International Migration Experience and Standard of Living in Old Age

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Description

This is work in progress, part of a larger project that focuses on migration and the life course and uses data collected by the Mexican Migration Project, a binational research project based at Princeton University and the University of Guadalajara (http://mmp.opr.princeton.edu/, see Massey et al 1987 for the MMP methodological foundations).

Migration research often compares international migrants with their non-migrant counterparts in their countries of origin. In general, the ultimate goal of this comparison is to answer a crucial question: does international migration deliver the benefits that international migrants expect it to deliver? Invariably, research in this direction focuses on the short term. When the migrants under study have returned to their country of origin, research in general focuses on whether they were able to start a projected business, or to buy property or land with the "migradollars" that they acquired (Durand 1992, Durand et al. 1996, Massey & Parrado 1997, Portes & Guarnizo 1991, Taylor 1999). All these are short-term outcomes.

By contrast with other areas of demographic research (such as research on the long-term mortality effects of childhood conditions) the lack of research on the long-term effects of international migration is glaring. Using MMP data from 93 communities in Mexico, we are working on assessing long-term effects of individual migration by comparing former Mexican migrants with non-migrants in old age. We believe that in Mexico, where only 40% of the workforce is covered by the social security system, long-term savings from migration play an important support role in old age. In the long run, returns from investment of migration-related savings (typically in the form of land or property) may allow former migrants to retire, while non-migrants may not have a choice. In addition, if the increase in wealth produced by migration persisted through time, former migrants should be wealthier in old age than non-migrants.

Our focus is on retirement, possession of assets and living arrangements. First, we expect a positive association between US experience and the likelihood of retiring in Mexico. In addition, even taking selectivity into account, we expect former migrants to possess more assets than non-migrants in old age. We do not expect to obtain major conclusions from the analysis on living arrangements.

At the time of this submission, we have performed extensive descriptive analysis, which gives initial support to the expectations just outlined. In the interest of brevity we will leave the descriptive analysis for the actual paper, presenting below the rationale and results from our first regression model, a discrete-time event history analysis on the likelihood of leaving the workforce and moving into retirement.

Moving from the workforce into retirement

A discrete-time event history model computes the probability of retiring from the labor force in year t+1, based on the value of a set of independent variables in year t.

DEPENDENT VARIABLE (event of interest)

I define "retiring" as moving from being part of the Labor Force (LF) to being "retired", as reported by the respondents. "Retired" respondents do not necessarily hold pensions (many do), but they consider themselves withdrawn from the labor force.

Let us define three LF statuses:

1) Those in the labor force
2) Those retired
3) Other out of the LF, such as student, homemaker, ill, idle, etc.

In category 3, "ill" means that the person does not have a disability pension. If they do, they are "retired." In other words, we try to look at *voluntary* retirement.

Our event history model dismisses all cases with LF status=2 or 3 in year t, and all cases with LF status=3 in year t+1. Then, we only look at people in the LF in year t, and whether they retired or remained in the LF in year t+1. Notice that this does not need to be permanent retirement: the same person may move from the LF to retirement more than once, although that is uncommon.

INDEPENDENT VARIABLES (in year t)

Voluntary retirement is possible if: a) the individual have enough resources to sustain him/herself in old age, or b) the individual's family can take care of her/his needs in old age, or c) he/she is entitled to a government pension. (Or a combination of these).

The independent variables can be classified as follows:

a) Individual-level variables that measure the individual's resources
b) Family composition variables that measure potential support
c) Macro-level variables that measure the social security system.

Individual-level:

USTRIPS: number of migratory trips to the US
USCUMEXP: cumulated months of US experience
FEMALE: 1 if female
AGE: age in years
EDUC: years of education
Occupational Categories (Agricultural occupation is the reference)
NOWORK: unemployed
UNSKILLED: unskilled manual occupation
SKILLED: skilled manual occupation
PROF: professionals, administrators and other skilled occupations
BIZLAND: business owner or landowner (of at least 10 has.) and entrepreneur

Family variables:

MARRIED: 1 if married
FLAGMAR: flag variable with value 1 if the individual has ever been married but this union could not be located in time
CHILDREN: number of children alive

Macro-level variables:

