NBER WORKING PAPER SERIES

POVERTY TRAPS, DISTANCE, AND DIVERSITY:
THE MIGRATION CONNECTION

Jeffrey G. Williamson

Working Paper 12549
http://www.nber.org/papers/w12549

NATIONAL BUREAU OF ECONOMIC RESEARCH
1050 Massachusetts Avenue
Cambridge, MA 02138
September 2006

Poverty Traps, Distance, and Diversity: The Migration Connection
Jeffrey G. Williamson
NBER Working Paper No. 12549
September 2006
JEL No. J6, N3

ABSTRACT

Within-country ethnic diversity in high-wage immigrant nations is driven by long distance
migration. This paper documents the migration-diversity connection for the first global century
before 1914 and the second global century after 1950. It distinguishes between ethnic diversity
among the foreign-born, between the foreign-born and native-born and for total populations
using country-of-birth data. It exploits the polarization index made popular in the recent
diversity-growth debate and exploits an emigration life cycle model to predict the connection. It
also shows how policy matters.

Jeffrey G. Williamson
Department of Economics
216 Littauer Center
Harvard University
Cambridge, MA 02138
jwilliam@kuznets.fas.harvard.edu

Diversity and Migration: Setting the Stage

Why do some parts of the world have much greater ethnic and cultural diversity than others?

Let me begin by stating the obvious: ethnic diversity can only come about for one reason – long distance migration. *Ceteris paribus*, regions which have undergone greater immigration in the past will exhibit greater ethnic diversity in the present. The *ceteris paribus* qualification is essential since most observers only pay attention to immigration rates and foreign-born shares. Who the immigrants are and their 'ethnic distance' from the native-born matters just as much as the overall immigration rate; both dictate the size of the economic, cultural and linguistic diversity in the host country.[1] The interesting issue, then, is how the combination of immigrant ethnic diversity and the immigration rate work to forge the migration-diversity connection in the host country and whether there is an economic explanation for both.

It seems to me that if we understand what determines who and how many migrate, then we understand what determines ethnic diversity. The most parsimonious explanation of migration, and thus of diversity, appeals simply to wage gaps between sending and receiving regions (Lucas 1988: 6). I call this demand side thinking. It tells us unambiguously that labor surplus regions -- which have, historically, always sent emigrants abroad -- will also be regions at the bottom of the real wage, living standard and GDP per capita pecking order. These poor parts of the world will also tend to be the least diverse since they do not pull in migrants. Symmetrically, it also tells us that labor

---

[1] There is a very large literature that tries to measure within country ethnic diversity, or what I call here 'ethnic distance', and a recent survey of it can be found in Alesina and La Ferrara (2005).

scarce regions -- which have, historically, always received immigrants from abroad --
will be regions at the top of the real wage, living standard and GDP per capita pecking
order.[2] They will also tend to be the most ethnically diverse.

The foreign-born share in the advanced economies today is 8.7 percent and the
share for the developing countries is 1.5 percent (Freeman 2006: 146), roughly
confirming the prediction of the parsimonious model. Table 1 offers far more detail. The
world population-weighted foreign-born ratio reported there is 2.98, but the range across
major regions is huge: the two highest are Western Europe and North America (10.07,
3.4 times the world average) and Eastern Europe and Central Asia (8.24, 2.8 times the
world average); the three lowest are East Asia (1.05), Latin America and the Caribbean
(1.01), and South Asia (0.92). The high FB ratio for Eastern Europe and Central Asia
may appear to be a surprise, but the explanation is simply that what had been internal
migration in the USSR became external migration after the break up. The second surprise
may appear to be sub-Saharan Africa, where the FB ratio is 3.66, but there has long been
cross-border churning in that region (Hatton and Williamson 2002). Finally, while
foreign-born shares of 10 percent may not sound like high levels of cultural and ethnic
diversity, remember that the foreign-born concentrate in gateway cities. Thus, while the
foreign-born share is 'only' 4.3 in the United Kingdom, it is 28 in London, a ratio of
almost seven to one! Similarly, the share for Paris (23) is almost two and a half times that
of France (10). Big multiples also apply to modern high-wage gateway cities in the US
like Boston (FB share 30.1; multiple 30.1/11.1=2.7), Los Angeles (40.2; 3.6), Miami

---

[2] One has to assume, of course, that the migration fails to eliminate wage differentials across countries.
History confirms that assumption: whatever produced the wage gap in 1830 at the start of modern mass
migration has persisted to the present. World migration has always been constrained, even during the age of
'free' migration.

(58.2; 5.2), New York (35.5; 3.2), and San Francisco (35.5; 3.2).[3] The same was true, of course, for 19th century Boston, Buenos Aires, New York, and São Paolo.

Figure 1 illustrates the parsimonious demand-side model with foreign-born shares (FB) plotted against GDP per capita, both for the year 2000, and covering 130 countries.[4] When FB is regressed against GDP per capita (Table 1) – controlling only for country size (area) -- the estimated coefficient is 0.294 with a t-statistic of 3.84. This world relationship is robust to the addition of geography and other controls (not reported here). But the big surprise in Table 1 is this: while the parsimonious relationship works very well in explaining world migration, it does not work very well in explaining migration within regions (with the exceptions of East Asia and Latin America). The moral seems clear: While the parsimonious model is effective in explaining long distance migration between rich and poor regions (between which ethnic distance is greatest), a more complex model is needed to explain migration within regions where income per capita variance is so much smaller (as are ethnic distances).

