

CEP Discussion Paper No 851

February 2008

**On the Relative Gains to Immigration:
A Comparison of the Labour Market Position of Indians
in the USA, the UK and India**

Augustin de Coulon and Jonathan Wadsworth

Abstract

While most studies of the decision to immigrate focus on the absolute income differences between countries, we argue that relative change in purchasing power or status, as captured by an individual's ranking in the wage distribution, may also be important. This will in turn be influenced by differential levels of supply, demand and migration costs across the skill distribution and across countries. Using data on Indian immigrants in the United States and the UK matched to comparable data on individuals who remained in India, we show that the average Indian immigrant will experience a fall in their relative ranking in the wage distribution compared to the position they would have achieved had they remained in the origin country. The fall in relative rankings is larger for immigrants to the UK than to the US, and largest of all for those with intermediate skills.

Keywords: immigration, wages, relative ranking

JEL Classifications: J31, J61, J68

Data: US Census, UK LFS, Indian NSS

This paper was produced as part of the Centre's Labour Markets Programme. The Centre for Economic Performance is financed by the Economic and Social Research Council.

Acknowledgements

Augustin de Coulon is a Research Associate at the Centre for Economic Performance, London School of Economics. He is also a Research Officer at the Institute of Education, University of London. Jonathan Wadsworth is a Senior Research Fellow at the Centre for Economic Performance, LSE and Professor of Economics at Royal Holloway, University of London.

Published by
Centre for Economic Performance
London School of Economics and Political Science
Houghton Street
London WC2A 2AE

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means without the prior permission in writing of the publisher nor be issued to the public or circulated in any form other than that in which it is published.

Requests for permission to reproduce any article or part of the Working Paper should be sent to the editor at the above address.

© A. de Coulon and J. Wadsworth, submitted 2007

ISBN 978-0-85328-245-7

1. Introduction

Do relative rewards influence the immigration decision? Recent empirical studies¹ have broadened the analysis of the absolute gains to emigration, embedded in the extended Roy model of self-selection (Borjas, 1987, 1999), by comparing wage levels of similar individuals in both the host and the origin countries. We argue that the existing focus on absolute gains, while insightful, misses a potentially important aspect of the migration decision, because an individual's relative position in the wage distribution may also be an argument in the decision making process, (see the related arguments over concern for relative position advanced in Clark and Oswald, 1998, for example). As such location decisions could depend not just on a comparison of potential wage levels but also on the relative purchasing power, or status, that moving to the host country may command compared to that foregone by moving. A relative wage focus can therefore reveal whether any wage gain (or loss) from immigration is accompanied by a movement up or down the wage distribution compared to the counterfactual had no move taken place. While the absolute income gains are expected to be large for most immigrants from a developing to a developed country, any negative changes in purchasing power that accompany those absolute gains could become a significant, potentially offsetting, factor for the decision to migrate.

Differences in the levels of demand or supply, between source and host country will affect the assimilation profile of immigrants and hence both an immigrant's wage level and their position in the wage distribution in the host country relative to that in the source country. As such the positional ranking may be higher or lower in the host relative to the sender country. If the cross-country transfer of skills is inefficient, then immigrants may be matched to jobs that are not suited for their

¹ Bauer, Pereira, Vogler and Zimmerman (2002), Hartog and Winkelmann (2003), Chiquiar and Hanson (2005).

qualifications. This would mean that immigrants would appear lower down the wage distribution of the host country, other things equal, than had they remained in the sender country.

Extending this argument to several potential host countries, then any differences in supply or demand patterns across different hosts should mean that similar immigrants might be observed at different points in the various host wage distributions. This could also be generated by differences in immigration policies or in other labour market institutions across countries, which may have differential effects on the quality of a job match and hence an individual's position in the wage distribution.

In what follows, we take immigrants from a single source country, India, and compare their positional rankings in the wage distribution of two host countries, the United Kingdom, (UK) and the United States, (US), to the counterfactual position in the wage distribution they would have attained, had they stayed in India. The two host countries are important destinations for Indian immigrants. Indians comprise the third largest ethnic grouping of immigrants in the US and the largest group of immigrants to the UK. Yet the two host countries have different levels of wage inequality, different labour market institutions, different immigration policies, different demand patterns and therefore potentially different assimilation profiles for immigrants.

2. Indian Immigration to the USA and the UK

Every year around 500,000 individuals leave India to go and live elsewhere, (Srivastava and Saikumar, 2003)². Individuals born in India comprise the third largest country group of immigrants in the United States and the largest group of immigrants

² A large absolute outflow, but a small fraction of India's 1.1 billion population

in the UK. There are currently around 1 million individuals born in India living in the US, some 0.3% of the host population. There are around 500,000 individuals born in India currently living in the UK, some 0.8% of the host population.³ The UK was the industrialised host country that received most Indian immigrants until 1970. Since then, the US and Canada receive the largest number of Indian immigrants each year among the industrialised Western economies.⁴

US immigration policy as regards Indian nationals is influenced both by the country-specific absolute limits on numbers of immigrants in place since the 1960s and the system of preference categories embedded in visa applications skewed toward skilled workers or workers in areas in which labor is in short supply, (Wasem 2004). While aggregate US immigration numbers are influenced by both documented and undocumented immigration, it is likely that the distances involved and lack of land borders make undocumented immigration less of an issue regarding Indian emigrants. Formal immigration policy has placed country-specific limits on the numbers of immigrants since the 1960s, and the system of preference categories embedded in visa applications is skewed toward skilled workers or workers in areas in which labour is in short supply, along with protection for refugees and reunification of families, (Wasem 2004). The 1990 Immigration Act introduced a system of visas allowing entry of high-tech workers with a sponsoring employer for up to 6 years (with the subsequent chance of applying for US citizenship) and also raised the share of employment-based visas in the total immigrant flow. In practice this has meant that immigration from India has been oriented towards highly qualified immigrants since the beginning of the 1990s. However, since dependents of immigrants also qualify for

³ Immigrants from India in the UK and in the US comprise, 13.5% and 5% of all new immigrants with work permits in the respective host countries, (OECD 2001)

⁴ Srivastava and Saikumar (2003) show that the annual flow of Indian immigrants to the UK reached a peak of 15,000 in 1970 and subsequently fell back to around 5,000 a year. The flow of Indian immigrants to the US is currently around 25,000 a year.

entry, family ties still currently account for around 60% of all immigrant entries and around 40% of new Indian entrants.⁵

As regards the UK, policy has at times, sought to encourage Indian immigrants from both ends of the skill distribution. In part this is because over the previous four decades, UK migration policy has been greatly influenced by its links with former colonies, of which India was the most populous. Before 1962, any commonwealth (and hence Indian), or Irish citizen had the right of entry into the UK. A system of work permits was introduced after that point and the principle of right of entry to commonwealth citizens was abolished in 1973, replaced by a system of work permits, (again skewed toward skilled workers in short supply) and entry rights for dependents that has continued, subject to periodic modifications, to this day. A recent report from the Home Office, (Home Office, 2002), suggests that these legislative changes did not change significantly the composition of the reduced numbers of Indian immigrants subsequently allowed to settle.

3. Theoretical Framework

Both the absolute and by extension the relative wage position of immigrants in the host country wage distribution will depend on the assimilation process which in turn depends on the return to imported human capital, the degree of accumulation of host country-specific human capital and the degree of mobility across the wage distribution, Eckstein and Weiss (2004). To the extent that these factors differ from the origin country because of cross-country differences in demand, supply or institutional features then the wage profiles of movers and stayers will vary.⁶

⁵ Yearbook of Immigration Statistics (2004), Table 8. There are no country-specific estimates of any undocumented immigrants.

⁶ Two recent studies have suggested that immigrant workers appear to be imperfect substitutes for native born workers, (Ottaviano and Peri (2006) for the United States and Manacorda, Manning and Wadsworth (2006) for the UK). This would tend to move immigrants down the host country wage distribution

However concentration on absolute gains alone makes it harder to assess the full extent of the consequences of the decision to emigrate.