- INUS: 1 if the individual was in the US in person-year
- Metropolitan Categories (reference: RANCHO, or village with less than 1,000 residents)
  - TOWN
  - SMALL: small city
  - METRO: metropolitan area
- NEWPRAT: migration prevalence ratio: a measure of the prevalence of Mexico-US migration in the community. Measured as the estimated proportion of community adults who have been migrants to the United States
- Cohort variables (reference: 1930-1939 birth cohort)
  - COHXX09 with value 1 if the person was born before 1910
  - COH1019 for the 1910-1919 birth cohort
  - COH2029 for the 1920-1929 birth cohort
  - COH4049 for the 1940-1949 birth cohort
  - COH5059 for the 1950-1959 birth cohort
  - COH60XX for those born in 1960 and after
- Period variables (reference: period 1950-1964)
  - PER6581 for the 1965-1981 period
  - PER8289 for the 1982-1989 period
  - PER90XX for 1990+

EXPECTATIONS

Our main variables of interest are USTRIPS and USCUMEXP. We expect both to be positive predictors of retirement, but USCUMEXP more than USTRIPS. We expect females to be less likely to retire (for having less resources than men), and those with more education to be more likely to retire (again for having more resources). Naturally, age should be a positive predictor of retirement. Regarding occupational categories, those working in agriculture (most are farm laborers) should be less likely to retire than those working on other occupations.

We expect those married to be more likely to retire. We also expect a positive effect of number of children on the likelihood of retiring. In both cases, more close kin represents a larger pool of immediate family for support in old age.

Those living in the US should be more likely to retire than those in Mexico, since the US social security system is far more develop than the Mexican one. Informal job markets are more prevalent in rural areas. Therefore, the likelihood of receiving a Mexican pension increases with levels of urbanization, and we expect those in ranchos to be far less likely to retire than those in towns, small cities or metropolitan areas. Conversely, previous research has suggested that the lack of formal jobs acts as an incentive for international migration (Sana & Massey 2000). We then expect the migration prevalence ratio to be a negative predictor of retirement. Cohort and period variables should reflect the expansion of the Mexican social security system, which was created in the mid-1940s and increased its coverage until stabilizing during the 1990s at about 40% of the workforce.

Results

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Logit estimates                                   Number of obs   =     549437
                                                  Wald chi2(27)   =    2859.77
                                                  Prob > chi2     =     0.0000
Log likelihood =   -3444.02                       Pseudo R2       =     0.2994
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(standard errors adjusted for clustering on commun)

withdrawr	Coef.	Robust Std. Err.	z	P>|z|	[95% Conf.	Interval]
female	-.4170639	.2153202	-1.94	0.053	-.8390837	.0049559
ustrips	.003617	.0126019	0.29	0.774	-.0210824	.0283164
uscumexp	.003257	.0006532	4.99	0.000	.0019768	.0045372
age	.1272715	.0108039	11.78	0.000	.1060964	.1484467
educ	.0648294	.0124602	5.20	0.000	.0404079	.0892509
nowork	-1.36528	.6618504	-2.06	0.039	-2.662482	-.0680767
unskilled	1.420546	.223956	6.34	0.000	.9816009	1.859492
skilled	1.25605	.1878683	6.69	0.000	.8878352	1.624265
prof	1.381846	.254589	5.43	0.000	.8828612	1.880832
bizland	-.3576716	.2252866	-1.59	0.112	-.7992253	.0838821
married	.368667	.134778	2.74	0.006	.104507	.632827
flagmar	1.188526	.3036946	3.91	0.000	.5932952	1.783756
children	.0179971	.0147925	1.22	0.224	-.0109956	.0469899
inus	.0091149	.2528496	0.04	0.971	-.4864611	.5046909
newprat	-1.71714	.5907222	-2.91	0.004	-2.874934	-.5593459
cohXX09	-1.846466	.5141928	-3.59	0.000	-2.854265	-.8386662
coh1019	-.9395218	.2506492	-3.75	0.000	-1.430785	-.4482584
coh2029	-.2914747	.1354865	-2.15	0.031	-.5570233	-.0259262
coh4049	-.375396	.1651802	-2.27	0.023	-.6991432	-.0516489
coh5059	-1.308624	.3965336	-3.30	0.001	-2.085815	-.5314321
coh60XX	-1.585372	.5982743	-2.65	0.008	-2.757968	-.4127755
per6581	.4480013	.4750993	0.94	0.346	-.4831763	1.379179
per8289	.8758545	.5178156	1.69	0.091	-.1390453	1.890754
per90XX	.933725	.5623342	1.66	0.097	-.1684297	2.03588
town	.8895141	.2776651	3.20	0.001	.3453005	1.433728
small	.9268677	.2914982	3.18	0.001	.3555418	1.498194
metro	1.174808	.2494857	4.71	0.000	.6858249	1.663791
_cons	-14.86087	.5913878	-25.13	0.000	-16.01997	-13.70177