The parsimonious demand-side model may work well in accounting for world variance in foreign-born shares, but it fails to take account of a force which has a powerful influence on ethnic diversity among the foreign-born. The migration of the poor has always been constrained on the supply side by poverty (Faini and Venturini 1994; Hatton and Williamson 1998, 2005), the cost of long distance moves, and the population share in the mobile age group. These supply constraints interfere with what otherwise

---

[3] The source of the US city 2003 FB shares is online at
www.census.gov/acs/www/Products/Ranking/2003/R15T160.htm
[4] The source of the GDP per capita 2000 data is the Penn World Tables online at
www.pwt.econ.upenn.edu/php_site/pwt61_form.php
and the source of the Foreign Born 2000 data is the United Nations online
www.un.org/population/publications/ittmig2002/WEB_migration_wallchart.ls.

might produce a perfect correlation between living standards, immigration and ethnic diversity, with the causal direction going from living standards to migration to diversity.[5] In fact, ever since 'free' mass migration started two centuries ago it has always been true that the richer of the poor regions, and the richer within poor regions, are the first to make the long distance move to the richest regions. Thus, while the United States had a lot of foreign-born in 1820 – before the big secular migration boom that started in the 1840s, most were ethnically, culturally and linguistically almost identical to the native-born. That is, new British and German immigrants joined old British and German immigrants. Similarly, new Italian and Spanish immigrants joined old Italian and Spanish immigrants in 19th century Argentina, new Italian and Portuguese immigrants joined the old in 19th century Brazil, and new United Kingdom immigrants joined the old in Australia, Canada and New Zealand. Only as the poverty trap was unlocked in poor European countries, as a glut of young adults emerged in those same countries as they underwent demographic transitions, and as the cost of long distance travel between the poor sending and rich host countries fell, only then did the ethnic gap between immigrant and native-born rise and diversity increase in the overseas host countries.

The Emigration Life Cycle

About 60 million Europeans set sail for the labor scarce New World in the century following 1820. Most moved to escape European poverty. European famine, revolution and ethnic cleansing certainly helped push the first great mass migrations, but it was

---

[5] Most of the economics literature has looked instead at the impact of ethnic diversity on public goods and economic growth (e.g. Easterly and Levine 1997; Alesina et al. 1999; Alesina et al. 2003). This seems unwise given that ethnic diversity is determined endogenously by migration.

underlying economic and demographic labor market fundamentals that made each subsequent surge bigger than the previous up to World War I. If my only purpose was to explain why so many Europeans emigrated in the first global century, this section would be very brief: after all, living standards were a lot lower in labor abundant European sending countries. But why did emigrating countries trace out the life cycle pattern in Figure 2? That is, emigration rates typically *rose steeply* from low levels (A: where emigration rates e_0 are zero and wages low at w_0) as successful economic development took place in poor sending countries, after which the rise began to slow down, emigration rates reached a peak (B: e_1 and w_1), and subsequently fell off (C: e_2 and w_2). This *emigration life-cycle* has been documented again and again for the first global century before 1914.[6] What accounts for this stylized fact?

Figure 3 contains the explanation (documented in Hatton and Williamson 1998, 2005), where movements along some downward-sloping home country emigration function (EM) are distinguished from shifts in the EM function. The EM function is downward sloping for the usual reasons: *ceteris paribus*, higher wages at home retain workers and produce lower emigration rates. But what about the *ceteris paribus*, violated here by rightward shifts in the EM function? In pre-industrial episodes, small or even nonexistent emigration rates ($e_0 = 0$, at A) and low wages (w_0) co-exist, that is, those who have the most to gain from a move are trapped in poverty. Industrialization and other events then serve to shift the emigration function rightward to EM' and to raise real wages to w_1. The shift in EM dominates in this example since emigration rates have *risen* to e_1 (at B); in the absence of the shift in EM, emigration rates would have *fallen* to e_1'

---

[6] Economists obsessed with contemporary cross sections have noted that fast growth is often, but not always, correlated with emigration rates (Beine, Docquier and Rapoport 2003; Freeman 2006: 160), inferring that emigration can foster growth. Figures 2 and 3 suggest that they have the causation wrong.

(where, in this example, they actually would have become *immigration* rates, at B'). In later stages of development, EM is more stable so that further improvements in real wages at home, to w_2, cut back emigration rates to e_2 (at C). Thus, the emigration life-cycle in Figure 2 is reproduced in Figure 3: starting at low wages and no emigration at A, emigration booms in the poor but developing country to B, then falls to C, and finally becomes a high-wage immigrating country at D.

What, then, might account for the rightward shifts in EM during early industrialization and its stability (or even leftward shift) thereafter? The first explanation appeals to the cost of migration and imperfect capital markets. Although there may be a strong incentive to flee pre-industrial poverty and rural subsistence, the costs of a long distance move are prohibitive for most poor laborers. Thus, enormous and historically persistent wage gaps between industrializing, resource-rich, high-wage countries and agrarian, resource-poor, low-wage countries are quite consistent with low emigration rates. As industrialization takes place in the poor sending countries, real wages rise and the supply constraints on emigration are gradually released: more and more potential emigrants can finance the move, and, in contrast with conventional theory, the home wage and emigration are positively correlated. As industrialization continues, the backlog of potential emigrants is slowly exhausted as more and more workers find ways to finance the move.[7] The demographic transition adds to that rightward shift in EM: the fall in infant mortality rates tends, after a 15 or 20 year lag, to create a fatter cohort of mobile young adults, thus contributing even more to the emigration boom. In addition, remittances from previous emigrants help finance the move of family left behind (the

---

[7] A young mobile cohort may also age before emigration conditions improve, thus helping deplete the backlog of potential emigrants.

friends and relatives effect). As a final contribution to the rightward shift in EM, the cost of long distance migration fell steeply before 1914 (Shah Mohammed and Williamson 2004). When the demographic transition reaches a crescendo, when remittances level off, when industrialization at home has released the migration cost constraint, and when the cost of long distance migration ceases its fall, the rightward shift in EM stops and begins to drift inwards to the left. Further increases in the sending country real wage causes the emigration rate to decline from the peak and the emigration life cycle is complete. The length of a country's emigration life cycle varied with the intensity of the industrial revolution and demographic transition at home, but 50 years was the typical length in the first global century before 1914. The emigration life cycle is shorter today since the demographic transitions and the industrial revolutions are faster and shorter. This contrasting length in the emigration life cycle is likely to have made ethnic diversity rise more steeply to higher levels before 1914 than after 1950. The shorter length of the emigration life cycle implies fewer regions emigrating at any given time.

