QUANTIFICATION OF MIGRATION

Emigration: Implications for U.S. Immigration Policy Research

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Introduction

Discussions of U.S. immigration trends and policy often rest on an implicit assumption that international migration to the United States is permanent. Research has revealed otherwise. Social demographic studies have shown that immigration has been related to significant levels of emigration of aliens and the foreign born throughout this century and continuing through the contemporary era. Between 1900 and 1980 approximately 30 million immigrants came to the United States, of which nearly 10 million returned or moved on to another country (Warren and Kraly 1985). The U.S. Bureau of the Census estimates that 195,000 foreign born residents emigrate from the United States each year. Moreover, the significance of emigration of immigrants appears to be characteristic of contemporary immigrant receiving nations. Among every 100 immigrants to Canada, 30 to 45 are estimated to eventually emigrate (Beaujot and Rappak 1986); of the settlers arriving in Australia since the second world war, perhaps one quarter have permanently departed (Lukomskyj and Richards 1986).

While emigration is increasingly identified by social scientists as an important analytic issue in the study of immigration, the implications of emigration for the formulation and implementation of U.S. immigration policy and programs remain

remarkably unarticulated. This paper considers emigration as an immigration policy issue for the United States. The general argument is that national immigration policy would be more effectively conceptualized, crafted and implemented with a better understanding of the dynamics of emigration among international migrants coming to the United States.

To be sure, our statistical image of immigration to the United States is shaped by a relatively small number of statutory and administrative concepts including admission of permanent resident aliens and nonimmigrants, refugee migration and asylum, and undocumented alien migration. Complementing trends in immigration with information about subsequent out-migration of aliens is likely to result in shifting conclusions about both the demography of immigration as well as the nature of social, economic and geographic effects. The statistical lens should be widened even further, moreover, to consider all sources of international migration to and from the United States including native born and naturalized U.S. citizens. Accordingly, a comprehensive appreciation of the dynamics of international migration will embed U.S. immigration trends, policy and issues within the broader context of international population movements emerging regionally and globally. Throughout the world international population movements are increasingly diverse embodying a widening range of geographic origins and destinations, reasons for migration, and social demographic characteristics (see Russell 1996; Martin 1994; Castles and Miller 1993). The emphasis on movements *to* rather than *from* the country blinds U.S. policy discussions to the connections between national policy issues and wider regional and global processes.

The paper seeks to adjust the lens of U.S. immigration policy analysis by considering issues concerning population movements out of the United States.
The analysis addresses four interrelated topics. First, I consider concepts of emigration and temporary international migration, raising issues in analysis and interpretation along the way. Second, I briefly and selectively review research on emigration for the United States. Third, I reflect upon the need for better information on emigration from United States for the design and implementation of U.S. immigration policy. Fourth, recommendations are offered concerning priorities for the collection of data and for research on international migration to and from the United States. Strategies for the study of emigration and temporary international migration encompass regional and bilateral perspectives on migration processes.

Two further comments concerning the approach taken here should be added. In several ways, this analysis builds upon a study prepared several years previously for the U.S. Immigration and Naturalization Service, Office of Plans and Analysis. That report, "Balancing the Equation: Federal Statistical Resources for the Measurement of Alien Emigration from the United States," represented an inventory and assessment of federal data relevant for the measurement of emigration

and offered recommendations for specific activities that might be pursued by the Immigration and Naturalization Service (INS) to this end. Several of the findings and recommendations of that study will be revisited for this analysis.

Second, discussions of the state of the art of emigration research often begin with calling attention to both the dearth of statistical information on the departures of immigrants from the United States and the consequent limitations of research and analysis on the subject. While this concern is well justified for the United States (hence, the current report!) it diverts our attention from what can be learned from methodologies underlying currently available estimates and from survey research concerning migration and immigrants, as well as from studies of emigration, return migration, and short-term migratory flows for other countries and regions of the world. Perhaps we in the United States have not taken sufficient advantage of perspectives on international migration and national policy concerns that have expressed in regions beyond the North American shores. Many countries in the developing world which have traditionally been regions of origin for international migrants now find themselves experiencing both return migration as well as other immigration and circular migration. These emerging trends are often understood as national and regional policy concerns regarding both migration as well as social and economic integration among countries. In her discussion of international migration data needs in Latin America, Maguid states,

> The changes which have occurred in the international migratory movements in Latin America and in the social, political and economic context in which they occur, both international and regional, stress the urgency of having adequate, reliable, up-to-date and continuous information for making or modifying migration policy (Maguid 1994, 39).

It is thus useful to consider approaches being pursued by other countries for generating information on international migration which is appropriate to process of national and regional policy formation.

Concepts of Emigration and Temporary International Migration

A variety of concepts concerning population movement from a country appear in the literature. Accordingly, emigration, return migration and circulation are special cases of international mobility (see Willekens 1994, 7-9; Gmelch 1980). Emigration is generally considered as the permanent migration from one country to another. The emigration of former international migrants includes return migration to the country of origin, and re-migration to a third country or region. For refugees,

return migration might considered repatriation. Obviously, nationals of a country can also emigrate, a process sometimes called expatriation.

Certainly the largest numbers of moves out of a country are of temporary duration in the form of travel for business or pleasure. Beyond travel and tourism, moreover, temporary or short-term departures for work or training are increasingly significant in population movements worldwide. The increasing diversity of forms of international mobility is reflected in the long list of concepts seeking to capture specific reasons for the moves: circulation, seasonal labor migration, border crossers or commuters travelling daily or weekly to work in a different country, travel for training and education, migration of professional transients. Each of these concepts implies moves into and out of countries. Critically, the concept of international circulation has been developed to refer to short-term labor mobility or migration that recurs at varying times and connects workers and perhaps their households to two or more places of work and residence (see Chapman and Prothero 1985; Conway 1988). Circulation may be considered an important dimension of economic and social integration between and among countries (see Bailey and Ellis 1993).

