

McKenzie, David

Working Paper

Learning about migration through experiments

CRAM Discussion Paper Series, No. 07/12

Provided in Cooperation with:

Rockwool Foundation Berlin (RF Berlin)

Suggested Citation: McKenzie, David (2012) : Learning about migration through experiments, CRAM Discussion Paper Series, No. 07/12, Centre for Research & Analysis of Migration (CRAM), Department of Economics, University College London, London

This Version is available at:

<https://hdl.handle.net/10419/295406>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



Centre for Research
and Analysis
of Migration

CReAM

Discussion Paper Series

CDP No 07/12

Learning about migration through
experiments

David McKenzie

Learning about migration through experiments

David McKenzie*

* World Bank

Non-Technical Abstract

International migration is one of the most important choices that individuals and households in poor countries can make to increase their lifetime wellbeing. This choice presents a severe challenge to researchers attempting to learn the impacts of migration, since those who choose to move typically differ in a host of observable and unobservable ways from those who choose to stay behind. This paper provides an overview of a new experimental literature which uses policy experiments and researcher-designed experiments to overcome these selection issues. Particular emphasis is placed on discussing the different data-gathering strategies needed for conducting policy experiments. Experimental migration research as a field is still in its nascent stages, and there appears to be plenty of scope for both policymakers and researchers to design new experiments going forward – it is hoped that the summary here will aid researchers and policymakers in this purpose.

Keywords: Migration, Experiments, Selection, Data Gathering Methods.

Learning about migration through experiments^{*}

David McKenzie, *World Bank*

Abstract

International migration is one of the most important choices that individuals and households in poor countries can make to increase their lifetime wellbeing. This choice presents a severe challenge to researchers attempting to learn the impacts of migration, since those who choose to move typically differ in a host of observable and unobservable ways from those who choose to stay behind. This paper provides an overview of a new experimental literature which uses policy experiments and researcher-designed experiments to overcome these selection issues. Particular emphasis is placed on discussing the different data-gathering strategies needed for conducting policy experiments. Experimental migration research as a field is still in its nascent stages, and there appears to be plenty of scope for both policymakers and researchers to design new experiments going forward – it is hoped that the summary here will aid researchers and policymakers in this purpose.

Keywords: Migration, Experiments, Selection, Data Gathering Methods.

^{*} This chapter draws on lessons learned from joint work on several projects with John Gibson, Steven Stillman and Dean Yang. I thank them without implication.

1. Introduction

Emigrating to a richer country offers the possibility for both low and high-skilled individuals to dramatically increase their incomes (Clemens et al, 2009; McKenzie et al. 2011; Gibson and McKenzie, 2011). Yet despite the massive gains in income possible from migrating, the vast majority of people never migrate from their country of birth. A large part of the migration literature is devoted to trying to explain what determines the migration decision. The overwhelming conclusion of this work is that migrants are special – they differ in some combination of motivation, skills, wealth, drive, ambition, risk preferences, access to networks, entrepreneurial attitude, and a plethora of other attributes from the rest of the population who don't migrate.

This self-selection of migrants presents a severe challenge for researchers attempting to measure the impacts of migration or remittances on individuals, households or communities. For example, suppose we observe that households with a migrant abroad are more likely to own a business. This may reflect the income effect of remittances or the knowledge gained through experience abroad, but could just as easily reflect that these households are ones with a greater entrepreneurial drive, better quality education, or more wealth. Since it is unlikely that we will be able to measure and control for all the possible characteristics which might differ, comparisons of migrant and non-migrant households are unlikely to be able to give convincing estimates of the impacts of migration.

Experiments offer the potential to overcome this challenge, offering comparisons where the only reason one individual or household engages in migration and another does not is purely chance, and not the result of all of these other determinants of migration that we worry about. The purpose of this chapter is to introduce readers to different types of migration experiments, and to discuss the data gathering approaches needed in order to carry out research using them. It draws on McKenzie and Yang (2012), who also provide a recent overview of experimental approaches in migration, but builds on this by including newer research and by discussing the different possibilities for data gathering under different types of experiments. I begin with a short recap of how experiments can solve the selection problem, and then discuss two types of

experiments - policy lotteries, and researcher designed experiments -and the different approaches that are possible for gathering data in such cases.