In summary, emigration histories typically pass through two regimes, the first emigrant supply constrained, and the second emigrant demand constrained. The emigrant-supply-constrained EM regime was consistent with the rising emigration and rising home wages since powerful rightward shifts in EM dominated. But at some point, home wages were high enough so that financial constraints were less binding: further increases in the home wage (relative to the foreign wage) then served to reduce the emigration incentive, the emigration rate fell as the economy moved up a more stable EM function, and emigration experience entered the demand-constrained regime. Emigration

rates then fell as now-more-economically-mature sending regions began to catch up with the richer receiving regions.

Migration and Ethnic Diversity: The First US Global Century

The emigrant life cycle is consistent with conventional qualitative histories of the first global century. It implied an evolving change in immigrant source, quality and ethnic distance (from the native-born norm) through time. As the transport revolution unfolded between 1820 and 1913, the cost of long distance moves declined dramatically in terms of railroad fare to port, steerage rates between ports, and foregone income in transit. More potential migrants from more distant eastern and southern Europe could now make the move. Furthermore, as industrial revolutions started among the late-comers in eastern and southern Europe, the ratio of migration cost to annual income fell even more dramatically in those poor parts of Europe. The spread of the transport and the industrial revolutions both served to extend the reach of global migration: more potential emigrants in the poor rural hinterland of western Europe could make the move, and more potential emigrants from distant and backward eastern and southern Europe could make the move. Thus, migrant origins shifted to more backward and poorer regions, countries that were late-comers to modern economic growth. In addition, as each of these countries went through its own emigration life cycle, the share coming from poorer and ethnically different countries soared: those coming from the richer parts of Europe, with ethnic attributes similar to the native-born, declined in numbers as their emigration life cycle was completed; those coming from the poorer parts of Europe, with ethnic attributes different than the native-born, rose in numbers as their emigration life cycle began. Thus,

the ethnic gap between the native-born and the new immigrant widened in host countries and they became culturally and ethnically more diverse.

This dramatic shift in immigrant source obeyed economic and demographic laws of motion. As I have already noted, the shift in immigrant source induced a rise in host country ethnic diversity. It also induced a decline in the quality of immigrants (as judged by labor markets) and an even bigger decline in the quality of immigrants relative to the native-born (who were increasing their human capital at a fast pace). The fall in immigrant quality and the rise in their ethnic 'distance' from the host country norm both had a great deal to do with rising negative attitudes towards immigration in the US, especially the positive interaction between them. These trends helped produce the 1917 Literacy Act, the Quota Acts of 1921, 1924 and 1927, as well as the ban on Asians (Hatton and Williamson 2005: Chp. 9). All of these Acts were consistent with a racist policy retreat from ethnic diversity, and they persisted until the immigration reforms of 1965. Although the US was by far the main destination of European emigrants, other labor scarce immigrant countries underwent the same negative response to the rise (or a threatened rise) in ethnic diversity: Australia and New Zealand imposed 'whites only' policies (which persisted until the 1970s and 1980s), and racial strife broke out in tropical regions that had been relying on Asian contract labor for almost a century.

In short, the first global migration century came to an end, and the rising trend in host country ethnic diversity ceased. Or so says the conventional historical wisdom. Can it be confirmed with quantitative evidence? The US census reports country of birth starting with 1850, so I shall use these data to explore the hypothesis. True, country of birth isn't exactly ethnic diversity (Alesina and La Ferrara 2005), but it's a start. I will

also use the RQ index that is so common in the literature that explores the impact of ethnic diversity on economic growth and public goods expenditure (Esteban and Ray 1994; Montalvo and Reynal-Querol 2002; Alesina and La Ferrara 2005):

$$RQ = 1 - \Sigma \left([0.5 - s_i]/0.5\right)^2 s_i \qquad (1)$$

where s_i is the share of the foreign-born from origin-country i in total foreign-born population or in total population. The growth-public goods literature calls this a *polarization index* – reflecting its negative impact, but I will adopt the more benign view of migration and call it a *diversity index*. In any case, RQ reaches a maximum when two groups are of equal size and declines as their relative importance deviates: a high RQ indicates ethnic diversity. Of course, one would like to weight by the 'ethnic distance' between groups (e.g. by language and religion), but no such empirical analysis has yet been attempted (Alesina and La Ferrara 2005: 794), and the US authorities did not offer such judgments (although US native-born citizens certainly did). I will come back to the issue of 'ethnic distance' since it will shade our interpretation of RQ levels and trends.

Table 2 uses the US data on country of birth to construct RQ at census benchmark dates 1850-1960, as well as changes in the RQ index over the open, free migration era 1850-1910 and the closed and discriminatory period 1920-1960. The RQ calculations are made according to eight world regions, and the country allocations to those regions are given in the Appendix.[8] Table 2 also reports RQ *within* the foreign-born group (diversity among the foreign-born), *between* the foreign-born and native-born (diversity between the two groups), and *total* diversity. Note the following in Table 2: Total ethnic diversity

---

[8] See Alesina and La Ferrara (2005) for the technical reasons why the country data cannot be used with some aggregation.

reached a peak in 1860 (0.512), which it has not regained since, this despite the fact that diversity among the foreign-born was almost at its lowest (0.099). The explanation is that the RQ *between* index (the FB share) was at its peak (0.516).

Now consider the details, starting with the age of free migration 1850-1910. As predicted by the emigration life cycle model, *within* and *total* RQ changed far more dramatically than did the *between* RQ index (driven by the FB share). In the half-century before 1910, the *within* RQ rose five times faster than did the *between* RQ. The United States already had a high level of ethnic diversity in 1850 with RQ = 0.401. The subsequent rise in US ethnic diversity was driven almost entirely by the increased diversity of the immigrants themselves, an event which had important political implications, as I have argued.

