Points of Departure: Emigration from the United States

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Presented at the annual meeting of the Population Association of America, April 1-3, 2004, Boston, Massachusetts. Contact the first author Karen A. Woodrow-Lafield, Institute for Latino Studies, University of Notre Dame, 250 McKenna Hall, P.O. Box 764, Notre Dame, Indiana 46556-0764, 574-631-9781, **klafield@nd.edu** or **KarenWLafield@cs.com** .

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Abstract

The answer to the simple question of the number of U.S. residents having left in the 1990s to live abroad actually involves multiple "answers" that varied by source and date. The tasks of measuring quantities of emigration or return migration and the number of U.S. born persons or former U.S. residents living abroad, whether temporarily or long-term, remain dependent on a crude science of scrutinizing various data sources to indirectly address the problem. Drawing from several studies about emigration levels and return migrants for 1950-2000, this review covers definitional issues, analytic universe, study populations, period influences, heterogeneity of at-risk populations, constituencies of emigration estimates, and alternative findings. Although similar reviews are available for another hard-to-estimate migrant population, unauthorized populations, a similar review has not existed for the emigrant population. To augment the U.S. population statistics for this decade, a number of strategies are possible that meet the criteria of understandability, credibility, and feasibility.

Introduction

In early 2002, a demographer's search for a statistic on U.S. emigration for 1990-2000 was a reminder of the relative obscurity of this component of population change in national demographic accounts. The tasks of measuring quantities of emigration or return migration and the number of U.S. born persons or former U.S. residents, whether temporarily or long-term, remain dependent on a crude science of scrutinizing various data sources to indirectly address the question. The effort to answer the question – or questions – about the departure and generally international mobility of various groups of U.S. residents is warranted. Better knowledge about the process of emigration from the United States will contribute to international migration theory, the measurement of national population dynamics, and critical arenas of national and international policy.

This assessment of the state of the art of national estimates of emigration has the goal of identifying opportunities for improved estimation, measurement, and analysis. Within the context and national programs of population estimates and projections, research has been traditionally directed to the specification of annual *levels* of emigration from the United States. The momentum we seek to establish, in contrast, is toward the specification of *rates* of emigration. Contemporary international migration theory and research (e.g., Portes 2001; Zolberg and Benda 2001) are strongly indicative of shifting characteristics of populations at risk of emigrating from the United States. We argue that in addition to extant studies of the role of social demographic correlates of immigration and emigration (places of origin and settlement, age, gender, education, conditions of migration and length of stay) the burgeoning literature on transnationalism, transnational

migration communities, and circulation is particularly rich in theory, concept and empirical detail regarding the behavioral and structural dimensions of the migration process. These analytic resources should be appropriately incorporated into models of emigration and return migration that are ultimately operationalized in national population estimates.

First, a renewed effort to produce better models of international migration flows and emigration for the United States is important, and, from the perspectives of both population analysis and policy research, increasingly so. Second, the concepts and working definitions of international migration and emigration are discussed. Third, we review past approaches to measurement and estimation of emigration. Fourth, we draw from a variety of places in the social science landscape to identify critical dimensions of processes of emigration and return migration. Fifth, we present a series of illustrations of analytic approaches that might be adapted to contribute to our understanding of the process of emigration and return migration. Sixth, we conclude with an outline of an agenda of interdisciplinary, integrated migration research that could form the basis for ongoing empirical grounding for national emigration estimates.

Emigration: Costs of Not Knowing, Benefits of Knowing

The rationale for reinvigorated commitment to improving measures and estimates of U.S. emigration and return migration is not one evoking the popular perception of academic rhetoric: "the 'need for more data." The adjective, 'more' presumes that 'some' now exists. National data on emigration from the United States do not exist.[1]

[1] The U.S. Immigration and Naturalization Service collected some statistics on alien emigration over 1901-1957. For a discussion of historical statistics on emigration, see Kraly (1982) and Warren and Kraly (1985). An exception is the category of H-1B workers for whom there is an accounting in population estimates.

The last data collection about emigration occurred more than a decade ago and that was more experimental than regular as noted below. Emigration data are most easily available for countries that restrict international travel of their citizens and either issue passports or exit visas for officially authorized travel. The absence of data poses critical issues for international migration theory and research, national demographic analysis, and national immigration policy.[2] Major immigration laws require that federal agencies report on flow, the foreign-born population, net change in size, and emigration, including rates of emigration (Gordon 2002; U.S. Immigration and Naturalization Service 1999, 2002).

Questions about the pace and spatial process of emigration and characteristics of return migrants are central to the sociological and geographical study of globalization and transnational processes, immigrant settlement, adjustment and incorporation. Analyses of socioeconomic characteristics of immigrants longitudinally seek to address immigrant integration across generations (Myers and Cranford 1998; Borjas 1985; Smith 2003), but selection of less successful immigrants on emigration may lead to overestimating certain

[2] Statistical infrastructures are devised not only to improve measures but also according to political negotiations. For example, those away in the U.S. military and government employees overseas were included in the state of record population counts for the 2000 Congressional apportionment. The basis was their presumed strong ties to the U.S. and expected return to the state of record. This led to controversy when North Carolina received the 435th seat and Utah's population count was lower by only 856 persons. Litigation followed to argue that Utah's Mormon missionaries abroad should have been counted just as North Carolina's military abroad had been counted. Currently, the Census Bureau is conducting the U.S. Census 2004 Overseas Enumeration Test (February-July) in France, Kuwait, and Mexico (www.census.gov/overseas04). The purpose is principally to gauge the feasibility of counting private citizens abroad for which the estimates range from 3 million to 10 million (Cohn 2004). Specific figures of 6.5 million for civilians overseas and 500,000 overseas military and dependents were attributed to Joseph Smallhoover by Keating (2004). Although many may not be as likely to return as armed forces personnel, government employees, and missionaries, crises or political upheavals could lead to mass returns to the United States. As noted in a United Nations report (1998:9), protection of U.S. citizens' rights while abroad "requires that the pre-departure arrangements be monitored." Groups that represent military and civilian overseas residents support the development of Internet voting for the 2004 Presidential election. Mentioned were Democrats Abroad, Republicans Abroad, Association of Americans Resident Overseas, American Citizens Abroad, and the Federation of American Women's Clubs Overseas. An experiment was conducted early in 2004 as a prelude to allowing Internet voting for overseas residents with states of record of Arkansas, Florida, Hawaii, North Carolina, South Carolina, Utah, and Washington (Keating 2004).