2. How do experiments solve the selection problem?

A large number of papers in the migration literature attempt to measure the causal impact of migration or migrating on various outcomes of interest. In the immigration literature this typically involves estimating the impact of immigration on wages or employment rates of natives, while in the development literature it often involves estimating the impact of migrating on the welfare of the migrant or of his or her remaining family. A standard approach is to specify a linear regression model for individual i , relating an outcome like poverty or income, Y_i , to whether or not that individual engages in international migration, M_i , and a set of observed (exogenous) characteristics of the individual X_i :

$$Y_i = \beta M_i + \gamma' X_i + \varepsilon_i. \quad (1)$$

The standard concern is that self-selection into migration leads to biased estimates.¹ In particular, one worries that there are unobserved attributes, such as personality type, entrepreneurial ability, and ambition which are correlated with both the decision of whether or not to migrate, and the income that the individual earns. That is, we are concerned that:

$$E(M_i \varepsilon_i | X_i) \neq 0. \quad (2)$$

We require the unobserved determinants of the outcome of interest (income or poverty in our example) to be uncorrelated with whether or not an individual migrates once we have conditioned on the observable characteristics of these individuals. But in the absence of experimental variation in migration, this assumption is unlikely to hold. Indeed, the seminal migration selectivity model of Borjas (1987) has migrants deciding whether or not to migrate in part on the basis of the ε_i they would expect to have at home versus abroad. The existing literature has typically focused on trying to address this selectivity using a variety of non-experimental methods. This includes assuming selection on observables (Adams, 1998),

¹ I focus here on the individual selection problem of whether or not to migrate. When the household is the unit of analysis, there is also the additional selection issue of how many household members migrate. In addition, depending on the specification of interest, selection into the duration of migration, and into whether or not individuals engage in return migration can lead to a triple- or quadruple-selectivity. See Gibson et al. (2011a) for more discussion of these cases and the role of experiments in overcoming them.

estimating parametric selection correction models (Barham and Boucher, 1998; Acosta et al, 2007), using propensity-score matching (Esquivel and Huerta-Pineda, 2007), and instrumental variables methods (Brown and Leevs, 2007; McKenzie and Rapoport, 2007). However, it is easy to question the identification assumptions underlying these non-experimental approaches given that selection is likely to be on unobservable characteristics in addition to observables, and the difficulties of obtaining plausible instrumental variables.

Equation (2) will only hold if the only reason one person migrates and another does not is random (conditional on observed characteristics). Ideally if we could randomly choose some people to migrate and others not to, this would be the case. The ideal experiment does just that. For example, suppose that individuals wishing to migrate enter a lottery, with all those who have their name in the lottery migrating and none of those who lose the lottery being able to migrate. Then linear regression of equation (1), with or without the X controls, will give a consistent estimate of the causal impact of migration for the people who enter this migration lottery.

However, in practice, what typically happens is that some of those who win a migration lottery (or who are assigned to “treatment” in some other migration experiment) do not migrate or take-up the treatment, and some of those who lose the lottery find other ways of migrating. In such a case, linear estimation of equation (1) will no longer give a consistent estimate of the impact of migration, but the outcome of the lottery (or the assignment to treatment in other migration experiments) can be used as an instrumental variable for migration. If the impact of migration varies across individuals, then what will be identified is the local average treatment effect – the effect of migrating for someone who would migrate if they won the lottery and would not migrate otherwise.

3. Types of migration experiments

Policy Experiments

Several countries use visa lotteries to choose among numerous applicants desiring to immigrate through a particular migration category that has a fixed quota. The most famous of these is the United States Diversity Visa Lottery (commonly known as the Green Card Lottery), which each year makes available 50,000 visas, to be drawn randomly among eligible applications from countries with low rates of immigration to the United States. For the 2010

lottery, over 13.6 million qualified entries were received, with 102,800 applicants drawn as winners, under the assumption that half of these would migrate.² New work by Mergo (2011) uses this lottery to estimate the impact of having a family member move to the United States on remaining household members in Ethiopia. Comparing households with diversity visa winners to households with members who applied to this program but lost the lottery, he finds families of lottery winners to have more consumer durables, to spend more on food, and to be heavier.