Now consider the 1920-1960 period when immigration policy was so restrictive. Before WWI, the US did not discriminate against poor source countries (except for the ban on Asians after 1882). Between WWI and 1965, the US used quotas to favor west Europeans and suppress immigration from poor countries. After the Immigration Act of 1965, the US leveled the playing field again back to what it was in the first global century (except for that post-1982 anti-Asian bias). Total ethnic diversity fell sharply, but its main source was the fall in immigration and the FB share (RQ *between*), not the more modest fall in RQ *within*. This is a bit of a surprise given that the intent of the quotas was to exclude 'new' source countries from the immigration flow.[9]

---

[9] It must be said, however, that there was no quota on immigrants from south of the border, and Mexicans poured over in very big numbers during the 1920s.

Migration and Ethnic Diversity: The Second US Global Century

Annual immigration to North America and Oceania rose gradually to the mid 1970s before surging to a million per year in the 1990s. The absolute numbers were by then similar to those reached about a century earlier, but they were smaller relative to the population and labor force that had to absorb them. Thus, the US annual immigration rate fell from 11.6 per thousand in the 1900s to 0.4 per thousand in the 1940s, before rising again to 4 immigrants per thousand in the 1990s. The proportion of the US population foreign-born had fallen from a 1910 peak of almost 15 percent to an all-century low of less than 5 percent in 1970. The postwar immigration boom increased the foreign-born share to more than 8 percent in 1990 and more than 10 percent in 2000. Thus, it appears that the US has reclaimed the title "a nation of immigrants" after a half-century retreat. Has it also reclaimed the title "an ethnically diverse nation" after a half-century of retreat?

As this audience well knows, what happened to the United States after World War II also happened world-wide (Table 3). The foreign-born share increased by about a third in Oceania between 1965 and 2000 – from 14.4 to 19.1 percent, more than doubled in North America – from 6 to 13 percent, and more than tripled in Europe – from 2.2 to 7.7 percent. Of course, the addition of undocumented immigrants would raise these foreign-born shares, and perhaps even raise their increase over time. Illegal immigrants will also raise the ethnic diversity measures, since they tend to be unskilled from the poorest countries, individuals which host country immigration policy tries to keep out. Thus, restrictive immigration policy tends to make the social problems associated with ethnic

diversity even worse: the larger the share illegal, the bigger the ethnic distance between and host country native-born norms.

While world migration has surged, the labor market quality of these immigrants (relative to native-born) has declined as their ethnic 'distance' from host country native-born norms has increased. For example, US immigrant males earned 4.1 percent *more* than native-born males in 1960, but they earned 16.3 percent *less* in 1990. The wage of recently-arrived US immigrants (relative to the native-born) deteriorated by 24 percentage points between 1960 and 1990. Although the average educational attainment of US immigrants improved, it did not increase as rapidly as that of the native-born. The percentage of newly-arrived US immigrants with less that 12 years education was 5.6 percentage points higher than native-born in 1970, but 20.4 percentage points higher in 1990, an increase of almost *four times*. Most of this decline in immigrant relative quality is due to changes in the source country composition (Table 4), and, of course, the same is true of the rise in ethnic diversity. I think it is important to stress the coincident fall in immigrant quality and the rise in ethnic diversity in the recent half-century since that combination contributed dramatically to anti-immigration sentiment a century ago. In any case, both trends have been driven by four massive shifts in world migration patterns over the half century since World War II.

The first shift involved Europe's decline as an emigrant source. Part of this drop can be explained by the resurgence of migration within Europe (including Turkey): foreign European nationals increased from 1.3 percent of the western European population in 1950 to 10.3 percent in 2000. The rise would have been even higher if it included the foreign-born that became naturalized. More recently, western and southern Europe have become

destinations for immigrants from Asia, the Middle East and Africa, and since the demise of the Soviet Union in the 1990s western Europe has also absorbed immigrants from the east including the former Soviet republics. As a result, annual net immigration into the European Union (EU) has soared since the 1980s such that it now surpasses that of the US, and it would exceed it by even more if illegal immigrants were included.

The second shift involved emigration from Eastern Europe. This traditional east-west European flow has a long history, but it was stopped cold by postwar emigration policy in the centrally planned economies. Things changed dramatically in the 1980s when Poland and Romania opened up, and they changed even more dramatically when the Berlin Wall fell in November of 1989. Emigration from these transition economies increased by five times between 1985 and 1989. The annual outflow stayed at levels exceeding a million until 1993, when they eased off a bit. In any case, Europe seems to have re-established its old east-west migration tradition.

The third shift involved the transformation of Latin America from a major emigrant destination to a major immigrant source. The emigrant life cycle leads us to expect that poor, low-wage and agrarian countries should send out more emigrants as they industrialize, but at some point they should start to retain their own and receive immigrants as they get fully industrial and high-wage. Latin America is an exception to the rule: it went from hosting (net) 1.8 million foreign-born in 1960, to having (net) 1.8 million of their own hosted abroad in 1980. The explanation for this unique regime switch appears to be that Latin America has a much richer and faster growing northern neighbor close by.

The fourth shift during the post-war decades involved Asian, African and Middle Eastern immigrants, whose numbers rose from a negligible to a huge flow. This evolution repeats the emigration life cycle experience of the first global century. Early industrializations and demographic transitions unleash a surge of emigration as the migration poverty trap is unlocked. Thus, the East Asian miracle first fostered an emigration surge, the rate of rise then slowed down, peaked, and subsequently declined as modern development ensued. The Middle East pattern has been delayed, as has been its development. The African pattern has been delayed even longer, as its growth over the past half century has been so disappointing.