It is difficult to discuss these concepts without reference to specific national contexts, policies and statistical practices. To be sure, the challenge to specifying international migration concepts and terms reflects not so much demographic or sociological issues but more the constraints imposed by national migration control policies and statistical programs for measuring what are by definition bi- and multilateral processes. Progress toward standard concepts and definitions of international migration has involved international efforts throughout this century (see Kraly and Gnanasekaran 1987); implementation of international statistical concepts in national practices, however, has been uneven (see Simmons 1987; Kraly 1995).

Given our goal to connect emigration and circular migration patterns to U.S. immigration policy it is important to identify population groups whose departures are of interest. From a strictly demographic perspective, all residents of the United States are "at risk" of emigrating. For immigration policy analysis, it is the emigration of alien and foreign born residents of the country that is relevant. Alien residents include a diverse of group of people depending on how residence is conceived: aliens resident in the United States may be defined on the basis of legal status such as legal permanent resident alien; or the resident alien population may be considered as those non-U.S. citizens who fulfill residency rules of U.S. Census Bureau operations, such as permanent resident aliens, foreign students and undocumented migrants. By including naturalized U.S. citizens, the population of foreign born residents represents an even broader demographic concept of lifetime migrants to the United States and permits the analysis of relevant immigration policy issues. For example, cross-classification of the foreign born population by

citizenship status reveals the effect of naturalization on emigration behavior of former immigrants.

Most often, however, it is the available data source that dictates the boundaries of emigration analysis. Thus, census-based estimates of emigration refer to the foreign-born population and thus include both aliens and naturalized U.S. citizens enumerated in the decennial census. Bratsberg and Terrell's recent analysis of 'Americans living abroad' (1996) uses U.S. Department of State data on U.S. citizens registering with consular posts in foreign countries. The population abroad thus includes both native-born and naturalized U.S. citizens and as a result captures emigration, return migration and perhaps re-migration. Temporary migration and circulation are processes very difficult to study using official data sources and are more often considered in surveys and ethnographies investigating specific migrant streams and ethnic communities.

The emphasis here is on what is known and needed to be known about emigration and short-term and circular migration of international migrants to the United States. To best serve immigration policy analysis, moreover, the population of international migrants should be broadly conceptualized to capture existing and emerging trends in emigration and international mobility (see McNicoll 1992, 14). We should thus consider groups of aliens migrating to the United States both within and around U.S. immigration policies, specifically persons admitted for permanent resident status (including refugees), nonimmigrants who reside in the United States for significant periods of time such as students, workers and exchange visitors, and resident undocumented migrants. Patterns of emigration and circulation among the naturalized citizen population is also of interest given the connection of this group to policies governing immigrant and refugee admissions and settlement in the United States.

Research on Emigration from the United States

Suffice it to say that the emigration and temporary migration patterns of each of the groups just identified have not been fully covered in the research literature. Data for the study of emigration from the United States are limited. Federal statistical resources must be used creatively to produce estimates of emigration; surveys and field research on particular immigrant groups have provided information about short-term departures and patterns of circulation. Accordingly, this discussion of what is known about emigration begins with a summary discussion of U.S. data available for the study of emigration and population movements from the United States. I will then consider several studies of emigration and short-term mobility among immigrants with specific attention to recent estimates prepared by the Population Division of the U.S. Bureau of the Census. The review

by Karen Woodrow-Lafield (1997) provides a more comprehensive analysis of the state of the art of emigration studies for the United States and should be considered in tandem to this report.

U.S. Data on Emigration and Short-term Mobility

The need for federal data on emigration has been recognized for sometime (see Keely and Kraly 1979; Levine, Hill and Warren 1985; Warren and Kraly 1985). As a result, federal statistical resources concerning emigration have been documented and assessed in some detail (see for example, Kraly 1991; Woodrow-Lafield 1994, 1996b; Borjas and Bratsberg 1996). The first observation that is usually made concerning U.S. emigration data is that no comprehensive source of statistical information on emigration exists for the United States (see U.S. General Accounting Office 1998, 4). Data on the permanent departure of aliens and U.S. citizens were collected between 1908 and 1957 but the statistical program was discontinued because of uncertainty about the quality of the data. Since that time, alien emigration from the United States has been estimated using census data, administrative data sources collected by several federal agencies, and results of surveys and other field studies.

In 1991 I identified four federal agencies that collected data most relevant for the study of emigration among aliens and the foreign born population in the United States: U.S. Immigration and Naturalization Service (INS), U.S. Bureau of the Census, U.S. Social Security Administration and the U.S. Travel and Tourism Administration. Half a decade later the list remains essentially the same,[1] although some of these programs have been enhanced for purposes of emigration analysis. For example, while INS no longer collects data it defines as emigration data, the agency does in fact operate a program of statistical departure control for aliens with nonimmigrant visas. The Nonimmigrant Information System (NIIS) records the arrival and subsequent departure of nonimmigrants (excluding most Canadians and Mexicans entering for business or pleasure). The system is the basis for information on the legal entry of nonimmigrants and for the estimation of rates of visa overstay among groups of nonimmigrant aliens. The system has been used to measure length of stay among groups of nonimmigrants. Kraly and Warren (1991, 1992) used these data to estimate the number and characteristics of nonimmigrants who remained (hence resided) in the United States for more than one year and thus should be considered long-term immigrants according to United Nations standard definitions. The INS Statistics Division now publishes a regular report on nonimmigrant departures and patterns of length of stay among detailed visa categories.