In addition to the Diversity Visa lottery, the United States has used migrant lotteries on several other occasions. One example occurs with the H1-B visa category, which is an admission channel for high-skilled workers such as IT workers to work in the United States. There is a cap on the number of people who can enter through this channel each year. Although applications are processed on a first-come, first-served basis, in 2007 and 2008 so many applications were received on the opening days that a lottery was used to select which applications to process. Clemens (2010) uses this lottery to examine the impact of migrating to the United States on workers from an Indian software company. He finds moving outside India results in a sixfold increase in wages of workers using the same technology to produce a highly tradeable good. The U.S. also had a lottery for Cubans in the mid 1990s³, which to my knowledge has never been used for research.

The first research studies to use migration policy experiments used much smaller lottery programs operated by New Zealand. The Pacific Access Category (PAC) allows for annual quotas of 250 Tongans, 75 citizens from Kiribati and 75 citizens from Tuvalu to migrate as permanent residents to New Zealand through applying to a random ballot (in addition to those going through the standard family reunification and skilled migrant categories).⁴ A similar policy, called the Samoan Quota, provides for 1100 Samoans per year, with individuals again chosen by random ballot. New Zealand also used a lottery to allocate places in its Family Quota and Refugee Family Quota Categories in the early 2000s.⁵

In a series of papers with John Gibson and Steven Stillman, I have examined the impacts of migration through the PAC on Tongans and their families. We find that Tongans moving to New

² Source: http://travel.state.gov/visa/immigrants/types/types_4574.html [accessed February 26, 2010].

³ <http://havana.usint.gov/media/pdfs/lottery.pdf> [accessed March 1, 2010].

⁴ Prior to the December 2006 coup, the PAC also contained an additional annual quota of 250 citizens per year for Fiji.

⁵ These categories have now been replaced, but New Zealand still uses a random ballot to fill residual places in its Refugee Family Support Category which provides a means for refugees to sponsor parents, adult siblings or grandparents into New Zealand.

Zealand experience a 263 percent increase in income within the first year of moving (McKenzie et al. 2010), a gain much larger than the male migrants expect (McKenzie et al. 2012), and that the migrants also benefit in terms of improved mental health (Stillman et al. 2009). However, despite an increase in overall mental health, we do find rises in stress, which coupled with an increase in dietary sodium, is found to cause an increase in hypertension (Gibson et al, 2012).

We find a divergence in diet and child health outcomes between children who move with the principal migrants and children who remain in Tonga in the household that the migrant left behind. Children who migrate experience increases in weight-for-age and height-for-age, and richer diets, while children who remain behind while other household members migrate experience worse diets and some declines in anthropometric measures (Gibson et al. 2011b, Stillman et al, 2012). Looking at the household members left behind (who tend to be the parents or siblings of the principal migrant and their children), we find the short-run overall impact of migration to be largely negative in terms of resource availability, with the remaining household members experiencing a short-term increase in poverty (McKenzie et al, 2007), drop in per-capita income, less access to durable goods and financial services, and a more basic diet (Gibson et al, 2011c). Moreover, when we compare the results to those we would obtain using non-experimental methods applied to a sample of non-applicants, we find evidence that selection matters and that non-experimental methods would give erroneous conclusions in some cases. For example, in Gibson et al. (2011c) we show that non-experimental estimation would lead one to conclude that emigration has made remaining household members wealthier, whereas the lottery evidence shows the opposite result.

The impacts of migration through the Samoan Quota on remaining household members are examined in Gibson et al. (2011a). In contrast to the short-run increase in poverty for remaining members in Tonga, we find migration to have reduced poverty of remaining household members in Samoa. This difference appears to stem in part from different intra-household selection in the two countries: in Tonga the movers earned twice the weekly income as the stayers did before migration, whereas in Samoa the individuals who moved were actually earning slightly less than the individuals within the same household that stayed. As a result Samoan households rely relatively less on the labor earnings of the potential migrants before migration, so suffer less opportunity cost of their absence in terms of these foregone labor earnings.

Few countries at present use lottery systems to decide who can immigrate. However, given the massive excess demand for migration into many countries worldwide, a lottery system for choosing which applications to process provides one fair and equitable mechanism for countries to process such applications, and so such systems may be looked at by other countries in the future.