Before moving on to the evolution of the RQ index since 1965, I want to stress the role of host country immigration policy. To repeat, in the first global century shifts in the source country composition were the result of the spread of the industrial revolution, rising incomes and demographic transitions in the poorer and more distant parts of Europe. That is, demographic booms and early industrial revolutions generated a surge in emigration from ethnically different countries, while demographic busts and mature industrial revolutions generated a fall in emigration from ethnically similar countries. Falling transport costs between sending and receiving regions amplified these forces, as did the friends and relatives effect. These forces also slowly reduced positive selection: the really poor could finance the move only late in the first global century, as their incomes at home rose and as the cost of passage fell. Exactly the same forces have also been at work in the modern era although policy has served to *strengthen* them. In the US, these included the abolition in 1965 of the country-of-origin quotas (and Asian bans) that had previously favored Europe, the shift to a worldwide quota, and the emphasis on

family reunification as a key criteria for admission. Other OECD countries also leveled the source-country playing field, but the effects on immigrant composition (and ethnic diversity) were not quite as dramatic.

Now consider US experience with ethnic diversity since 1970 as reported in Table 5. Note two important facts. In spite of all the debate about US immigration, the *total* ethnic diversity index in 2004 had only recovered its 1940 level, and it is unlikely that future levels will recover the peaks attained in the first third of the 20th century (see Table 2). The big surprise is that all of the rise in *total* US ethnic diversity since 1970 has been due to rising immigration rates and FB shares. None of the rise has been due to greater ethnic diversity among the foreign-born since the *within* RQ has not risen over the past 35 years. The surge in immigrants from East Asia and Latin America, then eastern Europe and the Middle East, then South Asia, and finally Africa has not left its mark on aggregate foreign-born diversity since each of those new sources simply replaced old sources.

While very few EU countries supply long time series on country-of-birth, three Scandinavian countries do and they are presented in Table 6. They confirm the US trends. Namely, *total* migrant diversity has risen since 1970 in Denmark, Norway and Sweden, but the rise has been driven entirely by increasing FB shares. As with the US, diversity among the foreign-born themselves has actually fallen over time.

Which Countries Are the Most Diverse?

Most countries do not report country of birth data, but it is available for eleven industrial countries in 2001 plus France for 1990. Table 7 summarizes the data for all three RQ measures.

The *total* migrant ethnic diversity measure is highest by far for Australia (0.598) and Canada (0.518), well above the unweighted average of the twelve (0.319). Both Australia and Canada recorded a *total* RQ index above that which the United States recorded in 1910 at the height of the free mass migration period (Table 2: 0.482). To the extent that observers at that time felt that immigrant assimilation problems were sufficiently difficult to warrant the restrictions passed in 1917 and the 1920s, it is all the more surprising that Australia and Canada have done so well on that front. Those immigrant countries with moderate *total* ethnic diversity levels in 2001 are Austria (0.405), Ireland (0.358), the Netherlands (0.347), France (0.343) and the United States (0.319). These figures are roughly comparable to those recorded by the US in 1930 and 1940 (Table 7: 0.385 and 0.327) after the quotas were in place and after the great depression. The big surprise here, given all the rhetoric about the US being a nation of immigrants, is that the US figure is at the bottom of the list of moderates, exactly the average of the twelve. The lowest *total* ethnic diversity levels are recorded for Denmark (0.208), Finland (0.111), Norway (0.149), Sweden (0.193) and, surprisingly, the United Kingdom (0.285).

The *within* migrant diversity range is much lower across these twelve. Still, Australia (0.671), Austria (0.761), Denmark (0.622), Finland (0.729), France (0.688),

Sweden (0.658) and the US (0.683) all recorded very high diversity among the immigrants themselves. Furthermore, six of these seven countries, the exception being Denmark, recorded a higher *within* RQ figure than did the US in 1910 (Table 7: 0.635), including the US itself. The other five – Canada, Ireland, the Netherlands, Norway, and the UK – all had lower diversity among the immigrants themselves, but not all that lower than the US 1910 figure. The interesting question is how much of this variance is explained by policy, and how much by the standard variables that explain migrant destination choice.

The much wider range on *between* RQ – driven by the foreign-born share – can be explained, one supposes, mostly by policy. Except for Australia and Canada, these countries had in 2001 (and France in 1990) lower *between* RQ figures than did the US under unrestricted immigration in 1910 (Table 7: 0.508).

Two Concluding Words about the Research Agenda

My motivation in this paper is to offer measures of migrant diversity that are comparable across countries and over time, so that they can be used to assess its impact of public attitudes towards immigrants. To that extent, this paper offers only the first step. It seems to me that there are two more steps to be taken before the political economy analysis can begin in earnest. First, our migrant diversity measure must be made richer by assigning the language, religion and other cultural attributes of source countries to foreign-born by country of birth. By so doing, it will attach weights to migrants by source

given the cultural 'distance' they are from the native-born. Second, late 19th century

migration backlash was driven by the interaction of rising migrant numbers (*between*

RQ), with migrant diversity (*within* RQ) *and* the level of skill. Those with low skills

(below the skills of the native-born median voter) -- controlling for the other two

dimensions – appeared to face more difficult assimilation problems. To see whether the

same thing is true today, we need to interact the migrant diversity index with measures of

skill by country of birth.

References

A. Alesina, R. Baqir and W. Easterly (1999), "Public Goods and Ethnic Divisions,"
Quarterly Journal of Economics 114(4): 1243-84.

A. Alesina, A. Devleeschauwer, W. Easterly, S. Kurlat and R. Wacziarg (2003),
"Fractionalization," *Journal of Economic Growth* 8(2): 155-94.

A. Alesina and E. La Ferrara (2005), "Ethnic Diversity and Economic Performance,"
Journal of Economic Literature 18 (September): 762-800.