We frame our empirical investigations with a simple extension of the Roy model of self-selection (Borjas, 1987, Chiquiar and Hanson, 2005), whereby potential immigrants face either the origin or host country wage distribution. Wages are assumed to depend on observed human capital characteristics of the individual, and the rewards to those characteristics. If only one country is considered as a potential destination, then the decision to move is made comparing wages in the origin and host country net of migration costs. Absolute incomes gains are expected to be large at every level of education for immigration from a developing to a developed country. Let the wage depend on observed human capital characteristics of the individual, X_i and the rewards to those characteristics, but also on characteristics unobserved to the researchers such as motivation, or dynamism and captured by the random error term ϵ . Assume instead two host countries for potential migrants who are originally located in the origin country (I) then:

$$\text{Host:} \quad \text{Ln}(w_{ij}) = \beta_j^I X_{ij} + \epsilon_{ij} \quad j = \text{UK, US} \quad (1)$$

$$\text{Origin} \quad \text{Ln}(w_{iI}) = \beta_I^I X_{iI} + \epsilon_{iI} \quad (2)$$

where β_j^I is the reward to given characteristics for individuals i from country I working in country j . As is usual in these models we assume that vector of residuals $\epsilon \sim N(0, \Sigma)$ and ϵ_i, ϵ_j have correlation coefficients ρ_{ij} . If any of these $\rho > 0$ then characteristics are rewarded similarly, though not necessarily equally, in each pair of countries. Given a cost of migration, π , an individual will mover from India to either country if $\text{Ln}(w_{ij}) - \text{Ln}(w_{iI}) - \pi > 0$.

Suppose instead that only relative status matters, then the wage on the left hand side of equations (1) to (2) is replaced with position in the wage distribution, POS_{ij} the

individual i 's positional ranking in the wage distribution of country j which in turn depends on a (potentially different) set of characteristics, Z , and rewards, γ

$$POS_{ij} = \gamma_j^I Z_{ij} + u_{ij} \quad j = I, UK, US \quad (3)$$

and the decision to migrate is now based on whether $POS_{ij} - POS_{iI} - \pi > 0$.

Given this, it is possible that potential moves down the income distribution may work to offset the potential absolute income gains for some individuals. If so, then immigration flows might be lower than would be expected from the simple extended Roy model focus on absolute wage comparisons.

Immigration Costs

Often the migration literature gives relatively little attention to the costs of migration, be it direct transportation costs, barriers to entry imposed by the host country, indirect psychic costs such as loss of social networks, loss of visits, contacts with the extended family. Borjas (1987, 1999) assumes that π is constant. Yet Borjas (1991) acknowledges that the predictions of the Roy model could be changed if the costs of migration vary with earnings potential, rather than being constant or randomly distributed across individuals. Chiquiar and Hanson (2005) assume that migration costs decline linearly with schooling.

We argue that migration costs are likely to vary by skill *and* across countries, depending on each country's immigration policies, labour market demands and labour market institutions and that the association with skill need not be linear or monotonic. The greater the variation in migration costs by skill, the more costs can offset the simple predictions of the Roy model. Clearly the work permit/visa systems in place in both the US and the UK make the costs of immigration higher for less skilled workers. While this may affect the average position of Indian immigrants in the host country wage distribution – more higher skilled immigrants relative to the average skill level

in the host country would mean that Indian immigrants should feature higher up the host wage distribution - this alone, would not be expected to affect an individual immigrant's progression in the host country wage distribution.

If there are also costs that determine not only who migrates but also how quickly those who migrate progress, then some immigrants will end up lower down the host country wage distribution than might be expected. First, it may be that the transfer of skills is not perfect. This may be caused by language and familiarization issues often discussed in the assimilation literature, (Chiswick, 1978). However, there may also be other institutional impediments. The "adaptation" process applied to immigrants wanting to work in many professions in both the UK and the US may hinder progress. For example, nurses who qualified in India may be impeded from getting their qualifications validated by unfamiliarity with the system or the actions of third parties.⁷

At the same time, progression in the respective wage distributions will depend on how characteristics are rewarded in the sending and host countries, which in turn depends on the relative demand for and supplies of observable and unobservable skills in the two countries. Any discrimination or assimilation problems would mean that $\beta_I > \beta_{US_UK} > \beta_{US_UK}^I$. Given differential rewards to immigrants and native-born workers in the host countries, individuals with a given characteristic would be observed even

⁷ Doctors and nurses in the UK with qualifications obtained abroad are required to find a supervised job placement in order to do conversion training and have their qualifications "adapted". The Guardian newspaper reports that the system is open to abuse, in that adaptations are either only available in more menial jobs or validation may be delayed.

<http://www.guardian.co.uk/guardianweekly/story/0,,1316656,00.html>

Dentists wishing to work in the UK from outside the EU must pass a Qualifying Examination and pay the entry fee of £2800. Migration News (2003) reports that some colleges in India "guarantee" students an H-1B visa, usually by having a US-based contractor attest that the individual is needed to fill a US job. However, once in the US, there may not be a job. Freeman (2003) outlines the institutional barriers facing immigrant workers in many professions in the US.

higher up the sending country wage distribution, other things equal. Of course this could be offset if certain skills were in short supply in the host countries.⁸

Thirdly migration networks in the host country can also affect the net cost of immigration and subsequent assimilation by providing flows of information and assistance. McKenzie and Rappoport (2007) argue that the extent of these networks and associated costs also vary by skill.⁹

We therefore allow the costs of migration to vary according to an individual's skill and also on the costs imposed by the destination country

$$\pi_{sj} = \mu_{\pi} + \bar{\delta}_{sj} \quad j = \text{US, UK}$$

where μ_{π} are costs of migration that are constant across individuals and the variable cost $\bar{\delta}_{sj} > 0$ ($\bar{\delta}_{sj} < 0$), depends on host country j and skill level s . These costs are unobservable but we do observe wage outcomes and the position of immigrants in the host country's wage distribution. This wage ranking will reflect, in part, the impact of these costs.

Which of these factors, costs, demand or supply, dominate is ultimately an empirical matter and so we proceed to measure wage rankings in both source and host country.

4. Data and Estimation Strategy

Existing comparative studies, Antecol, Kuhn and Trejo (2006) Antecol, Cobb-Clark and Trejo (2003a, 2003b) investigate the effect of different institutions on the employment and wage-level assimilation of *all* immigrants across different host countries. Their results rely on the assumption that immigrants originating from different countries, or within broad continental groupings, assimilate at the same rate

⁸ The difference in characteristics between the host and source countries also depends in part on the participation rates in the respective countries and on who migrates, (Chiquiar and Hanson, 2005).

⁹ Networks (or lack of them) in the source country may also be a factor in the decision to migrate affecting the selection of who migrates, but leave this issue to future work.

in the host countries. Adsera and Chiswick (2004), however show that assimilation rates can vary both across countries and within countries by country of origin. A focus on immigrants from a single source country could help therefore mitigate the influence of unobserved source country effects.

In order to do this we use three data sets, each containing individual data on pay and a set of individual control variables. In each of the three data sets we focus on individuals aged 16 to 65, male and female, employed in a full-time job.¹⁰ For the US we utilise the year 2000 Census 1% PUMS sub-sample (Ruggles et al. 2004). We select individuals working as a full-time employee in the week previous to the interview earning a weekly wage of between \$100 and \$5000. Using the country of birth and ethnicity data, we define Indians immigrants as those born in India and who are classified as “Asian Indians”. We split the sample into four education groups that can be compared across the data sets from the other countries. These categories correspond to those who left school before 16, those with some post-compulsory education, those with some vocational education and those with a college degree. To focus on the decision made after education has been completed, we further select on those who migrated *after* the age at which education was completed. This gives us a US sample of around 900,000 individuals, of whom around 3,700 came from India after completing their education.

For the second host country, the UK, we use several waves of the quarterly Labour Force Survey¹¹ (LFS) centred on the year 2000. The LFS being a rotating panel, where each individual is interviewed for five quarters in a row, we take wage responses from the 8,000 working individuals interviewed for the first time in each

¹⁰ There is no information on self-employed income in two of the three data sets, so the issue of selectivity into self-employment cannot be examined. Nor is there hourly wage information for India, hence the restriction to full-time workers.

¹¹ The UK Census does not report wage data.

quarter. To boost the sample size we pool all individuals interviewed over the period 1997 to 2003. We define “Indian immigrants” as those born in India of Indian ethnicity who migrated from India after completing their education. For the host wage distribution we trim the top and bottom 0.5% of the recorded wage distribution¹². This gives us a UK sample of around 75,000 individuals, of whom around 600 came from India after completing their education.

For India, we use the data collected by the National Sample Survey Organisation (NSSO), who have conducted representative household surveys in India since 1950. The 55th round was conducted between July 1999 and June 2000, with 820,000 individuals interviewed in around 100,000 households. This gives us a sample of 108,000 individuals aged 15 to 65 in full-time employees with wage information.¹³ This group comprises the set of stayers with which we compare relative positional rankings of immigrants, though it will, of course, include any return immigrants. We convert all weekly wage data into US dollars using the IMF Purchasing Power Parity Index, (PPP), prevailing in the year 2000, (IMF 2000).¹⁴

Estimation

To assess the relative gains from emigration we simply compare the percentile ranking of individuals with similar observed characteristics in the source and host countries. To obtain our conditional estimates of the relative gains from emigration we use OLS regression estimates from a pooled sample of migrants and stayers based on the model: $POS_i = b_0 + \gamma_1 Mover_i + Z\gamma + u_i$, where POS_i is the individual’s percentile ranking in the country of living and the coefficient γ_1 gives the differential

¹² We select only those with a full-time weekly wage between £50 and £3000.