However, policy lotteries need not just be restricted to visa lotteries. There are many other policies directed towards emigrants and immigrants that could also be ripe for experimentation in order to help policymakers better understand what works and what doesn't, and how they can improve these policies. For example, Chin et al. (2010) examine the impact of providing Mexican in the U.S. with assistance in obtaining the *matricula consular*, an alternative form of identification that can be used in opening a U.S. bank account. They find that receiving this assistance led to increases in opening of U.S. bank accounts, higher savings to the U.S., and reduced remittances to Mexico. Joonas and Nekby (2012) estimate the impact of intensive counseling and coaching to help new immigrants in Sweden find work. This was implemented as a trial program in some municipalities, with some immigrants randomly assigned to receive the intensive counseling and others to receive the more standard service. They find the intensive counseling does help immigrants in finding employment, but the costs of the program appear to outweigh the benefits.

As another example, financial literacy training is becoming a standard part of pre-departure training for temporary workers in a number of countries.⁶ However, there are a large number of open questions about what such training should contain (e.g. should it focus on remittance-specific literacy, or concentrate more on standard financial literacy concepts such as the importance of saving?), and to whom it should be directed. Gibson et al. (2012) test the impact of financial literacy training focused around comparing the costs of remitting via different channels on different immigrant groups in New Zealand and Australia. They find training improves knowledge and leads to some changes in information-seeking behavior and avoidance of switching to more expensive methods, but does not change the amount remitted or the

⁶ For example, some basic elements of how to send remittances and the importance of saving are included in the pre-departure seminars that are mandatory for temporary contract workers from the Philippines. The New Zealand and Australian seasonal worker programs now have some financial literacy efforts directed at seasonal workers participating in these programs.

frequency of remitting. In an ongoing study in Indonesia, I am working with Bilal Zia and staff from the World Bank's Indonesia country office to test the effect of giving training to the migrant worker, to the remittance recipient remaining in Indonesia, or to both. Preliminary results show much greater impacts on savings of the remaining household when training is given to the family member and migrant together than when it is just given to the migrant.

One can equally imagine experiments being used to try out a number of other policy initiatives before deciding whether to scale them up. For example, Mexico's 3 for 1 program to stimulate the diaspora to contribute to community projects through providing matching funds is a program that many other countries appear to be curious about, but for which there is currently a lack of rigorous evidence. A country which is thinking about implementing such a program could implement it experimentally at first, to see what the impacts are, before expanding to its entire migrant population.

Researcher-designed experiments

In addition to working with Governments, Banks, or NGOs to evaluate the impacts of their policies or products, researchers also engage in a second kind of experiment, where the fundamental goal is to test some underlying theory about migrant decision-making or about the channels through which migration may have an impact. In these cases the intervention itself is typically designed by, and in some cases also implemented by, the researcher and their field team. In these cases the intervention need not be a policy that is being considered or that is likely to be implemented wide-scale, but rather may be a mechanism to learn about the migration process.

A first example of this type of experiment is Ashraf et al. (2011), who are interested in the question of whether migrants will remit more if they have more control over how the remittances are used. They worked with a bank serving Salvadorian migrants in the Washington D.C. area to design new savings accounts in El Salvador which could be either jointly owned by the remittance recipient and migrant, or solely owned by the migrant. These are randomly offered to some migrants, while others get assistance opening an account only in the name of the remittance recipient, and a control group gets offered no new product. They find that migrants

remit more and saved more in El Salvador when given control over these accounts.⁷ In a cross-randomized experiment on the same subject pool, Aycinena et al. (2011) randomly vary the cost of remitting faced by the Salvadorian migrants in order to estimate the sensitivity of remittance flows to the cost of remitting. They find reductions in costs lead migrants to remit more frequently, increasing the total amount remitted.

Bryan et al. (2011) provide a second example, conducting experiments in Bangladesh to understand the constraints to seasonal migration during the hungry season. They randomly assigned 100 villages to four groups: a control group, a group which were provided information on the types of jobs available at different destinations and typical wages for these jobs, a group which were offered cash at the origin conditional on migration, and a group which were offered a zero-interest loan to pay back at the end of the hungry season. They find no impact of information alone, but that both the cash and credit treatments led to large increases in seasonal migration. In a follow-up experiment on the same group, they also offered a loan coupled with insurance, which conditioned loan payback on rainfall conditions at destination. They find households who are exposed to the risk that the insurance covers are more likely to migrate if offered this insurance, which they take as evidence that risk aversion is partially responsible for a failure of individuals to migrate to take advantage of higher expected earnings.