Potentially, the NIIS program could be used to study international migration

and mobility behavior and correspondingly circulation patterns among selected groups of aliens by tracking the arrival-departure records of individuals over time. The volume of information processed in this information system is, of course, immense. INS has been encouraged in the past to consider sampling arrival-departure record as a strategy for promoting more detailed research on trends and characteristics of short-term international migration and mobility. Similarly, the existence of departure control for nonimmigrant aliens travelling by air raises the possibility or opportunity for collecting data (for statistical purposes) from permanent resident aliens departing the country as a means to study emigration and short-term mobility among immigrants.

During the past two decades, demographers at the U.S. Bureau of Census have made significant contributions to the study of emigration from the United States primarily through efforts to estimate intercensal levels of emigration among the foreign born. Warren and Peck's (1980) analysis of foreign born emigration for the 1960-70 decade laid the foundation for the use of residual techniques applied to international migration research. Warren and Passel (1987) produced estimates of emigration that were a by-product of their method to construct the legally resident alien population of the United States and ultimately the size of the undocumented population enumerated in the 1980 census. Ahmed and Robinson (1994), whose recent study will be discussed in some detail below, have used variations on this analytic theme to produce estimates of emigration among foreign born residents for the 1980-90 decade.

The Current Population Survey (CPS) has been explored as a basis for estimating emigration using a multiplicity research design. The Census Bureau initiated the collection of data on numbers and characteristics of relatives of U.S. residents living abroad in 1987 and continued data collection again in 1988 and 1989. Briefly, the approach relies on identifying for U.S. residents those 'consanquineal' immediate relatives (parents, siblings and children) who are nonresidents of the United States, and then determining whether any of these individuals are former U.S. residents and are living abroad temporarily or permanently (longer-term). The number of emigrants identified by this approach is biased by two broad sources of error. First, emigration is underestimated to the degree that emigrants did not leave relatives in the United States to report them; second, the number of emigrants will be overstated by the number of immediate relatives eligible to report the relative. According, the survey must weight the emigrant according to the probability of his or her relative being in the sample, i.e., the "multiplicity" associated with the emigration (see Woodrow 1996; Zaba 1987).

Two federal programs that continue to hold potential for the study of emigration are the U.S. Social Security Administration (SSA) and the U.S. Travel and Tourism Administration (USTTA). Each of these programs are considered in relative detail

in the 1991 report and will only briefly discussed here. SSA collects direct, if not comprehensive, data on the emigration of former U.S. immigrants as a by-product of its records on earnings and benefits. For example, records on social security beneficiaries residing abroad are maintained by SSA from which the number and some characteristics of persons who had previously lived in the United States (both foreign and native born) can be gleaned (see Kraly 1982).

The Continuous Work History Sample is a second social security data file with a capacity to generate information on emigration. This microdata file is maintained for research purposes, although with strict constraints on public and federal access, and permits the longitudinal analysis of changes in employment, earnings, benefits, disability, and geographic location of employment. Country of birth is also included in the data record. It may be feasible to estimate emigration among foreign born workers given information about changes in earnings and benefits claims. Finally, the USTTA has conducted air passenger surveys since 1983 for purposes of monitoring trends in international tourism and markets. The survey might be explored as an instrument for collecting data from different groups of aliens on intentions about reasons for departure and length of stay abroad.

Selected Studies of Emigration from the United States

Research on emigration from the United States is indeed limited, largely because of data sources. We can look to studies of historical patterns of emigration from the United States (for example, Axelrod 1972; Piore 1979; Warren and Kraly 1985) which have relied on historical emigration statistics to trace patterns of emigration, presumably return migration, among groups of immigrants to the United States. Contemporary studies of emigration of U.S. immigrants have relied in large part on census and administrative data sources to estimate levels and characteristics of emigration. For example, Jasso and Rosenzweig (1982) matched individual data records for immigrant admissions, naturalizations, and responses to the Alien Address Report Program (which ceased operating in 1981) to yield estimates of the proportion of the 1971 cohort of permanent resident aliens who had emigrated by 1979.

Recent research by Borjas and Bratsberg has combined several administrative and research data sources to estimate out-migration rates for the foreign born population resident in the United States in 1980. Also using a residual estimation approach Borjas and Bratsberg compare the enumerated foreign population with a constructed estimate of the foreign population for 1980. In developing this expected population, Borjas and Bratsberg wrestle with differences among statistical concepts of U.S. international migration. For example, they must adjust the census data on the foreign born for those international migrants which fulfill census residency

rules but are not included in INS data on 'immigrant',' that is, permanent resident alien, admissions. These groups include undocumented resident migrants enumerated in the census, and nonimmigrants such as many foreign students, temporary workers and trainees, exchange visitors, etc. who have a *de facto* residence in the country. In adjusting for these differences in data sources, the authors explore in the process the sensitivity of estimates to alternative assumptions. Research findings reveal out-migration rates which average 22 percent for the 1970-74 international migrant cohort and 18 percent for the 1975-79 cohort. These out-migration rates vary widely by region and country of origin. The out-migration rate for the 1975-80 cohort of immigrants from Mexico is nearly double the overall level, 42 percent, and for the Canadian cohort is much lower, 11 percent. The estimated rates provide a basis to test models of the determinants of out-migration rates among legal international migrants and patterns of selection of out-migrants among original immigrant cohorts (Borjas and Bratsberg 1994).

Estimates of emigration have also been derived from survey research. As described above, data on relatives living abroad of U.S. residents have been collected in several rounds of the Current Population Survey (CPS). Karen Woodrow-Lafield (1990, 1994) has analyzed these data to estimate numbers of surviving emigrants under a range of assumptions about emigrants without immediate relatives in the United States. Her findings have implications for both evidence about emigration levels as well as analytic issues in predicting future trends:

> The implied level of emigration in the 1980s appears similar to previous levels based on intercensal research for 1960-1970 and analyses of legally registered alien populations for 1965-80. ...Overall emigration levels are likely to be influenced by changing heterogeneity of the foreign-born population on country of origin, familial ties in the United States, and reasons for leaving their native country. Characteristic of legal immigrant cohorts since 1965 are increasing proportions from Latin American and Asia, from family preference categories and exempt family reunification provisions, and from refugee status. All of these characteristics would probably be associated with lower probability of return in the short-run (1994, 27-28).