effects and cloud an assessment for particular immigrant cohorts (Lindstrom and Massey 1994). Conventional censuses and surveys measure length of U.S. residence imperfectly and underestimate total duration of U.S. experience, obscuring the true relationship between accumulated experience and earnings and greatly complicating comparative analysis of immigrant assimilation (Massey and Redstone 2003).

The questions that remain unanswered are several. Are professional worker-migrants likely to remain in destination countries? Might they be already planning to return to origin communities in later years? Are worker remittances to origin communities indicative of intentions to return and is it important to differentiate remittances for savings or investment from those for family household expenses or future migration? Are some migrants likely to stay only long enough to accumulate savings and then return home to start a business? Are some workers likely to stay until retirement and then return to their origin community where costs are lower and family ties exist? Are some legal workers likely to emigrate after completing the minimum requirements to be eligible for social security assistance?[3] In what ways are their decisions about daily life commingled with intentions for the long term?

Perhaps most prominent in the critical literature on emigration is the need for complete national demographic accounts for the United States (Keely and Kraly 1978; Levine, Hill, and Warren 1985; Kraly 1995). Now that the foreign-born population has reached a new platform in public, scientific, and political awareness, due to sheer number

[3] This paper does not fully incorporate relevant literature on Social Security beneficiaries and the timing of emigration relative to becoming fully insured which is covered in the excellent article by Duleep (1994) that, incidentally, is listed first under emigration at www.encyclopedia.com).

and population share, the reminder that the open door swings in both directions is timely. Other developed nations face more difficult scenarios on economic growth and labor supply than the United States. With continuing net international migration on the plus side, the U.S. population is projected to continue to grow for five decades, making the United States the only developed nation among the 20 most populous nations (United Nations 2001, 2003). U.S. population estimates and projections programs incorporate an assumed amount for net international migration rather than the gross additions of permanent residents, unauthorized residents, and refugee arrivals. Demographers are accustomed to population accounts of additions and subtractions and realize that net migration is quite different from gross migration in volume and character, nationally as for international flows and subnationally as for internal flows (Rogers 1995; Tucker and Urton 1994). If population accounts do not sufficiently compensate for return migration, then population estimates would be overstated. An extremely important need for good emigration research is for evaluating census coverage because emigration is a swing factor for estimating U.S. unauthorized migration (Passel and Woodrow 1987). Overestimation or underestimation of emigration may pose problems when a census count becomes available as a new benchmark on estimates.

Completeness and accuracy in national demographic accounting and population analysis are goals in and of themselves for national public administration. Given the social, economic and political scale of U.S. immigration, the public policy costs of incomplete and inaccurate population accounts loom even larger. Recognition of emigration levels is an aid in evaluating national immigration policies and population growth at all geographic scales, national, regional and local (Kraly 1998). Crudely put,

the return of individuals and families to their origin countries (or onward to a different country) alters their social, economic and environmental impact on communities of settlement in the United States. The consequences of incomplete and poor social demographic data are poor program planning for service utilizations and public benefits of education, public health, housing, and transportation access. Fundamental questions about the trajectory of national and regional population growth, as well as the population dynamics in cities and smaller communities pose challenges to analyses of population-environment interactions (Kraly 1998).

Emigration

As expressed above, recent research on transnational migrant communities is relevant for informing models of international migration and, specifically, models of emigration. This research is largely qualitative in method. The crucial commitment to contributing to national population analysis, however, requires a meta-analytic orientation to contort more temporally and geographically fluid perspectives on mobility and migration into demographic concepts.

Accordingly, we generally follow the United Nations' statistical concepts of international migration (United Nations 1998, 1980) and interpret the general concept of emigration as departure by long-term residents from the country of settlement (i.e., the United States) for long-term settlement in another country. The United Nations defines 'long-term' as one year or more.) Long-term emigration is the counterpart of long-term immigration; each process can include both nationals (i.e., native-born and naturalized U.S. citizens) and non-nationals (non-U.S. citizens or aliens in all statuses under U.S. immigration law and administration) who are long-term residents of the country. The

presence of special populations with temporary protected status, deferred enforced departure, H-1B temporary worker, must be accounted for in socioeconomic and political perspectives, but their presence is meant as temporary even if duration of stay surpasses the one year criterion for long-term resident. Various terms refer to nonspecific, quasi-legal, hidden, or unknown population. As noted in the United Nations reports (1998, 1980), residence is a legal-administrative concept that varies among countries. Temporary migration to and from the United States, of both U.S. citizens and non-U.S. citizens, is also of critical theoretical, demographic and policy interest, but holds somewhat less relevance for national population analyses which are census and survey-based. Special categories are Canadians and South Americans with dual residence in origin countries and the United States. In maintaining their Canadian home as primary residence, Canadian "snowbirds" spend less than six months annually in the United States.