¹³ We select individuals working at least 4 days a week (working time is given by the number of ½ days at work in the NSS).

¹⁴ The first NSS to contain wage data is the 1983/84 survey. There are no years other than 2000 when the data sets for all three countries overlap.

position in the host country wage distribution conditional on asset of observed covariates, Z .

When pooling the set of control variables are constrained to be the same for the two countries. This can create problems if the covariates or their returns differ across countries. For example, Table A1 shows that Indian immigrants are concentrated in geographical areas of the two host countries which also happen to be associated with wages higher than the average. In a single equation context one could introduce regional dummy variables to control for these effects, but in a pooled (across-country) regression this is not possible. However using percentiles of the wage distribution rather than wage levels, it is possible to net out these regional effects, or indeed any other covariates, by taking an individual's position in the residual wage distribution. This also allows the returns to a particular covariate to vary between source and host country, which would not be possible when pooling. We therefore also rank individuals according to their position using the residuals from OLS regressions of log weekly wages on regional dummies for both source and host countries. We also compare these estimates with those based on a variety of propensity score matching methods across the two cross-section data sets. Here the percentile gains to emigration are calculated as the difference between the mean percentile ranking for migrants and that of the appropriate matched sample of stayers. We also present separate estimates by gender.

Selection

Matching on observables may be open to bias if differences in outcomes are influenced by unobservable correlated with both the decision to emigrate and progression up the wage distribution. We do not pursue an identification strategy based on instrumentation, given the lack of good identifiers in the data, so we can not

single out the counterfactual population of potential movers among the source population other than through observable characteristics. Hartog and Winkelmann (2004) argue against using selectivity corrections when the mover sample is small relative to the stayer sample. It may be that the quota and visa systems imposed by immigration laws will work to negate these unobservable effects somewhat. Since migration flows are restricted by institutions, some potential immigrants get lucky while others do not.¹⁵ The numbers of Indian emigrants is also small relative to its source and host populations so that any general equilibrium effects on the wage distribution caused by emigration are also likely to be small. Both host countries are English speaking and English familiarity in India is one of the colonial legacies¹⁶. This should help net out some of the effects of language fluency on assimilation across the two countries, highlighted by Chiswick and Miller (1998), Dustmann (2000) among others.

Lalonde and Topel, (1997) object to using the stayer group as a counterfactual, arguing that if any two potential comparator groups are similar they should have the same migratory behaviour, (short of an exogenous migration shock to one group). Given this objection, it may be feasible instead to use the two sets of Indian immigrants in the two host countries to compare relative performance and so assess the relative assimilation prospects in both countries. We pursue this strategy in Table 7 below.

¹⁵ McKenzie, Gibson and Stillman (2006) make this argument in their study of Tongan immigrants to New Zealand where migration status depends on the result of the outcome of a lottery. Their estimated experimental returns to emigration are positive, but some 9 to 80% lower for the randomly selected group compared to the results from OLS and IV non-experimental estimation methods, though certain propensity score methods produce estimates that are not significantly different from the authors' experimental results.

¹⁶ English is an "associate official language" in India. It is the main medium of instruction at postgraduate level, and, in theory, should now be taught as a second or third language from junior school onward in all states of India. However universal enrolment in primary school has still not been achieved and the 2001 literacy rate is estimated at 63%, Department of Secondary Education, Government of India <http://education.nic.in/Elementary/adledu.asp#nlm>

5. Wage Distributions of Indians in India, the US and the UK

The summary statistics of our samples of full-time workers are given in Tables A1 and A2 of the appendix. The education profile of Indian immigrants to both the UK and the US is highly skewed toward university graduates. Around 13% of full-time employees in India have a university degree, but 36% of Indian immigrants to the UK went to college in India and 73% of Indian immigrants to the US. There are also more low qualified Indian immigrants to Britain than in the British-born population of full-time workers, (Table A1).

Indians living in the UK arrived earlier, on average, than other immigrants to UK, (Table A2). The US received more of its Indian immigrants in the years immediately before 2000. In the UK, the less qualified cohorts arrived earlier, on average, than those with higher qualifications. This is also true for other immigrants, which reflects, in part, the easier rights of UK entry to Commonwealth residents before 1973. In the US, the average length of stay of Indian immigrants is similar across skill groups and also compared to other immigrants.¹⁷ The proportion of young people is lower amongst immigrants than amongst the native populations, as opposed to the general rule that immigrants are on average younger than natives. The selection in our samples only of immigrants who completed their studies in India together with the large proportion of graduates most probably explains this pattern. The immigrant stock is also concentrated regionally in both countries, (Table A1). Some 42% of Indian immigrants in the British sample live in London, compared to around 8% of the native-born population. Likewise some 22% of Indian immigrants to the US live in California, compared to around 11% of the native-born population. Since these

¹⁷ Our samples may also be affected by no-random return migration, and therefore comments should be taken as conditional on those flows.

areas are high wage regions, immigrants to these regions will receive higher pay, other things equal, than immigrants to other regions.¹⁸

Figure 1 gives the weekly wage distribution, PPP adjusted, of full-time employees observed in the three countries. Not surprisingly the Indian wage distribution is to the left of the wage distributions in the UK which in turn is to the left of that in the US. However the three distributions do overlap to some extent. The Table confirms that wage inequality is much higher in India.¹⁹ Table 1 shows that the Gini coefficients are the highest in India and next highest in the US compared to the UK. This holds both for men and women. Wage inequality amongst Indian women is particularly high. Indeed the dispersion of pay among women in India is higher than among Indian men, unlike in the UK or the US. In absolute terms, an individual at the 90th percentile of the Indian distribution earns more than someone at the 10th percentile in the UK, but less than those at the 10th percentile in the US. That the wage distributions are not the same across the three countries means that a given percentile change in wage rankings implies a different absolute wage change. A one percentage point move up the Indian wage distribution is a larger absolute wage gain than a one point move in the US, which in turn is larger than in the UK.

6. Relative ranking changes

Table 2 gives the unadjusted percentile rankings of immigrants in the host country wage distributions disaggregated by education, alongside the equivalent percentile rankings of the four education groups in India. Not surprisingly, given the smaller graduate share in the Indian population, the average graduate in India is at the 83rd percentile of the wage distribution compared to the 71st in the UK and 69th

¹⁸ Wages in London are some 20% higher than in the other U.K. regions outside the south-east. Wages in California and New Jersey are some 10 and 20% higher than the average, respectively.

¹⁹ The bimodality of the Indian data is not caused by our definition of full-time work. The same pattern occurs for those working 7 days a week.

percentile in the United States. The variation around the mean percentile ranking is also smaller in India. Similarly those with a secondary education lie much further up the wage distribution in India compared to similarly qualified workers in Britain or the US. The percentile rankings of Indian immigrants to the UK or the US by education are however close to the average rankings of native-born employees by education in the host populations (columns 2 and 5).

Table 3 outlines both the absolute and percentile ranking returns to age and education across countries based on separate regressions for movers and stayers. The top panel gives results of simple human capital models on the determinants of log weekly wage for Indian immigrants to the US and the UK and for native workers in India, the US and the UK. The absolute returns to university education are around seventy percent greater in India than in the United States which in turn are around 30 percent higher than in Britain. The absolute return to secondary education is also much higher in India. Full-time employees in India with a secondary education earn around twice as much, on average, than those with primary education. These returns reflect, in part, the relative shares of these education groups in the respective populations. The implication of these results for the Roy model of migration is that we would expect to see primarily low educated workers among Indian immigrant stocks to countries with lower levels of wage inequality. That this is not the case, particularly in the US, is apparent from Table A1.²⁰ Institutional barriers to migration render the predictions of the simple Roy model unrealistic.

The OLS estimates of the effect on percentile rankings of the same human capital characteristics are shown in the bottom panel of Table 3. Here the advantages to university education are closer across countries, reflecting, in part, the wider

²⁰ This finding sits alongside Chiquiar and Hanson (2005) who show that Mexican immigrants to the US are drawn primarily from the middle of the income distribution.

distribution of wages in India offering a greater reward for a given percentile increase in wage ranking.