The use of multiplicity techniques for the estimation of emigration holds clear potential for adding to our understanding of both levels of emigration as well as relationships between international migration and family structure of foreign born and native born persons in the United States. The approach thus deserves further consideration within the context of federal statistical resources.

Census-based estimates of emigration among the foreign-born population provide important information of levels and characteristics of emigrations for recent decades. As mentioned above, the first effort to estimate emigration for an intercensal

period was that of Warren and Peck (1980). Demographers at the U.S. Census Bureau, Population Division have continued to develop estimates of emigration among the foreign-born using residual estimation techniques most recently represented in the work of Bashir Ahmed and Gregory Robinson (1994). It is useful to consider closely the contribution of this analysis to research on emigration for at least three reasons. First, the study provides measures of foreign born emigration for the most current intercensal decade, 1980-90. Second, given the striking absence of empirically situated, comprehensive studies of emigration, the Ahmed-Robinson estimates emerge as a significant contribution to both scientific and policy discussions of the implications of U.S. emigration. Third, Ahmed and Robinson emphasize the importance of modelling emigration in the form of emigration rates rather than aggregate levels, and implicitly urge an appropriate break with the Census Bureau tradition of modelling international migration.

Because of noteworthy contributions of the Ahmed-Robinson research, as well as the prominence being given these estimates in current discussions, it is important to appreciate several important analytic issues that should be considered in interpreting the results of the analysis. An exploration of both the study's strengths and limitations will contribute to strengthening the argument for continued research on emigration from the United States.

Ahmed and Robinson use a combination of approaches to produce detailed estimates of emigration among the foreign born for the 1980-90 decade. A brief summary of their data and methodology is warranted. Data collected in the 1980 and 1990 decennial censuses is basis for estimation. This contrasts to complementary census-based research on international migration which combines census data with INS data on the admission of aliens who would likely be enumerated in the census, i.e,. permanent resident aliens, refugees, students, etc. (cf. Warren and Peck 1980; Warren and Passel 1987; Borjas and Bratsberg 1994). The Ahmed-Robinson analysis proceeds in two stages. First, the authors estimate the level and characteristics of emigrants among the foreign born population enumerated in the 1980 census, that is, the 1980 foreign born stock. A residual technique is used to compute the proportions of the foreign born population, by age, sex, year of entry and country of birth, who emigrated between 1980 and 1990. Survival rates were derived from comparison of life tables for different races developed by the Census Bureau (Ahmed and Robinson 1994, 4-5).

The second stage of analysis is devoted to the estimation of emigration among foreign born international migrants who entered the United States during the 1980-90 decade and were enumerated in the 1990 census. Cohorts of these international migrations are identified using the census question on year of entry. The rates of emigration computed for the 1980 foreign born population for migration cohorts prior to 1980 are applied to the 1980-90 international migration cohorts

to produce estimates of levels of emigration and a profile of the composition of emigration streams. The use of emigration rates results in a larger absolute annual level of emigration for the recent decade, 195,000, in comparison to the level of annual emigration assumed in national population estimates and projections (133,000). This higher level of emigration reflects the higher levels of immigration during the decade.

The Ahmed-Robinson analysis is an important contribution to what unfortunately is a relatively meager body of literature on overall levels and patterns of emigration from the United States. This research provides estimates of emigration for the recent stock and flow of lifetime international migrants and thus indicates the degree of permanence of settlement and length of stay among foreign born migrants to the United States. Second, these estimates seek to mine available U.S. census data to yield not only the level of emigration for the most recent intercensal decade but also characteristics of emigration streams among the foreign born. The paper provides geographic and social demographic detail for foreign born emigrants that is both provocative and relevant for the design of subsequent studies of emigration from the United States. Third, the results for both levels and patterns of emigration derive from the application of emigration rates applied to the foreign both stock in 1980 and international migrants arriving during the decade, disaggregated by age, sex, year of arrival and country of birth. The estimates are a function of a model or models of (e)migration behavior applied to shifting population composition. Thus, to a certain extent, the analysis shifts attention away from levels estimated by residual analysis to the study of migration propensity and behavior.

The limitations of the study are also addressed by the authors. Issues raised include assumptions about the level of population coverage in the successive censuses, choice of life tables, and analysis and interpretation of results for countries in which the estimation technique produced inconsistent levels of emigration. These issues in data and method should be considered somewhat more closely. Moreover, additional issues in theory and population modelling, and data quality and evaluation need to be critically entertained for an appropriate interpretation and use of the findings. I would suggest that five general analytic issues should be addressed in evaluating the Ahmed-Robinson estimates, all of which are interrelated: (1) the validity of their model of population change; (2) the assumptions about the relationship between types or categories of international migrants and migration behavior; (3) the relationship between model assumptions and migration theory and research; (4) issues concerning the quality and consistency of the data; and (5) the need for more extensive exploratory and sensitivity analysis.

Of these five areas of concern I believe the first, the appropriateness of the inherent model of population change for the foreign born population, is the most important for evaluating the merits of the Ahmed-Robinson estimates of emigration.

Estimation of levels and ultimately social demographic composition of emigration among recent international migrants (1980-90) derives from the application of rates of emigration computed for the foreign population who immigrated between 1970 and 1979 and were resident in the United States for the 1980 census enumeration. In fact, rates of emigration for the 1980-90 cohort of international migrants are not computed in this analysis, but current levels are computed on the basis of migration behaviors from the 1970-80 decade, converted to annual emigration rates and weighted by average length of stay estimated for the 1980-89 migrants.