In most nations, there are no policies to intervene with individual decisionmaking to emigrate (United Nations 2002). Among countries, the balance of migration flow is more often weighted heavily to emigration over immigration. The major immigrant-receiving nations most need to expand statistical infrastructures to separate long-term immigration and long-term emigration. For most sending nations, vital statistics, censuses, and surveys track population change through fertility, mortality, and emigration, whether done by the country itself or international organizations. Those nations receiving immigrants in excess of emigrants may also receive unauthorized migrants and temporary migrants that further complicate statistical accounts. Migration will be the key component in changing the contours of the world population. Traditional

demographic models dealt with fertility and mortality in a population closed to migration, and more sophisticated population accounting schemes treated migration, internal and international, as best as possible given data sources and their quality, for population estimation and projection. For each of internal migration and international migration, controversies arose as to adequacy of measures relative to the changing migration dynamics and phenomena (Rogers 1995; Levine, Hill, and Warren 1985; Massey 1985).

National population analysis requires information on emigration of all *residents* -- U.S. citizens and non-U.S. citizens, native-born and foreign born; U.S. immigration and immigrant policy analysis would benefit from information on the emigration of aliens. In the U.S. case, emigration of the foreign-born offsets net unauthorized migration that may not be estimated with great certainty. Emigration of immigrants to the country of origin is considered return migration, although it should be noted that return might not be to the original community of residence within the country of origin. Countries census either the *de facto* population or the *de jure* population, usually the latter, and the United States uses a 'usual residence' criterion as the basis for inclusion, that is, whether the person usually resides and sleeps at the address. Studies of the emigrant universe typically address segments of foreign-born, legal foreign-born, naturalized citizens, or native-born, but these divisions are apparent rather than salient. Migration is often an occurrence of clusters of individuals, families or related individuals, rather than individuals. Emigration and settlement involve families with mixed nativity and possibly a mixture of lawful statuses.

Emigration from the United States: Trends and Estimates

The ascendancy of a new immigration to the United States is a common reference in the public and scholarly literature after four decades of lawful and unlawful migration originating principally in countries of the Asian continent, South America, Central America, and the Caribbean, in contrast to the historically preeminent European migration to the United States. Migration, both immigration and emigration, was a matter of minimal attention and even somewhat ignored over 1930-1970. The major pursuit among demographers was the question or problem of world population growth and the mechanisms for bringing fertility under control, as noted in reflections of one immigration demographer (Massey 1996) and analysts of popular literature (Ball and Wilmoth 1994). This new regime of immigration, as termed in Massey (1995), marked a an increasingly complicated heterogeneity among immigrants and within immigrant communities by race, ethnicity, generation, and citizenship.

Several studies are relevant to understanding emigration levels for the 20th century (Bratsberg and Terrell 1996; Borjas and Bratsberg 1996; Robinson 1978; Keely and Kraly 1978; Warren and Peck 1980; Warren and Kraly 1985; Warren and Passel 1987; Jasso and Rosenzweig 1982). The immigration volume in 1900-1980 was offset by substantial return migration, approximately one for every three immigrants (Warren and Kraly 1985). Hatton and Williamson (1994) examined the "great return" of European migrants. The era of high immigration and high return migration was followed by a low immigration period as a consequence of restrictive legislation. A consensus is that assimilation processes were operating well over 1920-1960 and that the slowdown of immigration may have helped (Alba and Nee 2003). Perhaps immigrants were easily assimilated and less likely to return to origin countries. Despite crude measurement of

emigration, there was an awakening of interest in emigration as immigration policies were changing in the 1970s and 1980s because the question arose as to whether rising immigration was offset by return migration.

Earlier studies of emigration may have been relevant for earlier immigrants and may not be salient for those arriving in the latter half of the 20th century when the world was changing and U.S. immigration laws changed (Massey 1995). Within the North American migration system, the 1965 Amendments to the Immigration and Nationality Act for the United States affected Eastern Hemisphere immigration, increasing the Asian flows dramatically, and later changes altered certain dimensions of Western Hemisphere immigration to greater family reunification. Arriving Southeast Asian and other refugees in the 1970s and 1980s were met with resettlement programs and assistance. Immigrants coming in the 1970s had little time to reverse their decisions as of 1980, and this observation applied for recent immigrants in the 1990 and 2000 censuses. In any census, observations are right-censored as to occurrence of emigration.

The cohort component approach to estimating emigration has been reviewed often (Woodrow-Lafield 1998; Kraly 1998). For a population closed to immigration or a population with known immigration, emigration may be estimated as a residual with censuses. These studies try to assess the dwindling down of the cohort over time. These vary from simpler analyses (Keely and Kraly 1978; Warren and Peck 1980) to more complex analyses in the presence of unauthorized migration that used Annual Alien Registration Program data (Warren and Passel 1987) rather than census data.

Measuring emigration as population loss across censuses means the population definition must be precise. If nonresidents are included, there will be overestimation of

emigration. Over time, the temporary presence has increased, so the recent immigrant population in the census is probably overstated. Because recent immigrants show the highest measured emigration or loss, emigration levels are likely to be overstated. A confounding factor has been undocumented migration after 1970. The strategy of using cohort component techniques with two sets of census data on the foreign-born has been used with variations when undocumented residents were present (Warren and Passel 1987; Ahmed and Robinson 1994; Mulder et al. 2002). Intercensal calculations still have practical value for estimating emigration with the caveat of credible estimates for unauthorized migration and for coverage of nonimmigrant populations. The sizes of the unauthorized resident population and the nonimmigrant population are debatable despite recent studies (Bean et al. 2001; Bean, Van Hook, and Woodrow-Lafield 2001; Passel 2002; INS 2003; Woodrow-Lafield 1998). Whether these are credible depends on the array of data sources and comparability of commonly used criteria. Most of the studies used aggregate statistics with classification by certain individual characteristics (age, sex, origin, race or ethnicity, and period of entry).