The returns to education of Indian immigrants in the two host countries closely resemble those of the native born host populations, so that any differential positional rankings will not be influenced much by factors that reward education levels of Indian immigrants differently from the native born population. However the returns to age are much lower for Indian immigrants to both countries, (columns 3 and 6), though this may be influenced by the cohort effects observed in Table A2.

Given these returns to observed characteristics in the sample countries, Table 4, examines the absolute gains to emigration, based on OLS regressions of the log weekly wage on the pooled samples of Indian stayers and Indian immigrants to the US, (columns 1 to 3) and the UK, (columns 4 to 6). The Table reports the estimates on the mover dummy variable for a variety of different samples and specifications. Unsurprisingly, in the absence of any controls, Indian immigrants in the US earn more, on average, than Indian immigrants in the UK who in turn earn more compared to Indians working in India.²¹ The average absolute gains to immigration net of observable differences are somewhat closer at 186 and 171 log points in the US and the UK (columns 3 and 6 respectively). When the sample is split by education, it appears that the largest absolute gains are made by those with the lowest levels of educational attainment – with little difference between immigrants to the US and the

²¹ Note that when pooling data, the coefficient on movers is influenced more by the effect of controls from the dominant group, since the difference in average wages between movers, M, and stayers, S in a

pooled regression is given by $\bar{W}_S - \bar{W}_M = \bar{X}_S B - \bar{X}_M B - \beta_M$ so the coefficient on the mover dummy is given by $\beta_M = (\bar{W}_S - \bar{W}_M) - (\bar{X}_S - \bar{X}_M) B$, where the vector of coefficients on the controls, B is itself a weighted average of the coefficients from the two group, $\hat{B} = [(X_S' X_S + X_M' X_M)^{-1} (X_S' X_S)] \hat{\beta}_S + [(X_S' X_S + X_M' X_M)^{-1} (X_M' X_M)] \hat{\beta}_M$. The greater the difference in returns across the two groups, the more is lost by pooling.

UK. College-level educated workers gain more in absolute terms by moving to the United States. This is consistent with the patterns of wage inequality in the two host countries observed above.

When the sample is split by gender, female Indian immigrants get larger absolute gains, on average, in the UK rather than in the US.²² Female Indian immigrants to the UK also receive larger absolute wage gains than male immigrants to the UK. Male Indian immigrants receive absolute higher gains in the US compared to women and to male immigrants to the UK.²³ When we disaggregate by year of entry, recent immigrants to the UK receive the largest absolute gains, while recent immigrants to the US receive the smallest absolute gains, (Table A3).

The relative gains to migration are outlined in Table 5 which compares an individual immigrant's percentile ranking in the wage distribution with that of similar individuals in the Indian stayers' wage distribution. The unconditional percentile rankings for the whole sample, suggest a gain for immigrants to the US and a small fall for immigrants to the UK, (columns 1 and 5). However much of this effect is driven by the differential composition of immigrants across the host and source countries. Conditioning first on observed personal characteristics, (columns 2 and 6), and additional on job characteristics, (columns 4 and 8), the estimated relative rankings become significantly negative, suggesting an average fall in the percentile

²² Cobb-Clark (1993) shows that in the US, female immigrants from countries with low income inequality and returns to education do better than women from countries with high levels of inequality and returns to education.

²³ For those concerned with selectivity into employment, the non-school employment rate of male (female) Indian immigrants to the UK are 75% (48%) of which 71% (61%) work as full-time employees. The corresponding figures for UK-born workers are 82 (72) and 80 (54). For the US the equivalent numbers are 86 (51) for Indian immigrants of which 82% (74%) are in full-time work. For native-born US workers the employment rates are 78% (67%) of which 77% (70%) are in full-time work. In India, the employment rates are 82% (27%) of which 38% (31%) are in full-time work. The regressions results are little changed by restricting the sample to an "after college" sample of 23 years and over.

rankings in the order of sixteen points in the US and 22 points in the UK.²⁴ The one-digit industry and occupation controls account for around one half of the ranking gap in the US data and a third of the gap in the UK data.²⁵ When we disaggregate by entry cohort, the largest percentile declines in both host countries appear to be amongst immigrants who arrived in the eighties.

When the sample is split by educational attainment, in both host countries, the largest ranking falls are amongst Indian immigrants with secondary level of qualification, consistent with the larger returns to secondary education in India observed in Table 3. The net effect of this and other influences on assimilation mean that the average Indian immigrant with a secondary-level education in either the US or the UK faces a fall in the wage distribution, and associated drop in purchasing power, of around 33 points. Again the occupation and industry controls help explain much of this gap. In the UK, the fall for graduates approaches that for those with secondary education net of industry and occupation controls.

When the sample is differentiated by gender (Table 6), the average estimated counterfactual percentile change for male and female immigrants is similar, (rows 1 and 5). Female immigrants with secondary education to either the US or the UK can expect the largest fall in rankings. On average an Indian woman with secondary education who migrates will fall some 18 points further down the wage distribution in the US and 22 points in the UK, net of industry and occupation controls.

Female graduates also appear to face larger falls than male graduates. Both these observations are consistent with the idea of tied movers (see also Antecol, Cobb-Clark and Trejo, 2003a). However women with low education appear to drop less compared

²⁴ If selection in labour force participation is an issue, then we underestimate the positional drop in rankings if the more motivated immigrants participate in the host country and the less motivated do not in the source country. See Chiquiar and Hanson (2005).

²⁵ We acknowledge the possible endogeneity of industry and occupation controls but believe the results are of sufficient interest to justify their inclusion in the Table.

to men in both countries, so the tied mover theory may not hold across the distribution of skills.²⁶

Finally, Table 7 compares the position of Indian immigrants in the UK relative to Indian immigrants to the US, rather than relative to stayers in India, in order to address concerns about the influence of selectivity on the results. If movers are different to stayers then comparing the experiences of movers from a single source country in two host countries may allow us to identify the effects of the different host country institutions on assimilation by netting out the mover fixed effect. If however the UK and the US accept Indian immigrants with different unobserved characteristics, then this will also influence the positional rankings of Indians in the US and in the UK. Table 7 gives give the estimated coefficient on a dummy variable for Indian immigrants to the UK based on an OLS regression of position in the wage distribution on the country dummy and the set of controls using the sample of immigrants to the US and the UK. The absolute wage gains for most Indian migrants are higher in the US than in the UK. The largest differences are found amongst graduate migrants, however there is little difference in the wage levels for male immigrants with secondary-level education. The positional rankings again confirm that Indian immigrants tend to do better in the US than in the UK, with the exception of male immigrants with low and intermediate levels of education where the wage rankings are not significantly different in the two countries.

7. Conclusions

While most studies of immigration focus on the absolute income differences between countries, we argue that relative gains to migration may also influence the migration

²⁶ The results based on propensity score matching are similar. Results available from the authors on request.

decision because of the associated change in purchasing power that position in a wage distribution implies. Like the absolute incomes, these relative positions will be influenced by differential relative costs across the skill distribution caused by differential demand and supply patterns and institutional barriers to migration which together can render the predictions of the simple Roy model unrealistic.

Using data on Indian immigrants working in the United States and the UK matched to comparable data on individuals who remained in India, we show that the average Indian immigrant will experience an absolute wage gain in the order of 400%. The wage gains for Indian men are greater from migration to the US rather than to the UK, but Indian women gain more from migration to the UK than to the US.

However the typical immigrant will also experience a significant fall of up to 40 points in their relative ranking in the wage distribution compared to the position they would have achieved had they remained in the origin country. The relative rankings for male university graduates are higher for Indian immigrants to the US than to the UK, though the rankings for female university graduates and those with secondary education are higher among immigrants to the UK than to the US.

If an individual's relative position in the wage distribution is an argument in the decision making process then location decisions could depend not just on a comparison of potential wage levels but also on the relative purchasing power, or status, that moving to the host country may command compared to that foregone by moving. The net relative falls in wage distribution that we observe here appear to be large and significant for many immigrants. While the absolute wage gains are large for many immigrants from developing to developed countries, the results here suggest that the accompanying changes in purchasing power can be negative and so could be a significant factor in the decision to migrate.

