UN/POP/MIG/2005/08
30 June 2005

A. INTRODUCTION

In the last 40 years, there has been a substantial expansion in global trade and capital movements across countries. At the same time, the gap between per-capita incomes in low-income and high-income countries has not closed. New approaches to eradicating global poverty are called for. One policy increasingly on the development agenda is the encouragement of international flows of people from low- to high-income economies. Clearly such migration will improve the economic circumstances of those who move. An important question is how increased international migration, and of what type, affects incomes, growth and development in underdeveloped countries.

In this paper I consider the relationship between emigration from low-income countries and the development of those countries. I do not review the enormous and growing literature on this topic. Rather I consider the analytics of the question and use data from two new surveys of U.S. immigrants combined with cross-country data to shed light on some of the issues and some of the major literature, in addition to data on the households with immigrants from one sending country, India. One of the reasons that the effects of

countries associated with out-migration - return migration and remittances. These are considered in following sections. In assessing the relationship between out-migration from low-income countries and their economic

receiving and sending countries are substantial. Table 1 provides the estimated skill prices for the top ten sending countries for the United States among immigrants who marry US citizens (the largest visa category of US immigrants) from that study. The estimated skill price for the United States is $75 and, as the table shows, $81 for Canada. However, in Mexico, the other US border country, the skill price is

b. *Long-run effects*

The general-equilibrium and compositional effects of emigration on the home country wage discussed

literature. However, this literature ignores the return of skilled immigrants. Another potentially important mechanism by which increasing opportunities for high-skill individuals to immigrate permanently to high skill-price countries positively affects the home country's growth is via the return of the migrants back to the home country. Such immigrants may bring back to the home country increased skills and knowledge that could only be picked up abroad but are transferable to the home environment (Stark *et al*. (1997); Domingues Dos Santos and Vinay (2003)). Although the return of low-skill migrants who work temporarily in low-skill jobs in a developed country for a short period of time could also have beneficial effects in the home country, it is more likely that it will be high-skill individuals working in dynamic sectors of the economy that will contribute, upon return, to the development of the home country.

The empirical issues concern the magnitudes and impacts of return migration by skilled immigrants who have acquired significant skills in the receiving country. With respect to the latter question, there is little systematic evidence, although there is some intriguing case studies (e.g., Saxenian (2002). There is also only limited information on the quantitative importance of return migration. How important is return migration by skilled or other immigrants who are not required by the terms of their visas to return home? Existing estimates indicate that return migration from the United States is not trivial. Jasso and Rosenzweig (1982) combined INS administrative records at entry for the FY 1971 cohort of legal permanent immigrants with their subsequent naturalization and address report records to estimate 10-year emigration rates. These averaged 30 percent, but were as high as 50 percent for immigrants in the cohort from some sending countries. The administrative records kept by governments in receiving countries do not permit, however, an assessment of the magnitude of return migration by education. Cohort analyses using immigration date-of-entry cohorts across adjacent Censuses have been used to estimate emigration rates from receiving countries of the foreign born, but not by schooling. The official US Bureaus of the Census estimate of the ratio of emigration to immigration for the 1981-90 period is .22 - 22 percent of immigrants leave. However, estimates based on Census data cannot distinguish between immigrants with temporary or permanent visas. The official estimates do not distinguish emigration by skill level or country of origin.

The first round of the NIS sheds some light on the prospects of return migration for immigrants with visas not limiting duration of stay. The "new" permanent residents were asked within a few months of receiving their permanent visas whether they intended to spend the rest of their lives in the United States. It is thus possible to see what proportion of the immigrants thought they would emigrate by schooling level. Figure II shows the proportions who said they were not going to stay for four education categories - less than a high-school education, high school graduate, college graduate and graduate training. As can be seen, there is a monotonic relationship between the likelihood of emigration and schooling attainment, with the probability of not staying 15 percent for those with college degrees and higher. Intentions and behavior are not necessarily the same, and we will have to wait for subsequent rounds of the NIS, which will track the location of all respondents, to see how temporary permanent immigrants with high skill are in this cohort.

