yorkshire, East Midlands, East Anglia, London, Rest of the South East, South West, West Midlands, North West, Wales, Scotland, Northern Ireland. Estimates have been corrected for regional clustering, see Moulton (1990) for a discussion.
[15] Since 24 percent of observations have missing earnings information the sample for earnings uses information on 132108 employed males and 133381employed females only.
[16] Here the semi-log specification of the earnings function is used. In practice, for low values (of around 0.10) log points method and the level method give the same result. The semi-log specification is given by $\ln Y = \alpha + \beta X$, where $\ln Y$ is the log of earnings and X is the inter-mover binary variable. Since X is binary, the effect of X on Y is $\frac{Y_{|X=1} - Y_{|X=0}}{Y_{|X=0}} = e^{\beta} - 1$, whereas the log point difference is simply β.
[17] Lindley (2002a) demonstrates that Pakistani males, Indians and Chinese females exhibit the highest propensities for non-fluency in English.
[18] Leslie and Lindley (2001) use the *FNSEM* to show that 48.9 percent of those born abroad were fluent in English, whereas the figure for the UK born group was 94.3 percent.
[19] this is 30.86 percent (0.269 log points) – 22.51 percent (0.203 log points) = 8.35 percent

[20] For males this is 30.86 percent (0.269 log points) – 10.29 percent (0.098 log points) = 20.57 percent. For females this is 21.53 percent (0.195 log points) – 9.855 percent (0.094 log points) = 11.68 percent.
[21] This is 11.63 percent (0.110 log points) – 6.28 percent (0.061 log points) = 5.35 percent
[22] The full regression results are available from the author upon request.
[23] See notes to Table 4.
[24] See notes to Table 5.
[25] Leslie and Lindley (2001), Lindley (2002a) and Lindley (2002b) demonstrate significant ethnic unemployment and earnings penalties to British immigrants which are over and above other socio-economic characteristics (including English non-fluency and differences in religion).