Fundamentally, this model represents a conceptualization of population dynamics for recent international migrants that embodies a continuation or maintenance of emigration behaviors of earlier international migrants. Because of the shifting mix of legal/administrative categories of international migrants these emigration rates may not be appropriate for the migrant cohorts of the 1980s (this issue will also be considered below). The analytic approach and ultimately the results deriving from this model of population change implies, it appears to me, that we have access to more information about emigration behavior than in fact we do. In short, there is no new information about emigration behavior, that is, age-sex-country specific rates of emigration, for the international migration cohorts of the 1980s. Ahmed and Robinson have estimated levels of recent emigration based on a persistence of emigration rates estimated for the immigrants who entered during the 1970s.

This line of argument can also be extended to the model's assumptions about the other components of population change. That is, one might contend with the choice of the survival rates applied to the racial groupings of the foreign born population as well as the essentially linear approach to estimating average age at migration and average length of stay among international migration cohorts.

A second general issue, mentioned briefly above, concerns assumptions in the analysis and discussion about the relationship between types or categories of international migrants and migration behavior. Within the discussion, the authors recognize changing composition of international migration with regard to legal and administrative categories such as permanent resident aliens, refugees, students, and undocumented migrants (Ahmed and Robinson 1994, 10-11). They also suggest in reasonable fashion that different categories of aliens coming to the United States are likely to have different propensities to emigrate, either by returning to the country of origin or emigrating to another country. The basis for assumptions about rates of emigration for 'nonselected' countries, for example, relies in large part on hypotheses concerning the likely emigration behavior of aliens legalized under IRCA and refugees. In spite of this line of reasoning, however, the analysis does not model or incorporate alternative or diverse emigration behaviors but, as emphasized above, adopts a model of migration that derives

from an earlier decade and from what is certainly a different mix of categories even within country of birth. There is thus a missed opportunity in the paper's discussion to underscore the need for basic research on patterns of return migration, re-migration, and international mobility and circulation among various legal and administrative categories of international migrants to the United States as well as among nationalities.

A third area of concern is the relationship between model assumptions and existing migration theory and research. Again, this issue in connected to the previous concerns about the underlying population model and the relationship between immigration categories and migration behaviors. Several components of the model assume static conditions. For example, it is assumed that persons admitted as refugees are less likely to return to their country of origin. A more dynamic perspective on refugee migration and international migration generally might at least entertain the possibility that conditions in both the sending and receiving countries may change; thus migration behaviors may vary not only over the life course and by length of stay but also in relation to the context of migration. Similarly, the model assumes proportional levels of census coverage error that do not change for migrant populations between 1980 and 1990. One might predict on the basis of the sociology of immigrant settlement, however, that rates of population coverage would be greater at the second census date rather than the earlier date, not necessarily because of differences in census administration but because of greater knowledge among earlier, more settled immigrant populations about civic participation and the U.S. government in comparison to more recent immigrants. Moreover, the basis for establishing the assumed level of emigration among "unselected countries" should be better grounded in theory and research on international migration pertaining to the countries concerned. This is particularly necessary given that the basic model of population change implies levels of emigration very much at odds with the assumption that emigration rates for these countries are "50 percent of the rates for selected countries" (Ahmed and Robinson 1994, 11).

A fourth set of issues concerns the quality and consistency of census data. The Ahmed-Robinson estimates derive from both explicit and implicit assumptions about the validity of several key census items. Evaluation of data on age and nativity among the foreign born is necessary. Moreover, recent research by Ellis and Wright (1996) cast doubt on the quality of data on length of stay in the United States by estimating that perhaps one third of the foreign born population who indicated they 'came to stay in' the United States between 1985 and 1990 had actually entered before 1985. The heavy reliance on both year of entry and age to measure average age at entry further necessitates the critical evaluation of these census items. Finally and relatedly, there is a need in the analysis for more extensive exploratory and sensitivity analysis. As mentioned above, the results of varying assumptions about

changes in census coverage among immigrant populations should be presented. Similarly, the sensitivity of emigration estimates to varying assumptions about emigration rates for nonselected countries should be explored. In general, the analysis does not lead one to be fully confident that the implications of either model assumptions or data quality have been fully examined.

Both the strengths and limitations of the Ahmed and Robinson study serve to fuel the argument for increased research on emigration. The findings point to the demographic significant of emigration. The lack of adequate data to model the propensity among former immigrants to emigrate for recent years reveals the weaknesses of the federal systems of international migration statistics.

These selected studies which have sought to develop comprehensive estimates of levels of emigration from the United States often interpret their findings in relationship to dimensions of return migration of international migrants, in spite of the fact that no information is available on the destination of the out-migrants, reasons for departure, or intentions about permanence or length of stay of the move. Moreover, given the estimation methodology and data sources, these approaches are not able to address either length of absence or short-term moves out of the United States among groups of international migrants. Referring to the situation of Canada, Beaujot and Rappak (nd) reflect on the problems in interpreting the results of emigration studies which apply residual estimation techniques to a combination of administrative data sources:

> This discussion of definitions, data and methods makes it clear that immigration and emigration are somewhat "fluid" terms whose statistical capture is far from simple. For instance, some "landed immigrants" (permanent, by definition) may have a very limited stay in Canada while other temporary workers may eventually stay for a long time. Some persons are defined as emigrants just because they happened to be resident abroad on a census day, while other leave for long periods between censuses and come back without being noticed (Beaujot and Rappak nd, 26).

These issues are equally pertinent to the interpretation of emigration estimates for the U.S. foreign born population.