2. Student immigrants and their return

There is another source of return migrants among skilled immigrants to high-income countries. Many individuals come to developed countries for the purpose of acquiring schooling. In 2004, for example, the United States granted 620,210 student visas. In George Borjas' critique of the US student visa program (Borjas (2002)), one of his criticisms is that "The program is best viewed as yet another redistribution program, taking wealth away from native workers and taxpayers and redistributing it to universities and foreigners." Borjas is correct - to the extent that schooling is publicly subsidized in receiving countries and foreign students do not remain in the receiving country, there is an important subsidy from receiving-country taxpayers going to immigrant sending countries. This subsidy element embodied in returning students is often ignored when assessing the contribution of developed country assistance to developing countries.

What proportion of foreign students who receive schooling in receiving countries return? Borjas l

for the first time using both BCIS data on student visas by country and NIS data on immigrants who obtained their schooling in the US. In particular, we can construct the ratio by country of the number of immigrants in a year who received their schooling in the US to the number of student visas in the year. If rates of conversion are stable across cohorts, this can be used to calculate by country the proportion of students who return home with their US provided schooling credentials.

Figure V provides for each of the six island countries with high emigration skill rates the flow return rates of students along with, for comparison purposes, the corrected rate of gross out-migration, from figure III. As can be seen, for four of the six countries - Jamaica, Trinidad and Tobago, Grenada and Barbados - more than 70% of those receiving US schooling return; for Haiti, however, few go back (the exact estimate is slightly below zero) and for St. Vincent only 14 percent return. Interestingly, for that country the emigration rate is almost the same as the return rate for students educated abroad. To correct the gross emigration rates for these return flows of educated persons requires information on the gross numbers of foreign-born in the developed countries as well as the number of return flows for each sending country. The former is not available to me. The numbers of US-trained students who return annually, based on the visa and immigration data are not trivial for Jamaica, the data suggest that about 4300 return each year.

Finally, figure VI reports the same rates for the three African sending countries. It is interesting that return rates are lower than they are for the island economies proximate to the United States - overall, less than half of students return. Nevertheless, these returning students represent a human capital investment for these countries that is substantially subsidized by the richer receiving country. And these return rates need to be accounted for in measuring net flows of human capital. Until these country-specific brain drain measures take adequate account of the location of schooling for both emigrants and home-country residents, however, empirical analyses making use of cross-country data to study the effects of emigration on sending countries (i.e., Beine *et al*. (2003)) should be interpreted with caution.

D. Remittances From International Migrants

1. The magnitudes and determinants of transfers

When an immigrant of given skill moves from a low to a high skill-price area, total world output increases. A large portion of the gain accrues to the immigrant and those family members migrating with him/her. One important mechanism by which these private gains are shared with the sending country is via remittances - monies remitted back to the home country. Estimates of such flows suggest that they are substantial. For example, in 2000 it is estimated that aggregate transfers from the United States, at 18-19 billion $, were almost t(19 395 Tw [8 Tw [8.7(u)-9.7(t) 301.919e 301.919e 301.1(of01.919e 301.1(of01.S301.1(ofi0744 Tw

the year preceding the third round of the NISP survey, when the immigrants had been in the United States an average of three years. The two groups are those marrying US citizens and those who obtained employment visas. These two visa groups are selected because they are more likely to have family members still residing in their home country, unlike those who immigrated because they were sponsored by parents, adult children or siblings. The table also provides the share of the transfers in the immigrant's US earnings that year and the share the transfers represent of the immigrant's earnings prior to immigrating.

The figures in table 2 indicate that transfers are a small proportion of the US earnings of the immigrants - on average only 4.2 percent of those earnings are shared with home-country relatives. On the other hand, transfers represent almost 9 percent of home-country earnings, which may better reflect their impact in the sending country. The table also suggests that more schooled immigrants, who have higher US earnings, transfer greater amounts of money back to their relatives living in their home country - the average amount of transfers among college graduates and above is more than three times that of immigrants with less than a high-

3. Assessing the impact of remittances

From the perspective that the main contribution of international transfers is to redistribute global income, then knowledge of their incidence is sufficient to evaluate their impact. A more difficult question is how transfers associated with international migration contribute to economic development. One view is that a transfer dollar or peso or rupee is no different from monies that come from any other source of income. To the extent that under-developed credit and insurance markets constrain investments, then the increases in incomes associated with remittances from migrants can help foster growth. The development literature suggests that in some contexts lack of income is a major barrier to sustainable investment (e.g., Rosenzweig and Wolpin (1990). However, even in a setting in which the relaxation of income constraints enables investments, for transfer income to spur growth there also has to be both unexploited profitable opportunities and an environment in which investment returns are protected. Just as the effects of governmental foreign aid are blunted due to lack of institutions that foster investment and innovation, so too will the effects of increases in private transfers. Thus, the effects of transfers on growth will differ across countries depending on the set of institutions in place, unless the transfers themselves alter institutional arrangements.