These specification criteria have limitations. Individuals possess other characteristics, such as worker or student, or of their family relationships or household membership that may be associated with emigration or settlement. Indexing on duration of residence is imperfect because migrants go back and forth. Many foreign-born whose date of arrival is in the five years before the census are staying temporarily and leave before the next (Ellis and Wright 1995). An abundance of evidence exists that a single question about period of entry is inadequate to index the timing of immigration to the United States given the processual character of migration (Jasso, Massey, Rosenzweig,

and Smith 2000; Massey and Redstone 2003; Massey and Malone 2003). Perhaps the empirical strategy of gauging intercensal emigration placed undue emphasis on experiences of recent arrivals.

The presumed increase in emigration in the later 20th century highlights greater importance of specifying a range or sensitivity analyses of effect of emigrants for estimates of unauthorized (Passel and Woodrow 1987). To evaluate coverage in the 1990 census (Robinson et al. 1991, 1993) for the adjustment decision (Marburger 1991), Census demographers allowed 1.6 million emigrants, or a range of 1.0 to 2.5 million on the basis of intercensal and sensitivity analyses (Woodrow 1991). This was as assumed for postcensal population estimates throughout the 1980s, allowing for 1.33 million emigrants as foreign-born and 270,000 emigrants as native-born (Passel 1985, Immigration and Naturalization Service 1999, 1990, 1998). The point estimate was at the lower end of this range, with most of uncertainty concentrated with higher emigration (Robinson et al. 1993).

The answer to the simple question of the number of U.S. residents having left in the 1990s to live abroad actually involves multiple "answers" that vary by source and date. New low, medium, and high allowances for emigration allowances of 100,000, 160,000, and 260,000 were adopted (Day 1992, Woodrow 1991).[4] Later, an evaluation of the number of emigrants in 1980-1990 (Ahmed and Robinson 1994) argued that emigration levels exceeded assumptions. Demographers scrutinizing the magnitude of net unauthorized migration as of the 1990 census weighed emigration and other assumptions (Clark et al. 1994; Woodrow-Lafield 1995, 1998). The Census Bureau

[4] Allowances for net population change due to undocumented migration were set between 100,000 and 300,000.

increased the amount assumed for total (220,000) and foreign-born (195,000) emigration in the national population estimates as of 1992 (Immigration and Naturalization Service 1998). Again, the emigration allowance was changed for population projections (Day 1996) to amounts of 100,000, 220,000, or 310,000. There was some skepticism among demographers (Kraly 1998; Espenshade 1998; Woodrow-Lafield 1998).

This allowance for emigration as a component of change might have been the assumption used by census demographers for constructing the independent population estimate as of Census Day (U.S. Immigration and Naturalization Service 2000a, 2000b). Shortly before the 2000 census, the *1998* and *1999 Statistical Yearbooks* gave these figures that implied 2.2 million emigrants in the 1990s. A higher allowance was made--a range of 2.4 to 3.3 million emigrants in the 1990s for population projections and assessing 2000 Census coverage (Hollmann et al. 2000; Robinson 2001; INS 2002a, b). This amount of emigration for the 1990s is substantially higher than allowed for the 1980s (Robinson et al. 1993). The recent triennial report for 1995-1997 (INS 2002) noted there could be 250,000 or more foreign-born emigrants and referred to the assumed amount of 220,000 foreign-born emigrants annually for 1995-1997. Population estimates allowed for departures of 2.7 million persons of foreign birth in the 1990s, or nearly one-quarter the amount of the decade's 11.3 million immigrants, including unauthorized migrants, based on extrapolating emigration for recent immigrants from the emigration rates for the pre-1990s foreign-born (Robinson 2001). An ESCAPII report revised this assumption downward to 2.5 million, and subsequent reports sought further corroboration (Mulder 2002 et al., 2003).

For coverage analysis, emigrants are accumulated to birth cohorts by decade. For 2000, the component of emigration was "based completely on estimation, and is subject to uncertainty as to its true size . . . represents emigration of legal residents only" (Robinson et al. 2002:9). An initial amount of 5.5 million emigrants was changed to 5.3 million emigrants over 1960-2000. The empirical work to estimate emigration by decades may be the best available, but its epistemology is separate or divorced from the increasing heterogeneity of the foreign-born population on socioeconomic and political characteristics. Also, the work is flawed in treating the foreign-born emigration and native-born emigration as separate outcomes for a population more mixed on nativity within family and household decisionmaking units of analysis.

New Immigrants, New Immigration Research and the Fallacy of Linear Logic

Precisely who are these leavers? What may be said? What is the portent of this number? Clearly, leavers cannot be counted in the decennial census. These are persons not included in national survey controls or the demographic estimate of the expected population in the 2000 census count. If the demographic estimate was too high, and some of these persons were living here, then the census would have counted persons not expected to be resident. In that case, the count might be greater than the expected population and certainly may appear good relative to the expected population. If this figure were too low, then the census count would not look as good as actually the case because the presumption would be that some emigrants were resident and should have been counted. Overestimation of emigration proved dangerous in the evaluation of 2000

census coverage against the markedly lower U.S. population estimate as of Census Day in early 2001.[5]

Would emigration levels be expected to have increased proportionately to immigration levels for the 1960s to the 1990s? Would emigration rates be expected to be constant over time, implying a rise in emigration as the population at risk increased? How would these proportional arguments handle the special cases of unique waves of immigrants from specific countries? The demand to immigrate to the United States is increasing. On the other hand, the populations in sending countries greatly increased so the rates of emigration declined. This might imply greater selectivity of U.S. immigrants. The visa backlogs may be indicative of higher selectivity as only committed individuals seek to immigrate and as those awaiting visas may be honing their skills as they await their lawful permanent residency.