References

- Adsera, A. and Chiswick, B., (2004), "Are There Gender and Country of Origin Differences in Immigrant Labor Market Outcomes across European Destinations?", IZA Discussion Paper No. 1432.
- Antecol, H., Cobb-Clark, D. and Trejo, S., (2003a), "Human Capital and Earnings of Female Immigrants to Australia, Canada, and the United States." In: *Host Societies and the Reception of Immigrants*, La Jolla, CA: Center for Comparative Immigration Studies, University of California, San Diego.
- Antecol, H., Cobb-Clark, D. and Trejo, S., (2003b), Immigration Policy and the Skills of Immigrants to Australia, Canada and United States, *Journal of Human Resources*, Vol. 38(1), pp. 192-218.
- Antecol, H., Kuhn, P. and Trejo, S. (2006), Assimilation via Prices or Quantities? Labor Market Institutions and Immigrant Earnings Growth in Australia, Canada, and the United States, *Journal of Human Resources*, Vol. 41(4), pp. 821-840.
- Bauer, T., Pereira P., Michael Vogler, M. and Zimmerman, K., (2002) "Portuguese Migrants in the German Labor Market: Performance and Self-Selection", *International Migration Review*, Vol 36, No. 2, Summer 2002, pp. 467-491.
- Borjas, G., (1987), "Self-Selection and the Earnings of Immigrants", *American Economic Review*, Vol. 77, September, pp. 531-553.
- Borjas, G., (1991), "Immigration and Self-Selection", in *Immigration, Trade and the Labor Market* (eds.) J. Abowd and R. Freeman, NBER, University of Chicago Press.
- Borjas, G., (1987), "Self-Selection and the Earnings of Immigrants" *American Economic Review*, Vol. 77, September, pp. 531-553.
- Borjas, G., (1999), "The Economic Analysis of Immigration", in *Handbook of Labor Economics*, Volume 3A, edited by Orley Ashenfelter and David Card, North-Holland, pp. 1697-1760.
- Butcher, K. and DiNardo, J., (2002), "The Immigrant and Native-born Wage Distributions: Evidence from United States Censuses", *Industrial and Labor Relations Review*, Vol. 56, No. 1, October, pp. 97-121.
- Chiquiar D., and Hanson, G., (2005), "International Migration, Self-Selection and the Distribution of Wages: Evidence from the United States and Mexico", *Journal of Political Economy*, Vol. 113, April, pp. 239-281.
- Chiswick, B. (1978), "The Effect of Americanization on the Earnings of Foreign-Born Men," *Journal of Political Economy*, Vol. 86, October, pp. 897-922.
- Chiswick, B. and Miller, P., (1998), "English Language Fluency in the United States", *Research in Labor Economics*, Vol. 17, pp.151-200.

Clark, A. and Oswald, A., (1998), “Comparison-concave utility and following behaviour in social and economic settings”, *Journal of Public Economics* Vol. 70, pp. 133–155

Cobb-Clark, (1993), “Immigrant Selectivity and Wages: The Evidence for Women”, *American Economic Review*, Vol. 83, No. 4 , September, pp. 986-993.

Dustmann, C. and Fabbri, F., (2003),” Language Proficiency And Labour Market Performance Of Immigrants in the UK”, *Economic Journal*, Vol. 113, July, pp. 695-717.

Eckstein, Z. and Weiss, Y., (2004) , “On the Wage Growth of Immigrants: Israel 1990-2000”, *Journal of the European Economic Association*, Vol. 2, No. 4, June, pp. 665-695.

Freeman, E., (2003), “Barriers to Foreign Professionals Working in the United States”, CEPR Briefing Paper, September, 15th,
http://www.cepr.net/publications/professional_supplement.htm

Hartog J., Winkelmann R., (2003), “Comparing Migrants to Non-Migrants: The Case of Dutch Migration to New Zealand”, *Journal of Population Economics* Vol. 16, No. 4, pp. 683-705.

Home Office, (2002), Migration: An Economic and Social Analysis, Research, Development and Statistic Occasional Paper No 67, Government Statistical Office, Home Office, London, UK.

IMF (2000), World Economic Outlook Database,
<http://www.imf.org/external/pubs/ft/weo/2007/01/data/index.aspx>

LaLonde, R. and Topel, R.. (1997) “Economic Impact Of International Migration and The Economic Performance Of Migrants”, In M. Rosenzweig and O. Stark (eds.) *Handbook of Population and Family Economics*, Elsevier Science, pp. 799-850.

Manacorda M., Manning A., and Wadsworth, J., (2006), “The Impact of Immigration on the Structure of Wages in Britain”, Centre for Economic Performance Working Paper No. 1431

McKenzie, D., Gibson, J. and Stillman, S., (2006), “How Important is Selection? Experimental vs. Non-Experimental Measures of the Income Gains from Migration”, IZA Discussion Paper Np. 2086, IZA Bonn.

McKenzie, D., and Rapoport, H., (2007), “Self-selection patterns in Mexico-US migration: the role of migrant network”, CReAM Discussion Paper Series 0701, Department of Economics, University College London

Migration News, (2003), Vol. 10 No. 1, January 2003

OECD, (2001), SOPEMI, Trends in International Migration, Continuous Reporting System on Migration, Annual Report, Paris.

Ottaviano, G. and Peri, G. (2006), “Rethinking the Effects of Immigration on Wages”, NBER Working Paper No. 12497.

Ruggles, S, Sobek, M., Alexander, T, Fitch, C., Goeken, R., Hall, P., King, M. and Ronnander, C., (2004). *Integrated Public Use Microdata Series: Version 3.0 [Machine-readable database]*. Minneapolis, MN: Minnesota Population Center [producer and distributor], 2004, <http://www.ipums.org>.

Sjaastad, L, (1962), The Costs and Returns of Human Migration, *Journal of Political Economy*, 70(5), 80-93.

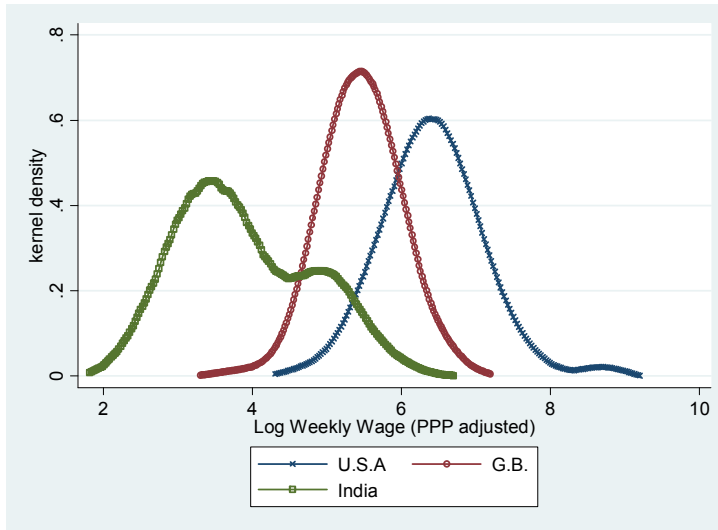
Srinavasta, R. and Saikumar, S., (2003), “An Overview of Migration in India, its Impacts and Key Issues”, in *Migration Development Pro-Poor Policy Choices*, DFID Conference Papers, www.livelihoods.org

Wasem, R. (2004), “US Immigration Policy on Permanent Admissions”, Congressional Research Service Report RL32235, <http://fpc.state.gov/documents/organization/31352.pdf>

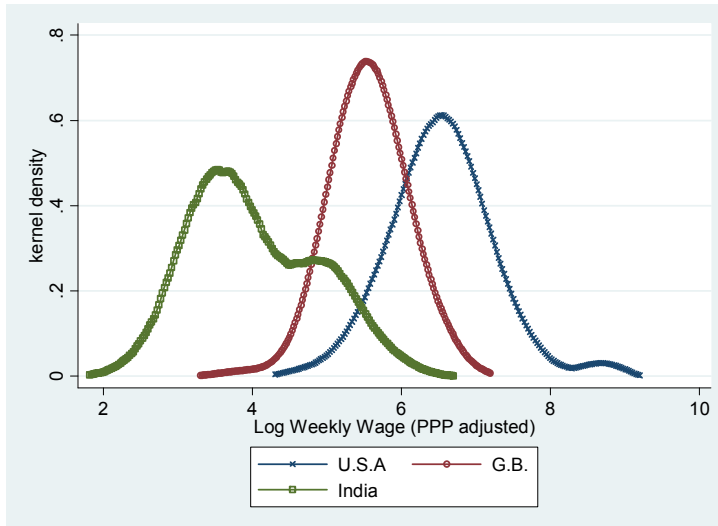
Yearbook of Immigration Statistics, (2004), Office of Immigration Statistics, Department of Homeland Security, Washington, D.C., United States.