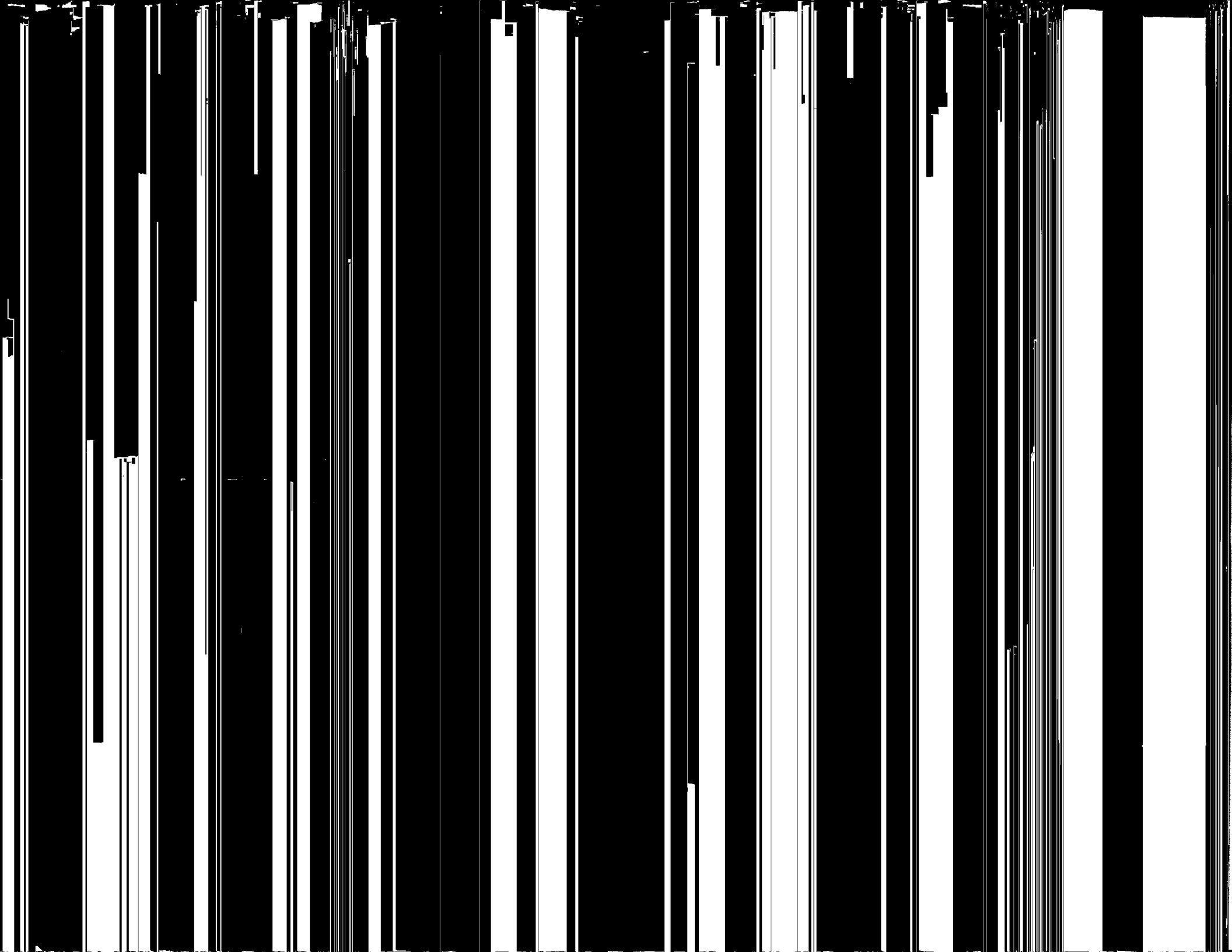
A difficulty in assessing directly the impact of the income associated with remittances is that, as we have seen, remittances are not randomly allocated across households. For example, in the Indian case, we might find an association between entrpreneurial activities and remittance income, but that just may be because households that have been able to succeed as entrepreneurs also have been able to finance family migration. One of the best quantitative studies of the effects of remittance income on household behavior is Yang (2005). In this study Philippines households experience changes in remittance income over a relatively short period of