M. Beine, F. Docquier and H. Rapoport (2003), "Brain Drain and LDC's Growth:
Winners and Losers," Institute for the Study of Labor, *IZA Discussion Paper 819*,
Bonn.

J. Esteban and D. Ray (1994), "On the Measurement of Polarization," *Econometrica*
62(4): 819-51.

W. Easterly and R. Levine (1997), "Africa's Growth Tragedy: Policies and Ethnic
Divisions," *Quarterly Journal of Economics* 112(4): 1203-50.

R. Faini and A. Venturini (1994), "Italian Migrations: The Pre-War Period," in T. J.
Hatton and J. G. Williamson (eds.), *Migration and International Labor Market
1850-1939* (London: Routledge).

R. B. Freeman (2006), "People Flows in Globalization," *Journal of Economic
Perspectives* 20 (Spring): 145-70.

T. J. Hatton and J. G. Williamson (1998), *The Age of Mass Migration: Causes and
Economic Impact* (Oxford: Oxford University Press).

T. J. Hatton and J. G. Williamson (2002), "Out of Africa? Using the Past to Project

African Emigration Pressure in the Future," *Review of International Economics* 10(3): 556-73.

T. J. Hatton and J. G. Williamson (2003), "Demographic and Economic Pressure on Migration Out of Africa," *Scandinavian Journal of Economics* 105 (September): 465-86.

T. J. Hatton and J. G. Williamson (2005), *Global Migration and the World Economy: Two Centuries of Policy and Performance* (Cambridge, Mass.: MIT Press).

R. E. Lucas (1988), "On the Mechanics of Economic Development," *Journal of Monetary Economics* 22 (July): 3-42.

J. G. Montalvo and M. Reynal-Querol (2002), "Why Ethnic Fractionalization? Polarization, Ethnic Conflict and Growth." Universitat Pompeu Fabra, Barcelona, unpublished.

S. Shah Mohammed and J. G. Williamson (2004), "Freight Rates and Productivity Gains in British Tramp Shipping 1869-1950," *Explorations in Economic History* 41, 3 (April): 172-203.

Appendix

Eight regions are used in the RQ country-of-birth analysis in Tables 2, 5, 6 and 7. The regional allocations are the following:

Northwest Europe and North America

Canada	Ireland
St. Pierre and Miquelon	Northern Europe, n.s.
Atlantic Islands	Belgium
North America, n.s.	France
Denmark	Germany
Finland	Liechtenstein
Iceland	Luxembourg
Lapland	Monaco
Norway	Netherlands
Sweden	Switzerland
England	Western Europe, n.s.
Scotland	Australia
Wales	New Zealand
United Kingdom, n.s.	Antarctica

Central America, South America, and Caribbean

Mexico	Cuba
Central America n.s.	West Indies
Caribbean n.s.	South America

Southern Europe (5)

Portugal	Italy
San Marino	Vatican City
Spain	Southern Europe n.s.

Eastern Europe and Central Asia

Austria	Eastern Europe n.s.
Albania	Russian Empire
Bulgaria	Baltic States n.s.
Czechoslovakia	Estonia
Hungary	Latvia
Poland	Lithuania
Romania	Other USSR/Russia
Yugoslavia	Europe n.s.
Central Europe n.s.	

East Asia and Pacific

China	Malaysia
Japan	Pacific Islands
Korea	Philippines
East Asia n.s.	Singapore

Brunei
Cambodia (Kampuchea)
Indonesia
Laos

Thailand
Vietnam
Southeast Asia n.s.

South Asia

Afghanistan
Bangladesh
Burma (Myanmar)
Ceylon (Sri Lanka)
India

Nepal
Pakistan
South Asia n.s.
Maldives

Middle East and North Africa

Bahrain
Cyprus
Iran
Iraq
Israel/Palestine
Jordan Kuwait
Lebanon
Oman
Middle East n.s.

Qatar
Saudi Arabia
Syria
Turkey (Ottoman)
United Arab Emirates
Yeman Arab Republic
Yeman PDR
North Africa

Africa

Table 1
Determinants of the Foreign-Born Share: The Parsimonious Model

Region	Weighted FB Mean	Coefficient on GDP per capita	Coefficient on land area (size)
Western Europe/North America	10.07	0.518	0.438
		0.96	*0.75*
Eastern Europe/Central Asia	8.24	0.112	0.218
		0.26	*0.45*
Middle East/North Africa	4.98	0.195	-7.165
		0.23	*-1.16*
Sub-Saharan Africa	3.66	0.2	-2.094
		0.78	*-1.14*
East Asia	1.05	0.532	0.938
		2.21	*1.57*
Latin America/Caribbean	1.01	0.621	-0.764
		3.06	*-1.47*
South Asia	0.92	-0.26	-0.44
		-0.03	*-0.78*
World	2.98	0.294	0.114
		3.84	*0.41*

Notes: The weighted regional foreign-born means are population weighted. The figures in italics are t-statistics.

Table 2
Measuring Migrant Ethnic Diversity in the United States 1850-1960

RQ	1850	1860	1870	1880	1900	1910	1920	1930	1940	1950	1960
Within	0.059	0.099	0.137	0.236	0.465	0.635	0.809	0.813	0.807	0.788	0.798
Between	0.402	0.516	0.492	0.464	0.475	0.508	0.463	0.409	0.342	0.232	0.213
Total	0.401	0.512	0.488	0.457	0.461	0.482	0.434	0.385	0.327	0.224	0.208

RQ Change	1850-1910	1920-1960
Within	0.576	-0.011
Between	0.106	-0.251
Total	0.081	-0.226

Notes: See text. The 1890 census data was absent from the web source.