Figure 1. Kernel Density Estimates of Log Weekly Wages (Full-Time Workers): India, US and G.B (2000)

a) Total



b) Men



c) Women

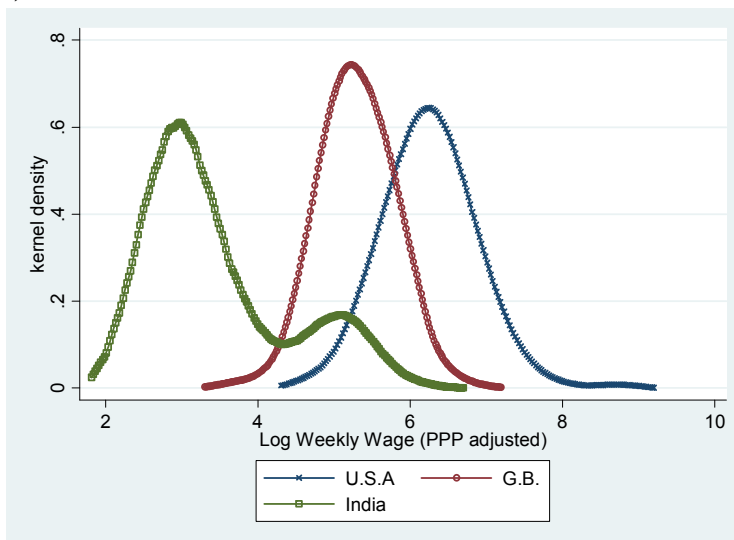


Table 1. Wage inequality in India, UK and US in 2000 (full-time employees)

	India	UK	US
Total			
10	2.78	4.84	5.54
50	3.69	5.46	6.39
90	5.21	6.15	7.22
Gini	.509	.305	.393
Men			
10	3.00	4.93	5.66
50	3.88	5.55	6.51
90	5.23	6.25	7.34
Gini	.484	.303	.398
Women			
10	2.44	4.73	5.44
50	3.13	5.28	6.22
90	5.03	5.92	7.00
Gini	.567	.277	.358

Note: Log of weekly wages for full-time employees, corrected for PPP's (IMF, 2000).

Table 2. Percentile Rankings by Educational Attainment (Full-Time Employees)

	India	UK			United States		
		UK born	Indian immig.	Other immig	US Born	Indian Immig.	Other immig.
Total			44.8 (31.9)	54.8 (29.8)		67.2 (29.5)	43.1 (30.0)
Primary	38.0 (24.1)	34.8 (24.2)	34.7 (28.1)	46.2 (30.5)	31.1 (24.8)	30.1 (24.0)	26.8 (22.9)
Secondary	66.2 (24.4)	44.9 (26.9)	50.2 (25.8)	45.2 (27.5)	40.7 (26.1)	35.4 (24.8)	35.7 (25.8)
Some college	75.1 (21.7)	55.1 (27.4)	55.6 (30.1)	54.4 (26.5)	49.8 (26.7)	52.5 (28.3)	48.0 (27.3)
Graduate	82.5 (19.3)	71.5 (24.1)	74.3 (26.5)	73.1 (23.7)	68.5 (25.5)	72.9 (26.6)	66.8 (27.6)
Women	34.3 (30.7)	40.6 (27.4)	35.5 (29.0)	48.4 (28.2)	43.2 (27.2)	57.7 (30.2)	39.3 (28.8)

Note: Standard errors in brackets.

Table 3. Absolute and Wage Percentile Returns to Education Movers and Stayers: (Log weekly wage)

	Indian stayers	US Native	Indian movers to US	UK Native	Indian movers to UK
<i>Absolute</i>					
Female	-0.482* (0.005)	-0.333* (0.001)	-0.288* (0.030)	-0.292* (0.003)	-0.245* (0.049)
Age	0.054* (0.001)	0.058* (0.0004)	0.009 (0.012)	0.087* (0.0011)	0.028 (0.017)
Age ²	-0.0005* (0.00001)	-0.0006* (0.00005)	-0.00004 (0.0001)	-0.0010* (0.00001)	-0.0003 (0.0002)
<i>(primary)</i>					
Secondary	0.429* (0.005)	0.164* (0.003)	0.110 (0.068)	0.211* (0.004)	0.215* (0.072)
Some college	0.760* (0.011)	0.338* (0.001)	0.433* (0.069)	0.425* (0.005)	0.303* (0.069)
University	1.023* (0.006)	0.743* (0.003)	0.933* (0.057)	0.686* (0.005)	0.629* (0.051)
N	104023	788177	2511	68632	625
Adj. R ²	0.53	0.31	0.24	0.38	0.30
<i>Percentile Ranking</i>					
Female	-16.42* (0.15)	-14.72* (0.05)	-10.97* (1.14)	-15.77 (0.17)*	-15.32 (2.27)*
Age	1.88* (0.04)	2.70* (0.02)	-0.51 (0.45)	4.45* (0.05)	1.45* (0.85)
Age ²	-0.02* (0.005)	-0.03* (0.0002)	0.01 (0.005)	-0.05* (0.0007)	-0.02 (0.01)
<i>(primary)</i>					
Secondary	14.51* (0.14)	7.38* (0.11)	5.04* (2.62)	11.92* (0.23)	11.60* (3.64)
Some college	22.51* (0.37)	15.49* (0.11)	20.80* (2.67)	23.53* (0.27)	17.68* (3.47)
University	28.33* (0.19)	32.54* (0.11)	40.44* (2.19)	37.03* (0.27)	33.42* (2.55)

Note: Robust standard errors in brackets, ** significant at 5%. Estimates are net of controls for age, marital status and region/state. Full-time employees only. The Table includes Indian immigrants to the US (col.3) and the UK (col. 5) and native workers in India (col. 1), the US (col. 2) and the UK (col.4).

Table 4. Absolute Gains to Migration: (Log weekly wage)

	Indians in USA wrt Indian stayers			Indians in UK wrt Indian stayers		
Total						
Immigrant	2.852 (0.015)**	1.885 (0.015)**	1.857 (0.016)**	2.253 (0.025)**	1.768 (0.027)**	1.705 (0.022)**
<i>University</i>						
Immigrant	1.90 (0.018)**	1.85 (0.018)**	1.61 (0.022)**	1.68 (0.048)**	1.65 (0.051)**	1.41 (0.045)**
<i>Secondary</i>						
Immigrant	1.80 (0.029)**	1.49 (0.030)**	1.67 (0.029)**	1.86 (0.060)**	1.55 (0.063)**	1.67 (0.057)**
<i>Low</i>						
Immigrant	2.46 (0.046)**	2.46 (0.050)**	2.19 (0.048)**	2.44 (0.027)**	2.41 (0.029)**	2.12 (0.028)**
Men						
Immigrant	2.828 (0.018)**	1.903 (0.017)**	1.893 (0.019)**	2.259 (0.032)**	1.692 (0.032)**	1.646 (0.028)**
Women						
Immigrant	3.074 (0.027)**	1.849 (0.029)**	1.776 (0.032)**	2.519 (0.037)**	1.884 (0.047)**	1.832 (0.039)**
Demographic	No	Yes	Yes	No	Yes	Yes
Occupation	No	No	Yes	No	No	Yes
Industry	No	No	Yes	No	No	Yes

Note: Robust standard errors in brackets; ** indicates significant at 5%; Sample sizes 106751 (83,375 men and 23,376 women) for the US-India regressions and 104898 (82017 men, 22881 women) for the UK-India regressions.

Table 5. Relative Percentile Gains to Migration by Education & Year of Entry Cohort

	<i>Indians in USA relative to Indian stayers</i>				<i>Indians in UK relative to Indian stayers</i>			
Total								
Immigrant	14.6 (0.6)*	-13.7 (0.6)*	-16.2 (0.6)*	-7.9 (0.6)*	-4.2 (1.3)*	-18.4 (1.1)*	-22.2 (1.2)*	-16.6 (1.1)*
<i>Of which</i>								
<i>Sixties arrival</i>	26.3 (2.6)*	-5.5 (2.6)*	-6.7 (2.6)*	2.8 (2.8)	-10.3 (2.9)*	-14.6 (2.4)*	-19.4 (2.3)*	-17.0 (3.0)*
<i>Seventies arrival</i>	18.8 (1.4)*	-11.5 (1.3)*	-12.8 (1.3)*	-1.9 (1.4)	-9.0 (2.5)*	-21.8 (2.3)*	-26.8 (2.3)*	-16.8 (2.3)*
<i>Eighties arrival</i>	10.3 (1.1)*	-17.5 (1.0)*	-20.5 (1.0)*	-9.9 (1.0)*	-10.7 (2.7)*	-23.3 (2.5)*	-27.8 (2.5)*	-19.1 (2.4)*
<i>Nineties arrival</i>	14.9 (0.9)*	-12.6 (0.8)*	-13.7 (0.8)*	-9.8 (0.8)*	5.3 (2.2)*	-13.8 (1.9)*	-16.6 (2.0)*	-14.3 (1.8)*
By Education								
<i>University Mover</i>	-9.6 (0.6)**	-10.7 (0.6)*	-12.2 (0.6)*	-7.8 (0.7)*	-18.5 (2.0)*	-18.9 (2.0)*	-21.4 (2.1)*	-17.4 (1.9)*
<i>Secondary Mover</i>	-24.3 (1.2)**	-33.0 (1.2)*	-34.2 (1.2)*	-18.9 (1.3)*	-25.1 (2.3)*	-30.4 (2.4)*	-33.9 (2.4)*	-18.4 (2.5)*
<i>Low Mover</i>	-6.6 (1.9)*	-6.3 (2.0)*	-11.7 (1.9)	-12.4 (2.0)*	-12.6 (1.6)*	-9.1 (1.5)*	-15.1 (1.4)*	-14.6 (2.0)*
Controls								
Demographic	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Region	No	No	Yes	Yes	No	No	Yes	Yes
Industry	No	No	No	Yes	No	No	No	Yes
Occupation	No	No	No	Yes	No	No	No	Yes