REFERENCES

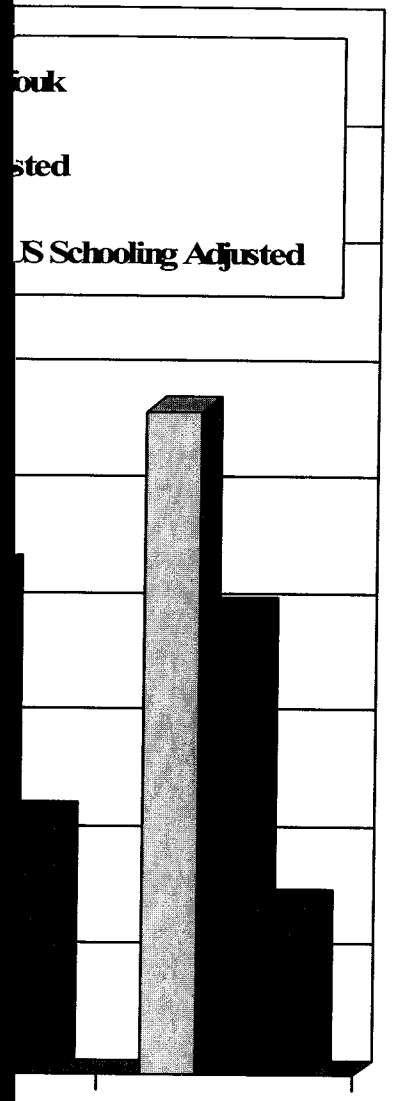
Beine, Michael, Frerick Docquier and Hillel Rapaport (2003). Brain drain and LDCs' growth: winners and

TABLES AND FIGURES

TABLE 1. ESTIMATED SKILL PRICES IN THE TOP T

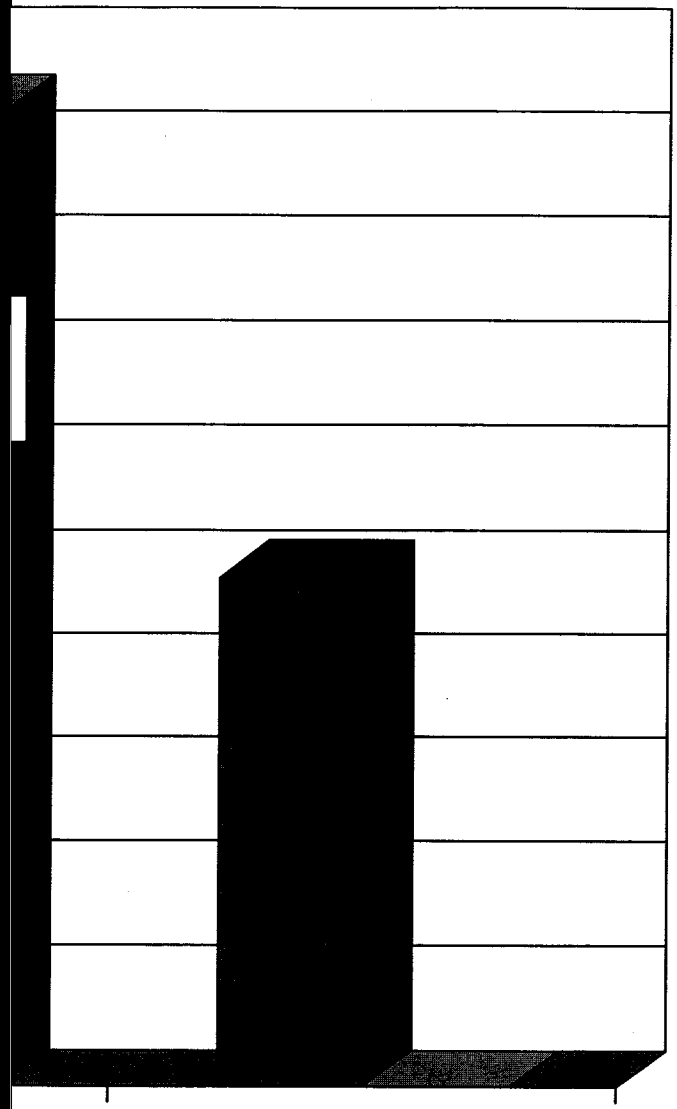


rated Foreign-Born



[redacted]

on of Emigrated Foreign-Born
Students Who Return



Sierra Leone