"Analyzing First Migration-Marriage/Marriage-Migration Sequences"

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Migration, just as any other demographic outcome, is an age-graded, duration-dependent process (Rogers and Castro 1982). This association is mainly explained by the intimate relationship between migration and labor market decisions. These in turn are related to other life course events, such as the timing of marriage and childbearing. The implicit embeddedness of migratory and other demographic decisions thus suggests not only their joint, but also conditional-*sequential* nature.[1] Thus, it makes sense to adopt such a view in regards to the migration process *per se*[2] and, more importantly, to consider migration transitions as part of a broader chain of demographic events rooted in individual trajectories.

The purpose of this paper is to analyze the timing and sequencing of marriage and U.S. –bound migration decisions of various cohorts of Mexican males. I use household heads' marital and migration histories from the Mexican Migration Project database to: 1) analyze the order and timing of these transitions; 2) sketch and compare a general socio-demographic profile of people engaging in each sequence vis-à-vis those only engaging in marriage[3]; and 3) consider how are individuals conforming to or deviating from the prevailing behavior (if any) on these respects in their community of origin.[4]

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[1] For instance, scholars have considered completed fertility as the resultant of a series of parity (that is, path-) dependent decisions.

[2] For instance, one can consider different migration spells as a sequence of out-bound, return, and repeated migration decisions (see Massey and Espinosa 1997; Riosmena 2003).

[3] Given marriage rates and sample sizes, I do not expect to find many people reaching age 40 as non-migrant or migrant spinsters to be able to use them as a comparison groups.

[4] The objective of this paper is –matters of these phenomena's endogeneity and joint determination aside- to study their timing and sequencing in order to understand how these decisions are being made given the fact that we could consider them competing risks.

The relationship between (labor) migration and marriage has interested scholars for some time. To my knowledge, however, no study considers both trajectories at once and instead concentrates on one (e.g. Massey and Espinosa 1997; Parrado 2004). In these analyses, the dimension of interest (i.e. migration/marriage) is set to be the response variable while the other (marriage/migration) is treated as exogenous by way of its measurement prior to realization/censoring of the dependent variable. Under this design, the counterfactual of interest (implicitly or explicitly) becomes how does previously engaging in the first transition (i.e. the one used as explanatory variable) relate to engaging into the second one (i.e. the response variable).[5] In the paper, I will thus first review both strands of literature and attempt to bridge them using life course theory (Elder, Johnson, and Crosnoe 2003) before proceeding to the analysis. Meanwhile, I hereby sketch the data and methods proposed and outline some expected outcomes of the analysis.

DATA AND METHODS

I will use data from the Mexican Migration Project (MMP), based at the University of Guadalajara and Princeton University. The project recollects wide-ranging multi-level social, economic, and demographic data, particularly focusing on those pertaining to the study of migration to the United States. The communities under study are selected attempting to present ample variation along the socioeconomic and urbanization continuum.[6] Within each community,

[5] I do not consider this to be a methodological flaw necessarily, though scholars have pointed out the possibility that both (choice) variables are jointly determined (e.g. Parrado 2004). My point is, however, that a consideration of how are both transitions sequenced may shed some light regarding both the processes of marriage and –especially- migration (whether there is strict exogeneity between the unobserved causes of one and the other or not).

[6] Massey and Zenteno (2000) performed a validity check of the MMP database, using the National Survey of Demographic Dynamics in Mexico (ENADID, by its acronym in Spanish) as the criterion of reference. The ENADID is a nationally representative survey that measures, the volume and direction of migration flows to and from the United States, among other demographic events. The authors found that estimates calculated with MMP

a simple random sample of 100-200 households was selected. Individual- and household-level data are collected via a flexible instrument, the ethnosurvey (see Axinn et al. 1991; Massey 1987). In addition, a non-random snowball sample of roughly 10% of the community-of-origin sample was interviewed in the U.S. to compensate for the impossibility to reach people whose entire household is abroad at the time of the survey. Sample weights are constructed in order to account for this compensation.[7]

While labor and migration histories were gathered for both the household head and his/her spouse, marital histories were gathered only for heads. Since, in the Mexican context and by the definitions used in the survey, these are predominantly males, I will focus exclusively on men.[8] I include communities where both U.S. and home communities where surveyed after 1998 –the last ones being surveyed in 2002- yielding 36 in total. This community selection mainly follows practical reasons. After 1998 a specific question regarding the marital status of the person at the time of migration was introduced. This question may prove to be vital in determining the order of the sequences and to test for the consistency of the information and reporting of migration and –to a lesser extent- marriage dates.

I will focus on the experience of people who have gone through the ages where a vast majority of both first migration and marriage transitions occur. Roughly, this span would cover ages 15-40 for the case at hand.[9] Hence, the lower age limit of the study is to include people age 40 at the year of the survey. In addition, since selective mortality and recall bias are a natural

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data do not differ in significant ways from those estimated from the ENADID database when restricting the analysis to Western Mexico, historically the main source and most traditional region of Mexican migration to the U.S.