Gans (1999) described *anticipatory acculturation* as taking place for future U.S. immigrants as they are prospective emigrants in their home countries as they absorb American culture. The strength of commitment to immigrating to the United States and adaptation success may influence the salience of intentions for long-term immigration and settlement as opposed to return migration. This has been demonstrated for Mexican immigrants (Massey and Espinosa 1997). The costs of immigration are greater in waiting time, delayed childbearing, separation from family and labor market adaptation given declines in the manufacturing sector and shift to a service economy. In addition, nation-state shifts to allow their citizens to retain nationality even after taking on U.S. citizenship and the importance of huge volumes of remittances are facilitating

[5] The emigration component was a weakness for the Canadian demographic estimate relative to the 2001 census count (Kerr 2003).

transnational ties as a substitute to return migration. Is it counterintuitive to think emigration has increased, given the highly family-oriented composition and pace of family reunification?

May rates be used for immigration? For fertility, the risk population is restricted to women of childbearing ages. For mortality, the risk population is definable. For emigration, the at-risk population is highly heterogeneous on characteristics affecting the risk of emigration, but studies employing rates have been specific only to country of birth, age, sex, and period of residence. Applications of rate methods for estimating emigration have lacked appropriate specificity, may have been biased in weight given to recent periods, and may be biased by the escalating volume of temporary migration. Relying on recent period of entry as indicating recent immigration level may be grossly imperfect.

In addition, these applications have treated individuals atomistically without accounting for their embeddedness in families, households, and communities. Through social networks, cumulative causation of migration happens that give migration a nonlinearity that is neglected in traditional demographic accounts, leading to underestimation of Mexican migrants in the United States (Massey and Zenteno 1999). Thus, U.S. population projections have always missed the mark on the Hispanic population to which migration contributes. Similarly, linear calculations of U.S. emigration levels are likely to misrepresent that behavior.

Children may or may not immigrate at the same time as their parents and their chances of emigration from the United States are likely to depend on the parental decision to stay or to leave as they cannot stay as minors if parents leave. When child

immigrants remain until adulthood, their adaptation success may be associated with their age at immigration, and a growing literature seeks to illuminate outcomes according to 1.25 generation, 1.5 generation, 1.75 generation, and second generation. Some suggest that the second generation are less likely to emigrate than the first generation (Hirschman, Kasinitz, and De Wind 1999:10), but a fuller investigation of emigration propensities among first, second, and higher generations is essential. Immigrant families are mixed composition by nativity and this means that research designs are necessary that examine emigration decisionmaking by family and household units over time

Modelling Emigration

This review seeks to establish the foundation to guide creation of new data and analytic strategies about emigration or return migration that meet basic criteria of understandability, credibility, and feasibility (Citro and Michael 1995). Several options are reviewed. Our analytic gaze is most decidedly focused on the national horizon. That is to say, this exercise is biased toward the development of concepts, measures, and estimates of emigration that can be incorporated into national population analyses. Illustrations of strategies include multiplicity sampling surveys about residence of relatives, studies of attrition in national surveys, complements to the American Community Survey; statistical possibilities, exit-entry systems, and international census data about American citizens resident and foreign citizens returned from the United States. This review is not intended to be exhaustive of relevant possibilities but seeks to provoke analytical creativity and problem solving.

Tremendous advances happened through demographic modeling of fertility, marriage, divorce, and labor force behavior with the advent of longitudinal surveys and

advanced statistical modeling to account for cohort and period effects (Crimmins 1993). The leap was possible from descriptive studies to theory formation. Immigration research has been bogged down in the empirical pursuits, but that must be ongoing with more advanced analyses to push theory testing and formulation (Portes 1999).

Migration Theory

Emigration from the United States can be considered within theoretical frameworks concerning international migration. For example, the broad rubric of world systems theory predicts movements of persons based on their human capital and economic functions. Some U.S. born workers choose to work abroad for the higher wages and professional advancement. Higher education personnel are desired or needed in Asian countries and countries with American communities where multinational corporations have established facilities. Emigration from origin community, settlement, or emigration from the U.S. or return migration events are shaped according to changing world markets and specific conditions of civil societies. Salvadoran migrants are unlikely to return migrate (Mahler 2001).

From a theoretical standpoint, the neoclassical framework focuses on workers and their calculations, in the aggregate, of the United States as offering more opportunity and minimizing the chances of returning to the origin country. The wage differentials between countries are presumed as used by individuals in calculating the benefits and costs. There is selectivity as to who leaves the origin country and selectivity as to who remains at destination country. The probability of emigration enters into actuarial calculations of the value of a life. The higher levels of education increase the likelihood of returning to the origin country (Borjas and Bratsberg 1996), although this could be

attributable to foreign students returning upon degree completion. Reagan and Olsen pose the emigration condition as suggesting "that return migration occurs if the expected present value of foreign earnings minus moving costs exceeds the maximized expected present value of U.S. earnings, associated with following an optimal path of working and welfare recipiency, plus the option value of being able to return to the home country sometime in the future" (2000:343). Their analysis suggested a relationship between economic incentives and return migration and a disincentive to return. The option value refers to persons with higher education as more likely to have similar options in the home country and more likely to return to the origin country (Reagan and Olsen 2000).

Econometric analyses address how country conditions affect immigration trends. Greenwood and McDowell (1999) sought to explain variation in the U.S. immigration rate across countries and time according to economic advantage, migration costs, source country conditions, U.S. policy, and availability of social programs in origin countries. Source country social program variables explain new immigration, old age programs reduce the rate of U.S. immigration, and unemployment insurance reduces new migration. Later, Clark, Hatton and Williamson (2003) examined immigration for 1972-1998 and found strong fixed effects of distance and proximity in addition to strong effects of U.S. policies and sending country conditions. There was only a weak persistence effect from family ties.