Note: Entries are estimated coefficient and standard errors on mover dummy variable from OLS regression of percentile ranking on set of controls. Each cell entry corresponds to the coefficient from a separate regression on the sub-sample highlighted in the row with the set of controls given in the column. For example the first cell estimate of 14.6 is the coefficient on the immigrant dummy based on the full pooled sample of Indians in the US and Indian stayers with no controls.

Table 6. Relative Percentile Gains to Migration by Gender & Education

	Indian in USA relative to Indian stayers				Indian in UK relative to Indian stayers			
Men								
Mover	14.6*	-11.8*	-13.8*	-7.9*	-0.4	-16.9*	-21.0*	-16.2*
	(0.7)	(0.6)	(0.6)	(0.7)	(1.6)	(1.5)	(1.5)	(1.6)
Univ.	-7.2*	-7.9*	-9.4*	-5.1*	-14.4*	-14.7*	-17.5*	-15.8*
	(0.7)	(0.7)	(0.7)	(0.8)	(2.2)	(2.3)	(2.5)	(2.8)
Second.	-24.0*	-31.1*	-32.9*	-19.7*	-19.3*	-25.7*	-30.0*	-15.9*
	(1.5)	(1.5)	(1.6)	(1.7)	(2.9)	(3.0)	(3.1)	(3.3)
Low	-9.3*	-12.0*	-17.3*	-14.8*	-9.3*	-12.5*	-18.1*	-16.3*
	(2.4)	(2.4)	(2.4)	(2.7)	(2.5)	(2.4)	(2.3)	(3.0)
Women								
Mover	20.4*	-18.0*	-19.1*	-8.1*	-0.6	-20.1*	-24.1*	-17.1*
	(1.1)	(1.1)	(1.1)	(1.1)	(2.0)	(1.8)	(1.8)	(1.6)
Universt.	-14.6*	-19.7*	-20.8*	-11.7*	-23.9*	-27.1*	-29.6*	-20.8*
	(1.4)	(1.4)	(1.5)	(1.5)	(3.7)	(3.8)	(3.9)	(3.3)
Second.	-22.0*	-36.5*	-36.7*	-17.9*	-31.5*	-38.1*	-40.2*	-22.5*
	(2.1)	(2.0)	(2.0)	(2.1)	(3.6)	(3.8)	(3.9)	(3.4)
Low	5.5	4.1	-1.8	-8.1*	-4.4*	-5.8*	-12.2*	-12.9*
	(2.9)	(3.0)	(2.9)	(3.0)	(1.5)	(1.6)	(1.5)	(2.5)
Controls								
Demog.	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Region	No	No	Yes	Yes	No	No	Yes	Yes
Occupa.	No	No	No	Yes	No	No	No	Yes
Industry	No	No	No	Yes	No	No	No	Yes

Note: The native-born Indian default percentiles are 82.6 (84.0/76.9), 67.6 (68.2/64.0), 38.0 (43.3/21.3) for college, secondary and low, (male/female). The interpretation of the individual cell entries is the same as in Table 5.

Table 7. Gains to Migration to UK v. USA by Gender & Education

	Absolute			Relative			
Total							
Moved to UK	-0.59*	-0.33*	-0.36*	-19.5*	-6.0*	-7.5*	-7.6*
	(0.03)	(0.03)	(0.03)	(1.4)	(1.4)	(1.4)	(1.4)
Men							
Moved to UK	-0.57*	-0.30*	-0.38*	-16.2*	-3.9*	-5.2*	-6.6*
	(0.04)	(0.04)	(0.04)	(1.8)	(1.7)	(1.8)	(1.8)
University							
Moved to UK	-0.45*	-0.45*	-0.51*	-8.4*	-8.4*	-9.6*	-12.2*
	(0.05)	(0.05)	(0.05)	(2.3)	(2.4)	(2.5)	(2.4)
Secondary							
Moved to UK	-0.09	-0.07	-0.12	-4.3	-5.4	-3.0	-3.6
	(0.07)	(0.07)	(0.07)	(3.2)	(3.3)	(3.4)	(3.7)
Low							
Moved to UK	-0.14*	-0.14*	-0.20*	-1.1	-1.0	-1.3	-1.4
	(0.07)	(0.07)	(0.07)	(3.4)	(3.3)	(3.2)	(4.0)
Women							
Moved to UK	-0.55*	-0.32*	-0.32*	-21.0*	-9.7*	-11.5*	-9.2*
	(0.04)	(0.05)	(0.05)	(2.2)	(2.3)	(2.3)	(2.1)
University							
Moved to UK	-0.37*	-0.37*	-0.38*	-9.7*	-10.0*	-11.5*	-11.1*
	(0.07)	(0.08)	(0.07)	(3.8)	(3.8)	(3.9)	(3.2)
Secondary							
Moved to UK	-0.29*	-0.30*	-0.28*	-9.3*	-9.8*	-12.8*	-10.4*
	(0.08)	(0.08)	(0.08)	(4.0)	(3.9)	(3.8)	(3.6)
Low							
Moved to UK	-0.26*	-0.24*	-0.26*	-10.1*	-9.0*	-9.5*	-4.1
	(0.08)	(0.08)	(0.09)	(3.4)	(3.6)	(3.4)	(4.2)
Demog.	No	Yes	Yes	No	Yes	Yes	Yes
Region	No	No	Yes	No	No	Yes	Yes
Occupa.	No	No	Yes	No	No	No	Yes
Industry	No	No	Yes	No	No	No	Yes

Note: Figures give estimated coefficient and robust standard error on dummy variable for Indian immigrants to the UK relative to Indian immigrants to the United States from OLS regression of position on the country dummy and the set of controls listed.

Table A1. Sample Means (Full-Time Employees)

	India	Indians in UK	UK-born	Indians in US	US-born
Age	35.3 (11.4)	41.6 (10.3)	38.7 (11.3)	41.5 (10.2)	40.7 (11.1)
< age 35	0.36	0.21	0.39	0.34	0.34
>= age 50	0.20	0.31	0.21	0.25	0.24
Education:					
Primary	0.68	0.30 (0.02)	0.20	0.06 (0.004)	0.07
Secondary	0.17	0.16 (0.01)	0.38	0.11 (0.006)	0.34
Some coll.	0.03	0.14 (0.01)	0.20	0.10 (0.005)	0.32
Graduate	0.13	0.36 (0.02)	0.21	0.73 (0.009)	0.27
Female	0.22	0.38 (0.02)	0.38	0.30 (0.009)	0.43
Single	0.20	0.06 (0.01)	0.32	0.10 (0.005)	0.20
Occupation					
	Agriculture (33%)	Production (21%)	Manager (16%)	Info. Tech. (24%)	Clerical (15%)
	Clerical (10%)	Clerical (12%)	Clerical (15%)	Health (12%)	Manager (10%)
	Construct. (8%)	Health Care (12%)	Mainten. (11%)	Manager (11%)	Production (10%)
	Pers.Serv. (8%)	Mainten. (7%)	Production (7%)	Clerical (8%)	Sales (10%)
Industry					
	Agriculture (32%)	Manufact. (30%)	Manufact. (23%)	Business (23%)	Manufact. (17%)
	Manufact. (14%)	Health (17%)	Selling (11%)	Manufact. (17%)	Selling (15%)
	Public admin. (11%)	Business (12%)	Finance (10%)	Health (16%)	Health (14%)
	Construct. (8%)	Selling (10%)	Health (9%)	Selling (14%)	Business (9%)
Region					
	Maharashtra (10%)	London (42%)	South-East (21%)	California (22%)	California (11%)
	Andara Pradesh (9%)	South-East (15%)	South-West (9%)	New Jersey (14%)	Texas (7%)
N	104261	629	68696	2515	794253

Table A2. Average years since migration of immigrants to the UK and US

Origin Country	UK		United States	
	India	Other immigrants	India	Other immigrants
Mean	15.3 (11.2)	12.3 (11.3)	11.2 (8.8)	13.2 (9.4)
25 th percentile	5	3	3	5
Median	14	9	9	11
75 th percentile	24	20	17	20
Mean years in host country by Education:				
Low Qualifications	20.0	11.8	11.2	13.3
Secondary	16.6	15.7	12.6	13.1
Some college	15.3	10.8	15.4	14.6
University	10.4	10.8	12.6	12.1

Note: Standard-errors in brackets.