There are several other ongoing researcher-designed experiments aiming to understand different aspects of the migrant process. Catia Batista and Gaia Narcisco are testing the role of communication with the origin country on the remitting and return decisions of immigrants in Ireland by randomly providing some immigrants with free calls home. Together with Emily Beam and Dean Yang, I am conducting an experiment in the Philippines designed to disentangle the roles of information constraints, financial constraints, job websites and passport help in helping potential migrants find jobs abroad. There are a number of other ongoing experiments focused on different financial products for remitters and their families. Yet there are still many aspects of the migration process for which no experiments exist, suggesting plenty of opportunities for creative researchers to design them.

4. Data gathering approaches for migration experiments

⁷ Not all efforts to increase savings by remittance receivers have succeeded. For example, Karlan and Mullainathan (2011) find no impact of an emergency savings account marketed to remittance receivers in Mexico.

Data and policy experiments

As discussed above, visa lotteries provide an exciting opportunity to obtain selection-free estimates of the impacts of migration. But using these lotteries requires challenging data collection. Several approaches have been used in the literature, which differ in the questions they enable one to answer, the extent to which Government permission is required, and the amount of surveying and tracking needed.

A first approach is to use administrative data on lottery entrants to identify lottery winners and losers, and then tracking these individuals in order to interview winners who migrate in the destination country, and lottery losers, remaining family of migrating lottery winners, and lottery winners who end up not migrating in the home country. This is the approach used for the studies of Tongans migrating to New Zealand through the PAC. It requires convincing the immigration department to allow access to the raw entrant data, which was obtained in the New Zealand case after signing appropriate confidentiality agreements, but which researchers have yet to be able to do with U.S. authorities. It also requires that the lottery application forms contain sufficient information to enable tracking of lottery applicants, which can be particularly difficult for the winning migrants who are moving away from the address contained on their application form.

In the New Zealand case we were able through our data agreement to link applicant records to arrival cards filled out by migrants upon arriving in New Zealand that had their first New Zealand address listed, and together with also collecting contact information from remaining family members in Tonga, used this to track down migrants in New Zealand. Even still, we needed to supplement this with telephone book searches and the use of community networks to help track the winners. An alternative approach would be to do this prospectively, interviewing migrant lottery applicants a short time after submitting their lottery applications, before anyone has migrated, and then using this initial contact to put in place tracking mechanisms to allow them to be found abroad. The disadvantage of this is that it requires a much longer time frame and multiple rounds of surveying, both of which make it more expensive.

If migration is temporary and of a pre-defined nature, data collection becomes a lot easier, since both lottery winners and losers can be interviewed in the origin country, after the time of return. Moreover, then permission may be required from the sending country authorities, rather

than from the receiving country immigration department. Clingingsmith et al. (2009) use this approach to measure the impact of Pakistanis going to Mecca. They obtained a list of applicants to the lottery that Pakistan uses to allocate Hajj visas, and interviewed people 6-9 months after the initial lottery, when they had returned to their own homes. However, this appears to be a rather special case at present, given that I do not know of any temporary worker programs that allocate visas by lottery.

A second approach attempts to locate households with lottery winners and losers through a survey based exclusively in the migrant sending country. This allows for estimation of the impacts on remaining family members, but not the impacts on the migrants themselves. In cases where either lots of people apply for the visa lottery, or it is known where people are applying from, this approach can be used without needing to get administrative data on lottery applicants. This is the approach used by Gibson et al. (2011a) in studying Samoan households with migrants going to New Zealand through the Samoan Quota. Given the large number of households which apply for this quota, a representative random sample of households was able to locate enough lottery winner and lottery loser households to enable analysis. A related approach is used by Mergo (2011), who obtains a list of Diversity Visa lottery winners from the Ethiopian post office, and then, given the large number of households that participate in this lottery, obtains a random sample of lottery losers through stratified random sampling.