As mentioned above, among official data sources, the Nonimmigrant Information System (NIIS) holds some potential for the analysis of international mobility, short-term migration, and circular migration among legal aliens in the United States, specifically among nonimmigrants. Kraly and Warren (1991, 1992) have used these data for identifying those (departing) nonimmigrants whose length of stay was greater than one year. The information system could also be used to monitor temporal and geographic patterns of international mobility among categories of nonimmigrants and by the few social demographic characteristics

available on the arrival-departure record (I-94 form). Moreover, the administration of arrival-departure control might be modified ('for statistical purposes') to document the international mobility of permanent resident aliens. In Australia, Lukomskyj and Richards (1986) used this approach to study emigration among 'visaed settlers' who immigrated in 1980. Their analysis of records in the Movement Data Base permitted not only the measurement of rate of out-migration (about 9 percent) among this immigrant cohort, but also of the characteristics of emigrants relative to immigrants.

Not captured in the Nonimmigrant Information System is the vast majority of moves of aliens across the Mexican and Canadian borders of the United States. For the most part, information on short-term international mobility and circular migration among U.S. international migrants has been generated through survey and field studies of specific migrant streams and communities. The list of relevant scholarship is broad and draws from a long history in social science. Certainly the ethnosurvey research conducted by Massey and his colleagues (see Massey, et al., 1987) has been central in both revealing the dynamics and circularity of migration of Mexicans between communities in Mexico and the United States as well as demonstrating the value of longitudinal survey and ethnographic research for the study of international migration. The Philippines Migration Study similarly reveals the relevance of surveys to reveal international mobility processes among specific migrant streams (Fawcett and Arnold 1987). Research by Weiser (1988) and Bailey and Ellis (1993) on return migration among Puerto Rican women illustrates the use of specialized surveys, in this case, the Puerto Rican Fertility and Family Planning Assessment, to yield insight into the behavioral dynamics of circular migration.

Fawcett and Arnold make the most eloquent case for the use of surveys for the study of international migration processes and emphasizing conceptual issues highlighted earlier:

> "International migration" is not a unitary concept; rather, it is a broad category encompassing population movements that differ in their timing, frequency, purposes, and locational boundaries. Substantive and theoretical issues are greatly influenced by how spatial mobility is conceptualized and measured. The advantage of surveys in this respect is mainly in the amount of information collected. A migration history can show frequency of moves, information about dates and places can be obtained for long-term and short-term movements, and reasons for moves and other motivational data can be collected. With such data in hand, the researcher can devise different typologies and measures of movement, thus ensuring that the key dependent or independent variable is measured in a way that is congruent with the conceptual posture of the study (1529).

The Need for Information on Emigration from the United States

An early report of the U.S. General Accounting Office succinctly states the policy rationale for the study of emigration of international migrants coming to the United States: "[e]migration is a factor that underlies all immigrant impacts because the magnitude of those impacts depends upon the length of time that immigrants reside in the United States" (GAO 1989, 47; see also GAO 1988). Moreover, the size and composition of the international migrant populations resident population which generates policy relevant impacts reflect the dynamics of change in those populations.

For many countries, the argument that emigration and return migration is a significant dimension of international migration policy analysis has already been made. In Canada, the MacDonald Commission urged the consideration of the long-term impacts of immigration on population change and economic growth (Beaujot and Rappak nd, 3; see also Michalowski 1991). In Australia, official reports have acknowledged the significance of return migration following the admission of permanent settlers (Lukomskyj and Richard 1986, 603). The need for continuous and reliable information on mobility and migration among countries in Latin America has been considered in discussions of national migration policies and also economic integration within the region (see Maquid 1993).

There is a statutory rationale for considering emigration in light of U.S. immigration policy concerns. The Triennial Report to Congress mandated by the 1986 Immigration Reform and Control Act is to include an assessment of the impacts of immigration on U.S. society, economic and population. Furthermore, the 1990 amendments to the Immigration and Nationality Act require that the "social, demographic and natural resources impact of immigration..." be determined (see Sec.141(c)(1)(C)). To restate the obvious, the 'impacts' of immigration can only be examined with evidence about the international migrant populations in the United States and how those populations are changing in size, characteristics and behaviors.

But the argument for better data on emigration and international mobility must derive from more fundamental principles of public policy analysis than solely the reporting requirements of the current law. If U.S. immigration policy is to serve national and international interests, the policy should undergo ongoing critical analysis informed by knowledge about patterns of change in causes, consequences and characteristics of international migration to the United States. From this premise, at least four general arguments can be offered for the necessity of improving national statistical resources for the study of emigration and the international mobility of U.S. immigrants. These include the benefits of information on U.S. population dynamics, economic and human resource issues, social demographic accounting

and the planning process, and issues of social and economic integration of the United States with other countries and regions of the world.

Interpreting National Population Dynamics and Regional Change

U.S. immigration policy does not exist to serve demographic ends. Concern about the volume of immigration to the United States, however, is reflected in annual ceilings, 'pierceable' or not, that are constructed to limit annual levels of immigration for permanent residence. It is important that the image of immigration trends is connected to real migration processes. The reality is that while many immigrants come to the United States intending to remain and do so permanently, some aliens with permanent resident visas emigrate permanently and others depart the country for temporary periods of time. Demographic research for the United States, as well as other immigrant receiving countries, suggests that proportions of immigrants emigrating are range upwards to 30 percent if not higher. Similarly, aliens arriving on nonimmigrant visas may remain in the country permanently by adjusting to permanent resident status. Kraly and Warren (1991) have shown that perhaps 100,000 nonimmigrants will depart after lengthy stays; many of these are likely to move into and out of the country on a recurring basis.

Policy makers and program managers are most certainly interested in the numbers, characteristics, and needs of international migrants, particularly permanent resident aliens and undocumented migrants, in their constituencies and communities of operation at any point in time as well as changes over time. The picture of international migrant populations painted through admissions and arrivals data is incomplete without corresponding information on departures; the snapshots of immigrant communities from census data are miss the dynamics of change in the national population and local communities. Thus, if the public and policy makers are to appreciate the relationship between international migration trends and immigration policy proposals, the evidence must be complete. When an annual level of immigration is reported, for example, "...in 1994, 804,416 immigrants were admitted to the United States... (U.S. Department of Justice 1996)" we should all be enlightened enough to implicitly add, "...of which about one quarter or one third are likely to emigrate...."