Table 3
Shares of Foreign-Born in Populations, 1870/1-2000/1

	1870/1	1890/1	1910/11	2000/1
Europe				
Germany	0.5	0.9	1.9	8.9
France	2.0	3.0	3.0	10.0
United Kingdom	0.5	0.7	0.9	4.3
Denmark	3.0	3.3	3.1	5.8
Norway	1.6	2.4	2.3	6.3
Sweden	0.3	0.5	0.9	11.3
New World				
Australia	46.5	31.8	17.1	23.6
New Zealand	63.5	41.5	30.3	19.5
Canada	16.5	13.3	22.0	17.4
United States	14.4	14.7	14.7	11.1
Argentina	12.1	25.5	29.9	5.0
Brazil	3.9	2.5	7.3	

Notes: All entries in percent, and Brazil 1910/11 = 1900. *Source*: Hatton and Williamson (2005: Table 2.2).

Table 4
Source Area Composition of US Immigration, 1951-2000
(% of total)

Region of Origin	1951-60	1961-70	1971-80	1981-90	1991-2000
Europe	52.7	33.8	17.8	10.3	14.9
West	47.1	30.2	14.5	7.2	5.6
East	5.6	3.6	3.3	3.1	9.4
Asia	6.1	12.9	35.3	37.3	30.7
Americas	39.6	51.7	44.1	49.3	49.3
Canada	15.0	12.4	3.8	2.1	2.1
Mexico	11.9	13.7	14.2	22.6	24.7
Caribbean	4.9	14.2	16.5	11.9	10.8
Central America	1.8	3.1	3.0	6.4	5.8
South America	3.6	7.8	6.6	6.3	5.9
Africa	0.6	0.9	1.8	2.4	3.9
Oceania	0.5	0.8	0.9	0.6	0.6
Total (000's)	2,515	3,322	4,493	7,338	9,095

Source: Hatton and Williamson (2005: Table 10.2).
Notes: National origin based on country of last residence. Totals include 2.7 million former illegal aliens receiving permanent resident status under the Immigration Reform and Control Act, 1986. Of these, 1.3 million fall in the decade 1981-1990 period and 1.4 million in the decade 1991-2000.

Table 5
Measuring Migrant Ethnic Diversity in the United States 1960-2004

RQ	1960	1970	1980	1990	2004
Within FB	0.798	0.745	0.698	0.717	0.682
Between FB and NB	0.213	0.204	0.251	0.298	0.359
Total	0.208	0.199	0.243	0.284	0.334

Change in RQ	1970-2004
Within FB	-0.063
Between FB and NB	0.155
Total	0.135

Notes: See text.

Table 6
Measuring Migrant Ethnic Diversity in Scandinavia 1970-2000

RQ	1970	1980	1990	2000
Denmark				
Within FB	na	0.706	0.686	0.634
Between FB and NB	na	0.075	0.113	0.186
Total	na	0.087	0.129	0.208
Norway				
Within FB	0.628	0.679	0.619	0.579
Between FB and NB	na	0.075	0.128	0.154
Total	na	0.074	0.125	0.149
Sweden				
Within FB	0.702	0.721	0.702	0.661
Between FB and NB	0.194	0.194	0.211	0.204
Total	0.189	0.188	0.203	0.196

Notes: Taken from the MIS web site
http://www.migrationinformation.org.

Table 7
Measuring Migrant Ethnic Diversity Across Countries 2001

Country	RQ Within FB	RQ Between FB and NB	RQ Total
Australia	0.671	0.711	0.598
Austria	0.761	0.438	0.405
Canada	0.527	0.611	0.518
Denmark	0.622	0.186	0.208
Finland	0.729	0.113	0.111
France	0.688	0.371	0.343
Ireland	0.587	0.373	0.358
Netherlands	0.559	0.379	0.347
Norway	0.567	0.154	0.149
Sweden	0.658	0.201	0.193
United Kingdom	0.592	0.304	0.285
United States	0.683	0.343	0.319

Source: MIS web site http://www.migrationinformation.org, except for France (1990), from UN web site http://unstats.un.org.