[7] For a more detailed description of the project methodology and this weight construction, see Massey and Espinosa 1997; Massey and Parrado 1994.

[8] Using the information on spouses may be problematic for a variety of reasons. First, for a long time and probably until today in *most* cases, Mexican females migration has traditionally depended on the migration behavior of a male, generally the husband or father (see Donato 1993; Cerrutti and Massey 2001). Second, and more importantly, though it would be interesting to differentiate between the migration-marriage sequencing of spouses, this the lack of marital histories of spouses permit us only to assume that the current marriage was the first (and thus only) one.

[9] The length and cutoffs of the age interval been considered may change if further analyses suggest so.

problem of retrospective studies, I set the upper limit of the study is to include people 60 years of age.[10] Hence, the study would include the 1938-1958 and 1942-1962 cohorts for the 1998-2002 survey years.

The analysis will be composed of two parts. First, I will estimate cohort-specific survival curves in order to compare the trajectory of age-specific likelihoods of engaging in both transitions conditional on having/not having engaged on the other transition before. I will compare these survival curves and the associated (mean) duration (i.e. age) before engaging into a transition and the socio-demographic profile of each group compared to married non-migrants (see note 3). Additionally, I will calculate expected durations before first migration/marriage after having getting married/migrated (conditional on both occurring of course).[11]

Second, I will calculate community-specific average ages at first marriage and migration, and 'waiting times' between both. The purpose of this exercise is to determine if a given sequence is more common or normative in some communities than others, and to analyze individual variability of behavior with respect to the community 'norm' (*if any*). [12] Using some available community-level characteristics in the database, I will attempt to identify community profiles for each type of sequence (e.g. one in which most people migrate and then marry to one in which people marry and then migrate, to one were there is ample heterogeneity). Time-permitting, I will estimate community fixed-effects models predicting age at marriage and

[10] First, the database can be regarded as a community-representative sample of households, and thus of household heads, in the survey year. However, as with any retrospective database and given that people naturally happen to have a certain age distribution at the time of the survey, the data may or may not be a representative sample of people of a certain age (e.g. 20 years) at a given point in time (e.g. the year of the survey). Selective mortality may bias estimates if one looks at older cohorts, who have suffered considerable mortality, and where the assumption that their marriage and migration behavior would seem more dubious to hold. In addition, recall bias is always an issue at stake (Auriat 1991, Belli 1998). Thus, the selection of the age range is an attempt to minimize with this problem.

[11] Graduation methods will be considered in order to overcome the unavailability of the specific month when the person was born, got married, and emigrated.

[12] It is important to note that consider a mean as the norm *per se* is futile and a self-fulfilling prophecy: people will gather around the mean precisely because such is its definition, that is, the point that minimizes the arithmetic distance between it and each individual observation. The term normative instead should depict a pattern of common behavior where variability is relatively low, and which can be predicted by considering sources of heterogeneity.

migration (separately) in order to find those factors associated with conformance-deviance to the community average while controlling for stable community characteristics.[13]

EXPECTED OUTCOMES

Migration spells –when engaged on before marriage of course- delay marriage decisions. Hence, the average age at marriage of those with previous migration experience will be higher than that of other people, regardless if they eventually migrate or not. However, conditional on been back from the U.S., people would marry quicker than their counterparts after controlling for other confounders, most notably age (Parrado 2004). Under the same token, people who get married first and eventually migrate will do so at a later age than those who marry second.

People will migrate/marry first following their community norm. That is, I expect to find that –conditional on having engaged in both transitions- most people in a community choose the same one as their first. This may be especially true in communities with a high prevalence of international migrants, where migration itself becomes normative. Related to this, people from rural communities –where migration prevalence tends to be higher- may be more likely to both migrate and marry younger than their urbanite counterparts. Temporary migration may represent a very important part of the transition to adulthood and labor market experience of young people in these communities (Kandel and Massey 2002). Finally, depending on the size and structure of mating and marriage markets, it is likely that people who migrate first resort to informal contracts (as opposed to marriage) to secure a partner's commitment. In smaller places with high

[13] Some joint estimation will be considered. However, its implementation will depend on various factors, like the identification and availability of good instruments for *both* variables. That is, if all factors included in the RHS are associated and theoretically linked to both migration and marriage, then the system of equations would not be identified. In addition, the models included here specifying a fixed-effects model of a duration-dependent process is not a straightforward procedure (see, for instance, Allison and Christakis 2000); hence, let alone is to specify a system of fixed-effect equations involving two endogenous duration-dependent processes (even worse so if we want to consider factors varying over time). Future versions of the paper would attempt to deal with this issue, at least partially.

social density (and low levels of female U.S.-bound migration), it would be likely that people migrate first and marry later.

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