Without comprehensive data on emigration among groups of international migrants, we are not able to effectively understand current demographic change or project population growth in the near future. The lack of complete information on components of population change is particularly problematic for analysis of the impacts of international migration below the national level—for regions, states, metropolitan areas, and local communities in the United States (see Greenwood and Ragland

1991; Kraly 1995, 52-53) where migration is usually the most significant component of population change. Furthermore, demographic analyses, for example, those taking the form of population models and projections, require information on emigration in order to construct realistic trends international migration under alternative policy scenarios. (Kraly 1995, 1997; see also Michalowksi 1991).

Economic Consequences of Immigration and Human Resource Issues

Debates about U.S. immigration continue to address issues concerning the economic implications of immigration levels and composition. Changes in the structure of the visa preference system introduced in the 1990 amendments underscored the heightened interest in Congress considering immigration as a route to enhance job creation and economic growth. Increasingly, there is public concern about the implications of U.S. immigration for social policy and entitlement programs. To some observers, the Immigration Control and Financial Responsibility Act of 1996 represented a move to restrict legal immigration through reduced access to public programs including health services, welfare programs and public education.

Information about return and re-migration of U.S. immigrants is fundamental to the analysis of issues concerning immigration and economic growth in the United States, labor force growth, and human resource needs. Oded Stark states that determining why and which international migrants return to countries of origin is the "frontier of international migration research." If the skill composition of migration flows can be shown to be responsive to concrete policies, real-world concerns are well served by the provision of clear answers to these questions. And real world-concerns, in this context, are real indeed because the numbers of those who return are, generally speaking, anything but trivial (Stark 1995: 55-56). Again, in the case of both Canada and Australia there has been policy research devoted to the implications of return migration for the stock of landed immigrants and for the loss on returns to investment in the settlement and adjustment process of immigrants. Lukomskyj and Richards comment on the significance of return migration for Australia because both

> ...the loss of skills and capital... and settler arrivals represent an initial cost to Australia in terms of operating the migration programs and providing post-arrival services and assistance. There is less return for the initial 'investment' in those migrants who later depart... (1986, 604).

Borjas has consistently raised the issue of emigration in relationship the analysis of the economic impacts of U.S. immigration and the skills and education levels of immigrant workers (see Borjas 1987, 1990). Recent research by Borjas and Bratsberg

(1994, 1996) considers how the human capital characteristics of groups of immigrants are related to the process of return migration and concludes that

> ...return migration intensifies the type of selection that generated the immigrant flow in the first place... if the immigrant flow is positively selected, so that immigrants have above average skills, the return migrants will be the least skilled immigrants... if the immigrant flow is negatively selected, the return migrants will be the most skilled immigrants (1994, 25).

Information on migration intentions among immigrants, such those data collected in the Legalized Alien Population Surveys may enhance the study of emigration decision-making and emigrant selectivity (see Woodrow-Lafield 1996; cf. Dustmann 1994).

Demographic Accounting and Public Policy and Planning

As implied above, if national statistical accounts are to serve the process of planning and analysis of public policy then the statistical systems must be able both capture reality as well as anticipate emerging trends and phenomena. Philip Martin emphasizes the importance for national migration policies of appreciating the basic "facts" of international migration (Martin 1994, 102). National statistical systems should facilitate the production of those facts and thus should not embody only administrative or legal concepts deriving from policies and laws in currently in place, but should also be conceptually flexible to permit the gazing at trends through a different policy lens. Reflecting on patterns of migration between Australia and New Zealand McNicoll wryly observes, "[a] demographic accounting system is an arbitrary construct, usually chosen to overlay a distinct polity (14)."

U.S. international migration statistics are generated as products of the administration of laws and programs concerning the admission and status of aliens in the United States, hence the absence of emigration data. Furthermore, there is a fundamental mismatch between official statistical concepts, which tend to divide the international entry of aliens into three categories—permanent, temporary and illegal, and the recurring patterns of international migration and mobility experienced by large numbers of aliens entering the United States from Mexico and regions in the Caribbean, in particular (Massey 1987; National Heritage Institute 1995, 7). Improved information on current and evolving patterns of emigration and international mobility would serve not only to evaluate current U.S. immigration policy but also to *anticipate* the need for shifts in policy and redesign of programs. Furthermore, flexibility in measuring both immigration and emigration within statistical systems would enhance the capacity of demographic accounts to contribute

to the broad enterprise of international migration policy analysis (Zlotnik 1987; Fawcett and Arnold 1987).

Immigration Policy, International Relations and Regional Integration

Morokvasic and De Tinguy have observed that since 1989 Central Europe has experienced new forms of inter- and intra-regional population movements and note that "[p]eople seem to go West in order to eventually remain in the East—where they reside" (1993, 261). International population movements throughout the world are embedded in widening economic and demographic regional differences as well as in increasingly extensive social and economic linkages between and among countries and communities (Russell 1996; Martin 1994). Efforts to control or manage international migration to the United States will depend in large part on the recognition of the place of the United States in the global and regional economy and the significance of social relations in shrinking the distance between sending and receiving communities across seemingly wide geographic space (see Papademetriou 1984, 267). Comprehensive study of current and emerging migration patterns is critically needed for analysis of regional economic integration of Mexico and the United States, as well as for the United States and other regions in Latin America and the Caribbean.