A final approach, which is the least expensive, but also the most limited in terms of the questions it can permit answering, is the approach used by Clemens (2011). Since getting data on H1-B applicants from the U.S. authorities has not proven successful to date, he obtains personnel records from a large Indian software firm that supplies large number of applicants to this lottery. Using the firm's internal administrative records he is then able to get basic data on work outcomes for those who are successful and those who were not successful in the H1-B lottery.

Two key issues to consider in data collection of visa lotteries using any of these approaches is the importance of collecting data on which years people applied to the lottery if they are allowed to enter in multiple years, and data on who in the household applies and who would be eligible to migrate if the applicant were successful. If several years worth of application rounds are considered, then households who enter in multiple years will have a greater chance of winning at least once than households who enter only once. If the years that the household enters

the lottery are known, one can condition on this in estimation (see Abdulkadiroglu et al., 2009). Typically the visa rules dictate which members are allowed to move with the winning lottery entrant (usually their spouse and children, but not siblings and parents), which can then be used to figure out which individuals in lottery loser households would have remained in the origin country even in the case that the household had won the lottery.

An important data issue for future work is to try and better measure intra-household allocation of consumption (and other resources) in migrant households. For example, if we see that per-capita consumption falls when migrants leave, it may reflect that those who remain in the home country are becoming worse off, but it could also just reflect that the migrants were the hungry ones in the households or were the people who otherwise consumed more than an equal share of household resources.

Data and researcher-led experiments

Data gathering approaches for researcher-led experiments are generally similar to those for many other randomized experiments in development, with researchers surveying a targeted population, implementing an intervention, and then using follow-up data that they either collect through survey or from administrative records of a partner organization like a bank. However, there are a couple of issues more specific to migration experiments that are worth discussing.

The first issue is that in most destination countries, migrants constitute a small proportion of the overall population, particularly once one focuses on immigrants from a particular country of origin. This raises the difficult issue of how to obtain a sample of migrants. McKenzie and Mistiaen (2009) compare three different methods of surveying migrants in Brazil: a representative sample based on door-to-door listing, a snowball sampling approach, and an intercept-point sampling method which samples migrants at locations where migrants from a particular community are known to congregate. They find that both the snowball and intercept point methods tend to oversample individuals with stronger ties to the home community relative to the much more expensive comprehensive listing approach.

Existing researcher-led experiments have typically relied on intercept point or convenience sampling methods. For example, Ashraf et al. (2011) enrolled individuals in their study by surveying at the El Salvador consulate office in Washington. Such experiments still have internal

validity, providing experimentally identified results for the population of individuals who can be found using such a sampling approach. This may be sufficient for research which intends to provide a proof of concept (e.g. that providing a means of control over remittances affects remitting behavior for *some* group of people). However, it makes it harder to argue for external validity, since the types of migrants not present in these convenience or intercept-point samples may be quite different in both characteristics and behaviors from the migrants who are present. Nevertheless, given the high cost of obtaining fully representative samples in many locations, experiments are likely to have to rely on samples obtained through cheaper means. This may also be the most appropriate sample for some policy purposes, if the targeting of advertising campaigns for financial products or for provision of some service to migrants is also likely to be geographically concentrated in areas where migrants congregate.

A second key data issue to consider when designing experiments with migrants is whether the question of interest requires surveying both the migrant at destination and the remaining family members in the origin country. Linking households across borders opens up a range of interesting questions, such as enabling close examination of whether interventions to change remittances are merely changing how savings are allocated within the international family, or also changing how much total savings are done. However, efforts to link families across countries have had mixed results. Beauchemin and González-Ferrer (2011) try and link households in Senegal to their migrants in France, Italy and Spain, but are only able to track down and interview 6% of the migrants. In contrast, the Mexican Family Life Survey was able to track and interview in the United States 91% of the migrants who left their origin households between 2002 and 2005 who had first been interviewed in Mexico. One approach that some experiments have used is to condition participation in the experiment on being able to link together the international family and successfully interview both the migrant and the remaining family. However, while ensuring internal validity, this raises similar external validity issues to those discussed above if only a small fraction of migrant households can be linked.