The new household economics recognizes household units as devising strategies for risk minimization and agreeing upon individual members as migrating and investing in origin community, e.g., migradollars (Massey and Parrado 1994; Kanaiupuni and Donato 1999) to support the family and prepare for their arrival. Decisions are short-run

or long-run. Migration decisions are sequential and initial influences for leaving a home community or entering a destination country may deteriorate. The course of migration streams are very much influenced through information exchange via social networks – conduits as to ways of migrating, housing options, work opportunities, and crucial contacts that ease adaptation, help locational choice, and may reduce emigration. Professional workers at the top of scale are most likely to be mobile, multinational, privileged (Sassen 1988). Mid-range professional workers may involve the pioneer individuals (Liu et al. 1991). Low-skilled workers may be mobile and at risk in the dual labor market as some will settle but most are circular migrants.

Feminist perspectives on international migration and transnational processes are exceedingly relevant for conceptualizing emigration and return migration. Lawson has challenged perspectives that view the household as fundamentally local and underscore the significance of intrahousehold process and structure for migration patterns, experience and settlement (Lawson 1998, 2000; see also Silvey, forthcoming). Migration or emigration must be conceptualized as a gendered process and experience (for excellent examples, Boyle 2002; Bailey, Wright, Mountz and Miyares 2002; Chant and Radcliffe 1992).

Research on Migration Intentions and Behavior

Emigration is situated in place, status, past, and future, as is immigration. Some migration traditions may be characterized by a return orientation, as described by Martinez (1999) according to Rubenstein (1982) for the Caribbean migration to Western Europe and North America. Even if individuals may never return to their origin communities, their orientation is such that they build investments in those former homes

and maintain a "presence" from afar. Transnational philanthropy is emergent as immigrant organizations are supporting efforts to promote development and social change (Ly 2004). Ascertaining intentions to stay in the United States or to leave for a residence abroad might be a useful focus. An analogous case is making assumptions for world population projections on the basis of survey evidence of fertility intentions (United Nations 2003, 2001). In measuring emigration with simultaneity, there is a risk of individuals misclassifying their migration behavior as emigration when they later return or failing to classify this leaving as emigration when they ultimately do not return.

The 1976 recommendations on international migration statistics emphasized using questions about intended stay in or absence from in the country of arrival or departure and their previous presence to allow classification as immigrant or emigrant (United Nations 1998, 1976). These would be administered to travelers at points of entry or departure, at the border, and others as appropriate. The foreigners may not then know the circumstances surrounding his or her return such as ability to renew the visa or permit while abroad. The United Kingdom's International Passenger Survey is an excellent example of such a strategy that is workable especially with scrutiny and improvements on the basis of expert judgment and supplementary data sources. It is a continuous voluntary survey that covers the principal air, sex, and channel tunnel routes between the United Kingdom and the rest of the world. Questions cover age, sex, marital status, citizenship, and country of last or next residence. Problems arose, e.g., with denied asylees leaving for other countries. U.S. agencies generally presume that approved asylees will not leave the United States, but a contemporary exception may be Colombian

asylees returning to Colombia despite continuing difficulties there (Garcia, Woodrow-Lafield, and Ramanujan 2004).

For the United Kingdom, overestimation of net international migration for the 1990s proved to be the problem in 2001 when the census count was well below the independent estimate. The conclusion is the critical factor is emigration as greater than allowed in past population estimates. Refinement of measures for net international migration in the 1990s has incorporated better assumptions and statistics for out-migration of "migrant switchers" who decide to leave sooner than the one year or more that they initially indicated, "visitor switchers" who leave for other countries, and rejected asylum applicants who leave for other countries (Office of National Statistics 2003). Another example is the need to disaggregate change due to net immigration as independent validation given that national surveys showed lower net international migration over 2002-2003 than for the previous two years.

Modeling individuals' intentions about emigration with more background characteristics and time series data would be a way of refining the usefulness of such surveys. Surveys to acquire retrospective data are subject to misclassification error in that some persons identified as emigrants may not continue in that status and my return to the country of origin. A continuous measurement strategy would provide a basis for maximizing this source of bias. A new resource is available through a question on Mexico's census about whether any household members were international migrants in the past five years.

Data Collection and Estimation

Longitudinal Surveys

A major statistical undertaking is the American Community Survey as a vehicle for gathering detailed characteristics in place of the long-form questionnaire for a sample of the population (U.S. Census Bureau 2003). The ACS may represent a timely way of identifying foreign-born communities and coordinating multiplicity sampling surveys for housing units with changes in members over the three-year interval, as shown in similar surveys for counties and communities likely to show loss of residents (Smith and McCarty 1997). The ACS sample is larger than the Current Population Survey, so the sampling variability would be lesser.

A strategy for a dynamic model of emigration is long overdue. Plans for reengineering the 2010 census lend urgency to attention to emigration because the accuracy of independent population controls may become more important for the accuracy of detailed socioeconomic characteristics that have traditionally stemmed from the questionnaire administered to a sample of the U.S. population. Opportunity may well coincide with responsibilities on measuring emigration, as reengineering the 2010 census and implementing the American Community Survey may afford ways to improve the population estimates, nationally and for local areas.

A dynamic strategy for studying emigration may be implicit to the New Immigrant Survey, a long awaited longitudinal survey of 11,000 persons admitted for lawful permanent residence in 2003-2004. Detailed characteristics at individual-level afford advantages over studies of administrative data (Jasso and Rosenzweig 1982; Liang 1993). Its initiation suggests possibilities for identifying those who later emigrate abroad, so long as those entering into survey attrition may be successfully assigned to death, internal migration, or emigration and there are successful contacts. Modeling

propensities to emigrate from the United States would be informative as to immigrant adaptation and settlement. This was accomplished successfully with the National Longitudinal Survey of Youth, 1979 cohort (Reagan and Olsen 2000). Lindstrom (1996) parametric hazard model of emigration epitomizes the best analytic strategy given data on initial characteristics, post-migration experiences, life course events, and transnational ties. Some face severe setbacks on arriving and there are multiple decision points on staying or returning.