Results match expectations.

INDIVIDUAL LEVEL

First and foremost, USCUMEXP is a strong predictor of the likelihood of retiring, even if USTRIPS is not. Females tend to have fewer resources than males, so they are less likely to retire. Age is of course a positive predictor. EDUC is positive (again related to individual resources). Occupational categories show that those in agriculture (reference) are the least likely to retire, but being a business/land owner in year t does not predict retirement in year t+1 (in fact, nearly the opposite).

FAMILY VARIABLES

Not surprisingly, being married in year t is a strong predictor of retirement in year t+1 (FLAGMAR shows that even those married at an unspecified time are more likely to retire than the never married). CHILDREN shows the right sign but it is non-significant. Descriptive statistics show a big jump in retirement between those with zero and those with >0 children. However, we tried a variable PARENT and it largely failed to be significant. We also tried the square of CHILDREN (under the presumption that too many children may wash out

commitment) and it largely failed too. Interactions of all of these with AGE did not provide any insight either.

MACRO-LEVEL VARIABLES

Being in the US turned out to be irrelevant. We think this is because INUS=1 mixes those temporarily in the US with those settled in the US (we will try further models to correct this). The prevalence ratio is negative (and significant) as expected. Conversely, metropolitan categories show that being in a rancho is a strong negative predictor of retirement (differences between the other categories are non-significant). Cohort variables show that the most likely to retire are those in the 1930-39 and the 1920-29 cohorts, cohorts that grew up with the Mexican social security system, enjoyed the Mexican "economic miracle" during their youth, and reached old age around the time of the surveys. No period contrast turns out to be significant, although retirement does appear more likely after 1982.

Next steps

We will run two additional sets of models. The first set will predict the possession of various kinds of assets: property, a vehicle, selected home appliances, and number of hectares (rural households only). Again, we expect those with more accumulated migration experience to be more likely to own each of these assets. However, a selectivity problem is obvious. Migration is known to be selective, and migrants are likely to be wealthier than non-migrants even before beginning their migration careers (Massey et al. 1998). We will try various techniques to address this problem (we are working on it).

Table 1. A first look at migrant selectivity…

	Households whose head…		
	never migrated	**migrated on survey year**	**migrated earlier**
Mean number of properties	0.85	0.93	0.98
Mean number of vehicles*	0.40	0.48	0.55
Percent of households with:			
Refrigerator	63	66	74
Washing machine	50	54	60
Sewing machine	48	52	61
Stereo	42	46	49
Telephone	20	17	19
Mean number of hectares			
All Households	3.1	3.0	5.7
Rural Households	1.7	1.7	2.3
Mean number of businesses**			
All Households	0.17	0.18	0.22
Urban Households	0.16	[N=40, huge SE]	0.21

* Cars, pickup/van/truck

** Store, restaurant/bar, workshop, factory

Our initial descriptive analysis, however, suggests that our expectations will be met even after controlling for selectivity. Table 1 shows statistics on household assets for households whose head never migrated, those whose head migrated very recently for the first time (in the survey year), and those whose head migrated earlier. In general, these estimates show that on average migrant households are actually wealthier than non-migrant households even before their household heads start their migrant careers. Yet, migration does seem to increase this advantage, as shown in the far right column.

The last part of our analysis will look at living arrangements. Our preliminary analysis of the data did not turn out any clear findings, so we are skeptical. We anticipate that living arrangements will not be an important factor regarding long-term effects of migration.

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