5. Migration experiments going forward

Self-selection is the bane of migration research, making it difficult to understand the causes and determinants of migration. Experiments offer a plausible means of overcoming these selection issues in some important cases, generating new insights about migration. However,

despite the rapid growth of experiments in development economics as a field, to date the use of experiments in migration studies is still in its nascent stages and there appears to be plenty of scope for both policymakers and researchers to design new experiments going forward.

On the policy side, it would be fantastic for researchers to be able to make better use of the Diversity Visa lottery. Mergo (2011) provides an innovative means of being able to look at the impacts in one origin country, but the United States should follow the lead of New Zealand in providing a means for a research study to track winners and losers in a range of countries. More broadly, there seems much more scope for Governments and policymakers to think about using lotteries and experiments in managing migration in a number of other contexts. For example, countries with points systems and immigration quotas could consider fine-tuning their points systems by randomly allocating a limited number of spaces at the bottom end of their points eligibility range. Governments piloting new programs - such as assimilation programs for refugees, financial literacy programs for migrant workers, selection programs for seasonal workers, trade facilitation activities with diaspora groups, or matching programs for remittances like the 3 for 1 program – could pilot these programs through well-designed experiments before deciding to incur the cost of rolling these out to their entire migrant populations.

On the researcher side, there are a number of promising avenues for new exploration. If the main interest is in the migrants themselves and programs to help them, then data may only need to get collected in destination cities like London, New York, Paris or Washington D.C. – homes to many researchers who would not have to travel far afield to implement their studies. Working with groups providing services to migrants, especially financial institutions, may make administrative data possible, lowering the costs of data collection in some cases. There also seem to be plenty of scope for carrying out more experiments in migrant origin countries – either through piggybacking interventions on top of other surveys already taking place, or through working with NGOs and Governments to help address the major policy issue of why more poor people are not able to take advantage of the massive gains in income to be had through international migration.

References

- Abdulkadiroglu, Atila, Joshua Angrist, Susan Dynarski, Thomas Kane and Parag Pathak (2009) "Accountability and Flexibility in Public Schools: Evidence from Boston's Charters and Pilots." NBER Working Paper 15549.
- Acosta, Pablo, Pablo Fajnzylber and Humberto Lopez. 2007. "The impact of remittances on poverty and human capital: evidence from Latin American household surveys." In *International Migration, Economic Development and Policy*, ed. C. Özden and M. Schiff. Washington DC: The World Bank and Palgrave Macmillan
- Adams, Richard. 1998. "Remittances, investment, and rural asset accumulation in Pakistan." *Economic Development and Cultural Change* 47(1): 155–73.
- Ashraf, Nava, Diego Aycinena, Claudia Martinez and Dean Yang (2011) "Remittances and the Problem of Control: A Field Experiment Among Migrants from El Salvador", Mimeo. University of Michigan.
- Aycinena, Diego, Claudia Martinez and Dean Yang (2011) "The Impact of Remittance Fees on Remittance Flows: Evidence from a Field Experiment Among Salvadorean Migrants", Mimeo. University of Michigan.
- Barham, Bradford and Stephen Boucher. 1998. "Migration, remittances and inequality: estimating the net effect of migration on income distribution." *Journal of Development Economics* 55: 307-31.
- Beauchemin, Cris and Amparo González-Ferrer. 2011. "Sampling international migrants with origin-based snowballing method: New evidence on biases and limitations", *Demographic Research* 25(3): 103-34.
- Borjas, George (1987) "Self-selection and the earnings of migrants", *American Economic Review* 77(4): 531-53.
- Brown, Richard and Gareth Leves. 2007. "Impacts of international migration and remittances on source country household incomes in small island states: Fiji and Tonga." Discussion Paper no. 347, School of Economics, University of Queensland.
- Bryan, Gharad, Shyamal Chowdhury, and A. Mushfiq Mobarak 2011. "Seasonal migration and Risk Aversion" Mimeo. Yale University.
- Chin, Aimee, Leonie Karkoviata, and Nathaniel Wilcox, "Impact of Bank Accounts on Migrant Savings and Remittances: Evidence from a Field Experiment," mimeo, University of Houston, 2010.
- Clemens, Michael (2010) "The Roots of Global Wage Gaps: Evidence from Randomized Processing of U.S. Visas", Center for Global Development Working Paper no. 212
- Clemens, Michael A., Claudio E. Montenegro, and Lant Pritchett. 2009. "The Place Premium: Wage Differences for Identical Workers Across the U.S. Border." Center for Global Development Working Paper 148.
- Clingingsmith, David, Asim Khwaja and Michael Kremer 2009. "Estimating the Impact of the Hajj: Religion and Tolerance in Islam's Global Gathering", *Quarterly Journal of Economics* 124(3): 1133-70.
- Esquivel, Gerardo and Huerta-Pineda, Alejandra. 2007. "Remittances and poverty in Mexico: a propensity score matching approach." *Integration and Trade* 27: 45-71.
- Gibson, John, David McKenzie, and Steven Stillman. 2011a. "Accounting for Selectivity and Duration-Dependent Heterogeneity When Estimating the Impact of Emigration on Incomes and Poverty in Sending Areas." *Economic Development and Cultural Change*, forthcoming.