Multiplicity Sampling Surveys

Cross-sectional household surveys of consanguineal family networks have great potential in capturing the magnitude of emigration and its dynamics through a retrospective component (Passel and Peck 1982; Passel and Woodrow 1989; Woodrow-Lafield 1996; Woodrow 1991; Robinson et al. 1993). Early analyses hinted at the range of uncertainty as to emigration levels and this is an alternative strategy for estimating emigration although still regarded as innovative and experimental (Kraly 1994). For each respondent, the number and residence of consanguineal relatives are ascertained, as well as details about any who live in another country after having once lived in the United States. Another 1991 survey was never analyzed despite relevance for assessing return migration to Mexico in 1987-1991 (Bean and Woodrow-Lafield 1995). There seems to have been little official consideration of reinstating the multiplicity surveys for measuring emigration since the 1980s. Given bias introduced by unauthorized migration for intercensal survival techniques, "the best prospect for producing statistics on emigration in the future is the multiplicity approach tested by the Census Bureau in the July 1987 CPS" (Subcommittee on Migration Statistics 1988: 48).

Quantifying a rare population is possible with multiplicity sampling approaches, as illustrated by Woodrow-Lafield (1996) and Zaba (1985, 1987) for emigration. The direct survey estimate of emigrants was comparable to the estimated number of emigrants surviving according to intercensal calculations and other studies. Furthermore, survey estimates for Mexicans having returned to Mexico over 1987-1988 demonstrated an increase that was plausible after many formerly unauthorized Mexican migrants were able to apply for temporary status and gain travel documents following the Immigration Reform and Control Act of 1986 (Woodrow-Lafield 1996). Also, some unauthorized migrants may have left due to employer sanctions.

What can be gleaned from the example of the 1987-1989 multiplicity sampling surveys on emigrants and Americans living overseas for understanding the feasibility of multiplicity sampling surveys this decade and beyond? The foreign-born population has increased from 19.8 million to about 35 million, but the emigrant population may not have increased commensurately. Composition is altered as two-thirds entered in 1980-2000, reflecting the dwindling cohorts from early European immigration.

The challenge is to use the direct estimates of emigration to derive indirect estimates of total emigration for the survey universe. The crucial flaw is underestimation of emigration levels through omission of households that migrated in their entirety (Woodrow-Lafield 1996; United Nations 1998; Zaba 1987). This error would also imply biases for estimated coefficients in modeling the probability of emigration. As reviewed in United Nations (1998), information may be gathered about household members and response error on this universe is considered too problematic to use this approach to estimate emigration. In the case of Ireland, multiplicity surveys to measure Irish abroad

did not provide useful statistics (Garvey and McGuire 1990). The explanation lay in parental reluctance to recognize children as having left to reside permanently in another country. The strength of weak ties may lead to overestimating emigration. A preferable criterion is a consanguineal rule of parents, siblings, and children.

The multiplicity sampling survey approach would be particularly validated by compilation of foreign census data and other sources on American citizens resident in other countries. Comparability is often more complicated than expected, but excellent examples exist. In addition to a focus on Mexico-United States migration, the Binational Migration Study noted U.S.-Mexico migration. As of 1993, there were 522,274 American citizens residing in Mexico, excluding government employees and military (Bustamante, Jasso, Taylor, and Trigueros Legarreta: 160). The 2000 Mexican census revealed 600,000 American citizens as living in Mexico, but this is believed to underrepresent the population. The constitution of Mexico prohibits foreign citizens from land ownership on the sea, but a change was made in 1997 to allow foreign ownership through a Mexican bank trustee. By 2002, American investment in Mexico had surged especially in the Baja Peninsula where possibly more than 100,000 Americans, especially Southern Californians, sought a lifestyle change (Weiner 2003).

Indirect Estimation Models

Estimates of emigration may be generated through indirect estimation models that combine three approaches: multiregional demographic methods, model migration schedules, and associating emigration with immigration, as pioneered by Rogers and Raymer (1999). They drew on existing emigrant age profiles for 1960-1970 and 1980-1990 from Keely and Kraly (1978) and Ahmed and Robinson (1994) and interpolated to

derive emigrant age compositions for all five-year periods over 1950-1990. The beginning assumption on emigration level was of 200,000 foreign-born emigrants annually in 1950-55 and period-to-period change was according to change in immigration levels. Thus, Rogers and Raymer developed age-specific emigration rates over 1950-1955 to 1985-1990. In assessing their work, these authors noted that emigration levels increased over this forty- year period, which is plausible given the assumption linking emigration with immigration. They further noted their cumulative emigration is, however, less than the combined total from several studies (3.46 million versus 4.45 million, respectively), and concluded the emigration results were "usable and accurate" (Rogers and Raymer 1999:205).

Entry/Exit Systems

Reengineering of entry and exit systems to meet national security needs might lead to benefits for migration statistics systems. At first glance, a reinstatement of the Alien Address Registration Program might have seemed possible in 2002. That program operated on a voluntary basis and yielded data regarded as deficient, but analysts drew on that resource for innovative estimation of unauthorized residents in 1980 and extrapolated for later dates (Warren and Passel 1987; Passel and Woodrow 1987). Although a resumption of the registration does not seem feasible, various possibilities may help. Ironically, the special registration required of young men from certain Mid-Eastern countries created such anxieties that many Pakistanis emigrated to Canada and others may have returned to their home countries.