Table A3. Absolute Gains to Migration by Entry Cohort: Log(weekly wage)

	Indian in United States wrt stayers			Indian in UK wrt Indian stayers		
Total						
Sixties	3.148 (0.076)*	2.026 (0.075)*	2.08 (0.057)*	2.053 (0.061)*	2.016 (0.072)*	1.741 (0.062)*
Seventies	3.004 (0.041)*	1.955 (0.037)*	1.953 (0.028)*	2.096 (0.053)*	2.047 (0.058)*	1.799 (0.046)*
Eighties	2.751 (0.028)*	1.798 (0.026)*	1.834 (0.022)*	2.051 (0.064)*	1.976 (0.062)*	1.762 (0.049)*
Nineties	2.807 (0.022)*	1.882 (0.021)*	1.774 (0.021)*	2.38 (0.047)*	2.32 (0.049)*	1.967 (0.042)*
Men						
Sixties	3.082 (0.081)*	2.030 (0.080)*	2.112 (0.081)*	2.052 (0.069)*	1.895 (0.080)*	1.686 (0.079)*
Seventies	3.080 (0.052)*	2.018 (0.047)*	2.030 (0.045)*	2.146 (0.081)*	1.836 (0.070)*	1.654 (0.071)*
Eighties	2.737 (0.034)*	1.793 (0.032)*	1.856 (0.029)*	1.996 (0.092)*	1.814 (0.084)*	1.638 (0.060)*
Nineties	2.761 (0.025)*	1.903 (0.023)*	1.809 (0.028)*	2.345 (0.053)*	2.237 (0.059)*	1.907 (0.051)*
Women						
Sixties	3.358 (0.193)*	2.011 (0.193)*	1.901 (0.156)*	2.223 (0.093)*	2.308 (0.130)*	1.940 (0.152)*
Seventies	3.172 (0.057)*	1.852 (0.059)*	1.822 (0.056)*	2.397 (0.059)*	2.254 (0.084)*	2.003 (0.083)*
Eighties	2.983 (0.044)*	1.807 (0.047)*	1.778 (0.044)*	2.409 (0.075)*	2.229 (0.081)*	1.980 (0.089)*
Nineties	3.032 (0.042)*	1.815 (0.044)*	1.692 (0.046)*	2.655 (0.090)*	2.493 (0.087)*	2.055 (0.086)*
Demographic	No	Yes	Yes	No	Yes	Yes
Occupation	No	No	Yes	No	No	Yes
Industry	No	No	Yes	No	No	Yes

Table A4. Absolute Gains to Migration by Education for Men: Log(weekly wage)

	Indian in United States wrt stayers			Indian in UK wrt stayers		
Men						
<i>College</i>						
Immigrant	1.949 (0.020)*	1.926 (0.021)*	1.707 (0.025)*	1.632 (0.062)*	1.584 (0.066)*	1.322 (0.053)*
<i>Secondary</i>						
Immigrant	1.798 (0.037)*	1.552 (0.039)*	1.732 (0.036)*	1.882 (0.070)*	1.561 (0.084)*	1.633 (0.079)*
<i>Low</i>						
Immigrant	2.361 (0.059)*	2.269 (0.057)*	2.071 (0.058)*	2.319 (0.046)*	2.232 (0.046)*	1.993 (0.046)*
Women						
<i>College</i>						
Immigrant	1.841 (0.036)*	1.620 (0.037)*	1.342 (0.047)*	1.728 (0.099)*	1.496 (0.116)*	1.490 (0.095)*
<i>Secondary</i>						
Immigrant	1.869 (0.048)*	1.397 (0.048)*	1.478 (0.057)*	1.790 (0.105)*	1.431 (0.110)*	1.572 (0.116)*
<i>Low</i>						
Immigrant	2.842 (0.072)*	2.799 (0.074)*	2.447 (0.084)*	2.664 (0.038)*	2.632 (0.038)*	2.217 (0.055)*
Demographic	No	Yes	Yes	No	Yes	Yes
Occupation	No	No	Yes	No	No	Yes
Industry	No	No	Yes	No	No	Yes

Notes: see Table 4.

CENTRE FOR ECONOMIC PERFORMANCE
Recent Discussion Papers

- | | | |
|-----|---|---|
| 850 | Andreas Georgiadis | HRM Practices and Knowledge Processes Outcomes: Empirical Evidence from a Quasi-Experiment on UK SMEs in the Tourism Hospitality and Leisure Sector |
| 849 | Mirabelle Muïls
Dimitra Petropoulou | A Swing-State Theory of Trade Protection in the Electoral College |
| 848 | Dimitra Petropoulou | Information Costs, Networks and Intermediation in International Trade |
| 847 | Bernardo Guimaraes | Optimal External Debt and Default |
| 846 | Javier Ortega
Laurence Rioux | On the Extent of Re-Entitlement Effects in Unemployment Compensation |
| 845 | Richard E. Baldwin
Frédéric Robert-Nicoud | A Simple Model of the Juggernaut Effect of Trade Liberalisation |
| 844 | Richard B. Freeman | Labor Market Institutions Around the World |
| 843 | Emma Hall
Carol Propper
John Van Reenen | Can Pay Regulation Kill? Panel Data Evidence on the Effect of Labor Markets on Hospital Performance |
| 842 | Fabrice Defever
Farid Toubal | Productivity and the Sourcing Modes of Multinational Firms: Evidence from French Firm-Level Data |
| 841 | Barbara Petrongolo | What are the Long-Term Effects of UI? Evidence from the UK JSA Reform |
| 840 | Kevin D. Sheedy | Robustly Optimal Monetary Policy |
| 839 | Christopher A. Pissarides | The Unemployment Volatility Puzzle: Is Wage Stickiness the Answer? |
| 838 | Kevin D. Sheedy | Inflation Persistence when Price Stickiness Differs between Industries |
| 837 | Kevin D. Sheedy | Intrinsic Inflation Persistence |
| 836 | Andrew E. Clark
Ed Diener
Yannis Georgellis
Richard E. Lucas | Lags and Leads in Life Satisfaction: A Test of the Baseline Hypothesis |

835	Jean-Baptiste Michau	Creative Destruction with On-the-Job Search
834	Nikolaus Wolf	Scylla and Charybdis: the European Economy and Poland's Adherence to Gold, 1928-1936
833	Sharon Belenzon Tomer Berkovitz	Innovation in Business Groups
832	Espen R. Moen Åsa Rosén	Incentives in Competitive Search Equilibrium
831	Eran Yashiv	U.S. Labor Market Dynamics Revisited
830	Laura Alfaro Andrew Charlton	Growth and the Quality of Foreign Direct Investment: Is All FDI Equal?
829	Richard Layard David Clark Martin Knapp Guy Mayraz	Cost-Benefit Analysis of Psychological Therapy
828	Emma Tominey	Maternal Smoking During Pregnancy and Early Child Outcomes
827	Christos Genakos Tommaso Valletti	Testing the “Waterbed” Effect in Mobile Telephony
826	Luis Garicano Paul Heaton	Information Technology, Organization, and Productivity in the Public Sector: Evidence from Police Departments
825	Laura Alfaro Andrew Charlton	Intra-Industry Foreign Direct Investment
824	Miklós Koren Silvana Tenreyro	Technological Diversification
823	Régis Barnichon	The Shimer Puzzle and the Correct Identification of Productivity Shocks
822	Carlos Thomas	Search Frictions, Real Rigidities and Inflation Dynamics
821	Giulia Faggio Kjell G. Salvanes John Van Reenen	The Evolution of Inequality in Productivity and Wages: Panel Data Evidence
820	Luis Araujo Emanuel Ornelas	Trust-Based Trade