- Gibson, John, David McKenzie, and Steven Stillman. 2011b "What happens to Diet and Child Health when Migration Splits Households? Evidence from a Migration Lottery Program" *Food Policy*, 36(1): 7-15.
- Gibson, John, David McKenzie, and Steven Stillman. 2011c "The Impacts of Migration on Remaining Household Members: Omnibus Results from a Migration Lottery Program" *Review of Economics and Statistics*, 93(4): 1297-1317.
- Gibson, John, David McKenzie, Steven Stillman and Halahingano Rohorua. 2012 "Natural experiment evidence on the effect of migration on blood pressure and hypertension", Mimeo. World Bank.
- Gibson, John, David McKenzie and Bilal Zia 2012 "The Impact of Financial Literacy Training for Migrants", Mimeo. The World Bank.
- Gibson, John and David McKenzie. 2011. "The Economic Consequences of "Brain Drain" of the Best and Brightest: Microeconomic Evidence from Five Countries." *Economic Journal*, forthcoming.
- Joona, Pernilla Andersson and Lena Nekby 2012. "Intensive coaching of new immigrants: An evaluation based on random program assignment", *Scandinavian Journal of Economics*, forthcoming.
- Karlan, Dean and Sendhil Mullainathan 2011. "Emergency Savings Accounts for Remittance Receivers in Mexico", <http://www.povertyactionlab.org/evaluation/emergency-savings-accounts-remittance-receivers-mexico>
- McKenzie, David, John Gibson and Steven Stillman. 2007. "Moving to opportunity, leaving behind what? Evaluating the initial effects of a migration policy on incomes and poverty in source areas." *New Zealand Economic Papers* 41(2): 197-224.
- McKenzie, David, John Gibson, and Steven Stillman. 2010. "How Important is Selection? Experimental vs Non-experimental Measures of the Income Gains from Migration." *Journal of the European Economic Association*, 8(4): 913-45.
- McKenzie, David, John Gibson, and Steven Stillman. 2012. "A land of milk and honey with streets paved with gold: Do emigrants have over-optimistic expectations about incomes abroad?", *Journal of Development Economics*, forthcoming.
- McKenzie, David and Johan Mistiaen. 2009. "Surveying migrant households: A comparison of Census-based, snowball, and intercept surveys", *Journal of the Royal Statistical Society, Series A* 172(2): 339-60.
- McKenzie, David and Hillel Rapoport. 2007. "Network effects and the dynamics of migration and inequality: theory and evidence from Mexico." *Journal of Development Economics* 84(1): 1-24.
- McKenzie, David and Dean Yang (2012) "Experimental Approaches in Migration Studies", in Carlos Vargas-Silva ed. *Handbook of Research Methods in Migration*. Edward-Elgar.
- Mergo, Teferi (2011) "The Effects of International Migration on Migrant-Source Households in Developing Countries: Evidence from Ethiopian Diversity-Visa (DV) Lottery Migrants to the US", Mimeo. UC Berkeley.
- Stillman, Steven, David McKenzie and John Gibson (2009) "Migration and mental health: Evidence from a natural experiment", *Journal of Health Economics* 28(3): 677-87.
- Stillman, Steven, John Gibson and David McKenzie (2012) "The Impact of Immigration on Child Health: Experimental Evidence From a Migration Lottery Program" *Economic Inquiry*, 50(1): 62-81.