These ideas are not new and have been articulated clearly through the research program of the U.S. Commission for the Study of International Migration and Cooperative Economic Development (see also Teitelbaum and Weiner 1995). Emigration, particularly circulation, moreover, is a critical dimension of the interdependence between and among countries. The study of emigration and international mobility among international migrants to the United States provides evidence about trends in international relations and connections and the flows of human and perhaps other forms of capital and investment, and thus can enhance national understanding of the role of the United States in global change. This statement is dramatic and presumptuous. Given the entrenched view that alien immigration to the United States is permanent, however, some provocation would seem warranted.

Priorities for Emigration Research for the United States

The general conclusions of the previous (1991) report on emigration data noted first, no comprehensive, ongoing source of statistical information on emigration exists for the United States; second, in the near term, the analysis of emigration

among U.S. immigrants would rely heavily on estimates of migration patterns among the foreign born population and selected groups of aliens; and third, federal statistical resources that have the potential for the measurement of emigration are relatively inaccessible for research by analysts both in and outside the government (Kraly 1991, 25-26). These conclusions remain essentially intact.

Several of the report's specific recommendations to INS concerning emigration research, however, have been implemented. For example, INS has taken an active role in the launching of a longitudinal survey of immigrants in the United States which should yield indirect evidence about emigration among permanent resident aliens. Analysis of data on length of stay among departing nonimmigrants has been continued. There have been interagency discussions concerning the analysis of administrative data sets, both SSA files and the USTTA air passenger survey, for purposes of studying emigration and other dimensions of international migration to and from the United States.

It will be important to continue build upon these initiatives. Specifically, three broad research strategies concerning emigration and international mobility of U.S. immigrants should be given priority in order to support national immigration policy analysis. First, coordination and collaboration should be encouraged among policy analysts and statisticians within those federal agencies which participate in immigration policy analysis. Continued exploration of administrative data files for the analysis and estimation of emigration and international mobility should be pursued. For example, the mission and scope of the Nonimmigrant Information System should be expanded to include the study of international movements of both nonimmigrant and permanent resident aliens. Analysts at INS and the Census Bureau's Population Division should continue to work together to estimate emigration of the foreign born using residual estimation techniques and to take more complete advantage of emigration data (generated through multiplicity survey design) and information on the foreign born population collected in previous and future Curre¡nt Population Surveys. Further consideration of SSA data for the study of both emigration and immigration should occur. It will be useful, moreover, for federal analysts to consider strategies for generating data on emigration and international mobility used by statistical offices of other countries notably Canada and Australia, throughout Europe (see Willekens 1994), and Latin America (Maguid 1993).

Second, survey approaches to studying emigration, return and re-migration as well as circular migration among international migrants should be pursued. Particularly critical is collaboration among agencies to revisit the use of multiplicity research design in the Current Population Survey to generate direct estimates of emigration and length of stay among immigrants to the United States. Support for longitudinal survey research on U.S. immigrants, such as the New Immigrant Survey currently underway, should continue. Analysis of the results of

the Legalized Alien Population Surveys should be supported for purposes of emigration research (see Woodrow-Lafield 1996). Again, the use of surveys by other countries, for example, the Air Passenger Survey used in the United Kingdom and the German Socioeconomic Panel Survey (Dustmann 1994), and the range of strategies pursued in many developing countries (see, for example, Altaf 1992; Apraku 1991; ESCWA Secretariat 1993) should provide valuable perspective on the use of survey research for the estimation of emigration and international mobility using both direct and indirect techniques (see Zaba 1987; Larsen and Sullivan 1987). Particular attention should be given to the development of sampling methodology for surveys of alien departures from the United States at both air and land border ports.

Third, the policy importance of information on emigration and international mobility should be reflected in greater use of ethnosurveys for the longitudinal study of specific immigrant streams between communities within countries of origin and the United States. A record of scholarship exists demonstrating the value of combining sample survey methodology with ethnographic approaches for generating comprehensive information on the dynamics of international migration and mobility for particular migration communities and locales in the United States. Commitment to longitudinal research programs of this type would serve to provide data tapping emerging patterns and forms of international population movement in diverse regional contexts.

These three areas of research activity do not represent remarkably new ideas for research on emigration and mobility among U.S. immigrants. At present, most researchers interested in U.S. immigration and emigration have relatively clear visions of both what might feasibly be accomplished within the current structure of the federal statistical system, as well as what new research initiatives would be most useful for increasing our reservoir of information about out-migration of U.S. immigrants. What might be added to these visions, however, is attention to process. The endeavor of U.S. immigration policy analysis would benefit from a structure of human and statistical resources that results in focussed and coordinated attention to issues concerning international migration as a dynamic process to and from the United States. In an important paper, Frans Willekens (1994) considers both approaches to "...bridging the gap between available data on international migration flows and the information for policy making and research" (1994,1) in Europe. While the construction of a coordinated data base among European countries is emphasized, Willekens also notes the importance of 'expert judgement' in shaping migration models and in interpreting results. This perspective is usefully considered for the United States in the form a consortium of researchers focussing specifically on issues of emigration, international mobility among groups of international migrants to the United States.

It may be worthwhile to ponder the creation of a "Program of Research on Immigration, Emigration and Circulation among International Migrants to the United States." Such a program could provide a structure for coordinated efforts to measure, estimate and monitor emigration and international mobility. Through meetings and publications, an ongoing mechanism could be established for encouraging collaboration and exchange between and among analysts in the United States as well as with researchers conducting relevant work in other countries. Such an organizational framework would also have symbolic significance as formal recognition that international migration both to and from the United States is a dynamic and complex process which should be appropriately reflected in U.S. immigration policy.

Note

1. The U.S. Department of State, Bureau of Consular Affairs, U.S. Internal Revenue Service and the U.S. Department of Defense were also identified as potential sources of statistical information on U.S. residents living abroad. While the scope and accessibility for research of these statistical programs limits their usefulness for the study of alien emigration, it may be useful to reconsider these programs for purposes of migration modelling and estimation.

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