Linking of nonimmigrant arrival and departure records maintained in the Office of Immigration Statistics (Office of Management, Department of Homeland Security)

continues to hold potential for measurement of length of stay for persons admitted to the United States on nonimmigrant visas. This approach has been used in the estimation of long-term immigration (Kraly and Warren 1991, 1992) and could be implemented on a continuous basis. If developed as a comprehensive statistical and research program concerning the demographic characteristics of U.S. immigration, the administrative information systems of the Office of Immigration Statistics have the capacity to generate valuable information on the dynamics and characteristics of short and long-term immigration and emigration. That is, of course, a sweeping statement with nontrivial implications for the federal statistical programs regarding international migration.

Record Linkage and Advanced Statistical Techniques

Record linkage procedures and statistical methodologies are promising for understanding emigration of immigrants. Although mere suggestions have ever been posed, record linkage of immigrant records and census or survey records would identify those lawful residents remaining in the United States.

Record linkage of social security earnings records with Current Population Survey and Survey of Income and Program Participation data is the basis for new studies that are improved assessments of immigrant earnings over time without bias from emigration selectivity (Duleep and Dowhan 2002).

The Longitudinal Immigration Database of Statistics Canada results from record linkage of immigrant records with tax filings. The database covers 1980 to 2000 and the "disappearing" of immigrants who ceased filing taxes may be attributed to emigration mortality, or non-required status (Dryburgh and Kelly 2003). They suggest the highest skilled immigrants as most likely to emigrate. However, only about 4 percent of

immigrants emigrated. Refugees were unlikely to emigrate, as would be expected. This may be very workable for Canada with employment skills crucial for landed immigrant status. One consideration is that loss of the highest skilled may simply reflect global migration of successful professionals, and Canada may have been an intermediate move on the way to the United States (Greenwood et al.).

Techniques for statistically controlling for unobserved heterogeneity may help with research on emigration although the issues are complex and there is controversy as to whether the techniques should be employed (Manton, Singer, and Woodbury 1992; Trussell, Rodriguez and Vaughan 1992; Montgomery 1992; Heckman and Walker 1992; Trussell and Richards 1985; Heckman and Singer 1984; Trussell 1992; Courgeau and Lelievre 1992; Murphy 1992).

In the situation of immigrant records linked with naturalization records (Woodrow-Lafield et al. 2004), hazards models on duration to naturalization, without explicit controls for mortality or emigration as attrition, would understate naturalization and understate certain covariate effects. Administrative data are intrinsically subject to deficiencies and lack of current characteristics including current status as living or U.S. resident. Models with controls for unobserved heterogeneity are usually better than those without for modeling duration to naturalization (Woodrow-Lafield et al. 2003). These seem to capture the influence of variables relating to post-immigration characteristics of socioeconomic change and emigration as well as unmeasured initial characteristics, such as human capital, social capital, selectivity, secured employment, or assets. This approach is rigorous in specifying the hazard function, but technological advances have greatly eased the task.

A Program of Emigration Research

Will there be a national debate on U.S. immigration policy? On the one hand, there is an ongoing debate about skill levels of contemporary immigrants and economic assimilation within labor markets and educational advancement of immigrant generations. Future population growth is shaped extensively from immigration from developing countries to which immigrants may be less likely to return. Certain restriction-oriented groups assert that cessation or reductions to immigrant numbers should be made. Yet there are bases for substantial emigration of earlier immigrant cohorts under scenarios of economic growth in origin economies and expansion of social security reciprocity agreements abroad. One scholar makes a particularly optimistic conclusion about how recent Hispanic immigrants are faring in American society in progress toward native-born levels. Clearly, an agenda for a program of emigration studies is timely.

1. Migration theory: The illustrations of possible approaches to the conceptualization and measurement of U.S. emigration are presented with a deliberate recognition of the role of migration theory as a critical foundation. Statistical and research infrastructure regarding international migration to and from the United States must be built on theoretical bedrock and must be also responsive to emerging theoretical challenges and debates. Interdisciplinarity, transdisciplinarity and cross-disciplinarity should characterize our efforts for theory to inform measurement.

2. The Use of Emigration Data: In the early sections of this paper, we have outlined the importance of knowing more about emigration from the United

States. The focus has been largely on the international movements of U.S. immigrants, aliens and the foreign born. In the current era of heightened concerns regarding homeland security, it is critical that population scientists engaged in national research on the international migration and mobility be vigilant about the potential use of the information which is collected and of the analyses that are generated (cf. Seltzer and Anderson 2001).

3. Creative Coordination (and the metaphor of looms and patchwork): Federal statistical resources regarding international migration and mobility exist as many pieces and threads, but lack weaving and stitching. There will be a critical need for sustained coordination across federal and regional agencies and organizations to develop an integration of federal statistical programs in order to tap the potential of these systems for data linkage and estimation. This will require organizational structure and commitment by population scientists, but consider the quilting "bee" in which a variety of people participate in the connection of pieces and threads. The implementation of a program of emigration research will benefit from contributions and leadership drawing widely from population scientists and migration scholars within government, academic institutions, national and international research institutes and public policy foundations.

4. Emigration Estimation as Creative Problem-Solving: Just as creativity and commitment should characterize the weaving or building of a statistical infrastructure regarding emigration, so must researchers be creative in adapting and adopting a range of analytic strategies and approaches for

emigration measurement and estimation. The various illustrations that have been presented above are an attempt to recognize the potential in nontraditional methodologies for emigration research.

5. International Collaboration: U.S. emigration research projects and initiatives will benefit from exchange with international agencies as well as other national statistical offices regarding statistical concepts and definitions, approaches to measurement and data collection (United Nations 1998, 1976).

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