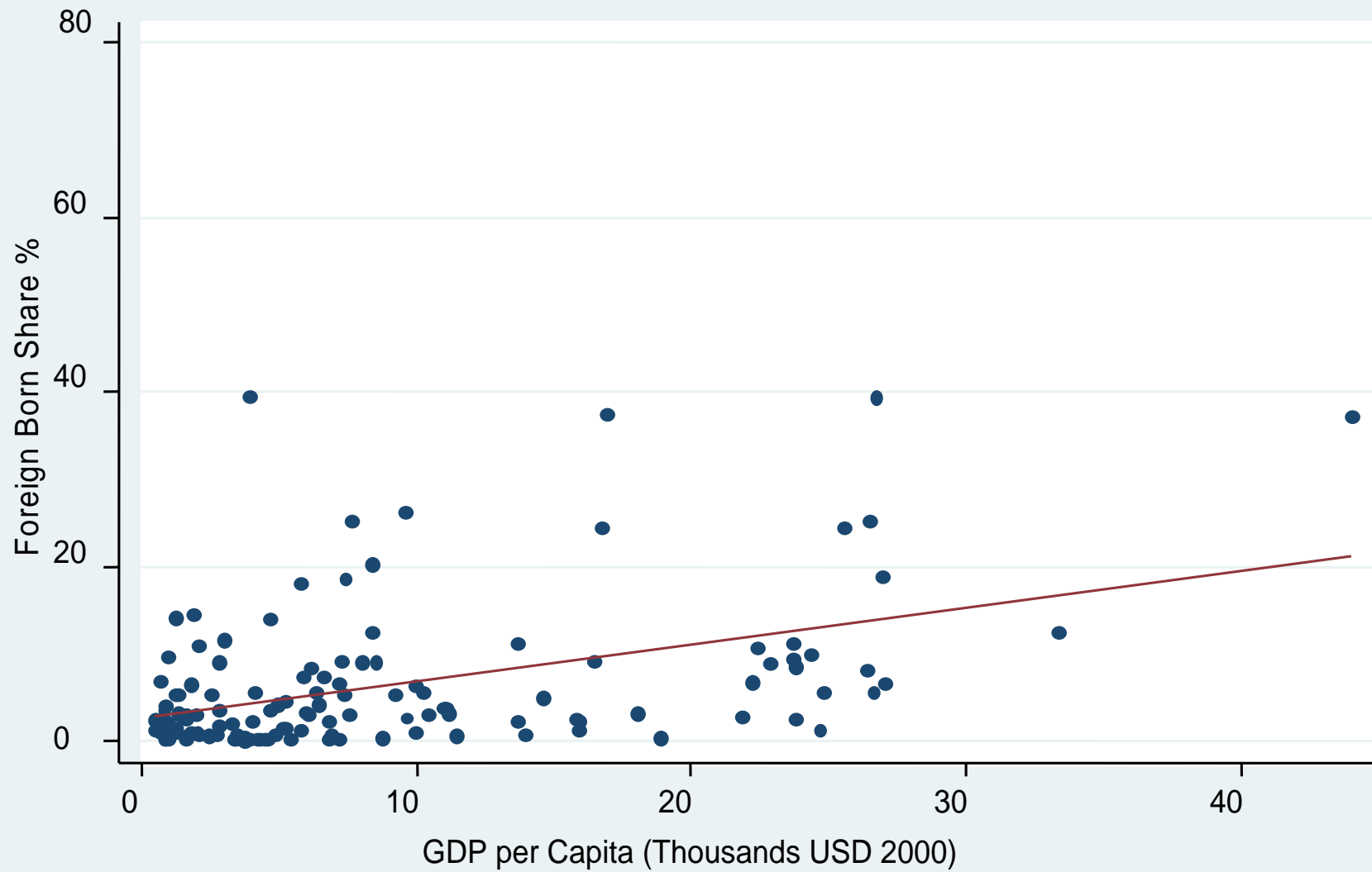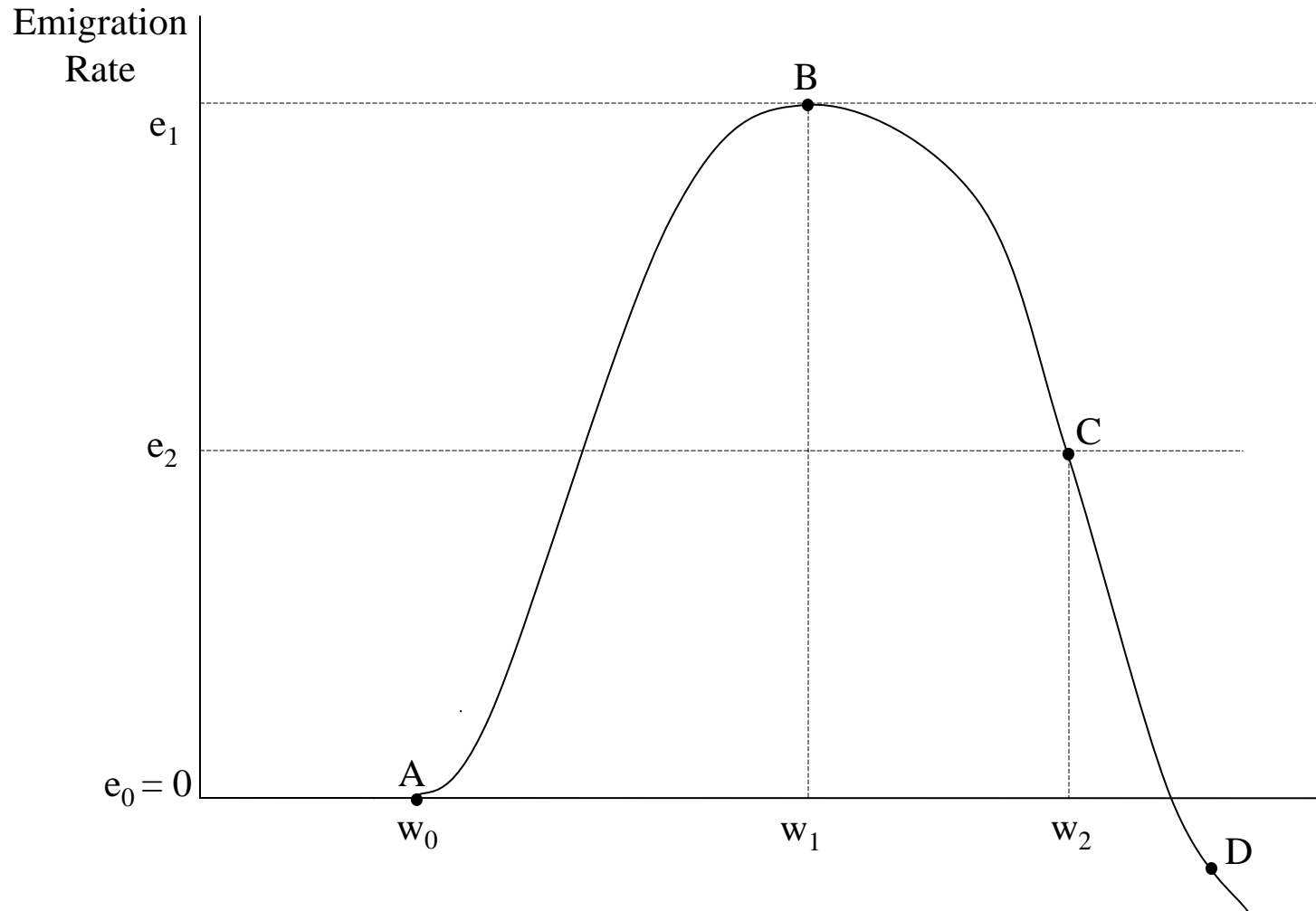Figure 1 Foreign-Born Share versus GDP per Capita 2000

Figure 2
A Country's Emigrant Life Cycle

Figure 3
Stylized Emigration Responses