The Fertility of temporary Mexican migrants to the United States

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From a life-course perspective migration and family formation are both events associated with the transition to adulthood and, therefore, likely to occur during the main reproductive years. This study uses data from the Mexican Health and Aging Study, which contains information on U.S. migration as well as family formation, to look at the long-term fertility outcomes of temporary migrants. Mexico is particularly well suited to this study, since the prevalence of international migration to the U.S. is high, and return migration is very common. Negative Binomial regression was used to model complete and age-specific fertility. Results confirm a disruptive effect of migration on fertility, but only among female migrants. However, both Mexican men and women who temporarily migrated to the United States before 2001 were selected on characteristics associated with fertility. Female Mexican migrants were selected on low fertility characteristics, while Mexican male migrants were selected on high fertility characteristics.

BACKGROUND

International Migration and Fertility

There are four main theories that have been used to describe immigrant fertility: Assimilation, adaptation, disruption, and selection (Stephen & Bean, 1992; Singley & Landale, 1998; Lindstrom & Giorguli, 2002 ; Kulu, H., 2005). All of these theories recognize that there will be some adjustment in the fertility behavior of immigrants as a consequence of their move and, while they are usually presented as if they were mutually exclusive, a combination of them could apply at different stages of the migration career and of migrants' reproductive lives.

One of the most common theories to explain migrants' behavior in general and fertility in particular is the *assimilation* hypothesis. According to the assimilation hypothesis the fertility of immigrants is expected, over time, to approach that of the population in the receiving country. However, the effect in temporary migrants might be different. While temporary migrants are also exposed to the norms and values of the receiving country, as long as they are planning to return to their country they may not be as motivated to assimilate to the receiving country as long-term migrants are. This is because for temporary migrants the reference group may continue to be that of their home country and thus, their fertility norms may continue to be shaped by their sending communities (Forste & Tienda, 1996).

According to the *adaptation* hypothesis immigrants are able to make short-term changes to their fertility behavior in order to maximize the gains of their migration experience. These changes could include a temporary reduction in fertility or a shortening of the birth intervals so that as many children as possible are born in the United States and obtain citizenship. In the specific case of Mexican immigrants, where a large proportion of them enter the country illegally, having a child who is a United States citizen could be seen as a long-term investment for the parents and as an advantage for the children. The fact that over 90% of foreign-born children residing in Mexico were born in the United States to Mexican parents suggests this might be the case (Lopez-Villar, 2006).

The *disruption* hypothesis is highly relevant to temporary migrants. Mexicans migrating to the United States are more likely to be men who travel alone because they are planning to return in a relatively short period of time and also because many of them travel illegally. The longer the couple remains separated the greater the disruptive effect that migration will have on fertility. Migration does not necessarily have to disrupt fertility, however. Short-duration trips or trips taken during infertile periods (i.e. while the spouse is pregnant) are unlikely to affect fertility. Also, many studies have found that temporary migration affects the timing of fertility but not the level (Andersson, 2004, Goldstein & Goldstein, 1981). Lindstrom and Giorguli (2002) analyzed data from the Mexican Migration Project and found that while migration reduced fertility in the short term due to separation it did not affect the level of fertility within a union in the long term. Finally, a common assumption about immigrants is that they are not a representative sample of the population in their countries of origin but that they are somehow selected; the direction of that *selection* has given rise to heated debates in the scientific literature (Borjas, 1987 & 1990; Jasso and Rosenzweig 1990, Chiquiar, 2005). If we consider migration to a higher income country as a long term investment, it should not be surprising that immigrants take into account the wellbeing of future generations when weighting the cost-benefit of making the move and could, therefore, be selected on characteristics influencing fertility outcomes such as intergenerational altruism. Further complicating the examination of this hypothesis is the fact that immigrants are usually selected along characteristics related to higher fertility norms, such as coming from large families themselves, rural communities or low socioeconomic background.

Berman & Rzakhanov (2000) found that Soviet Jews who migrated to Israel in periods of high migration costs had significantly more children than members of the same birth cohort who migrated later when costs were low. Analyzing data from the 2000-2004 American Community Survey Swicegood et al. (2006) found that not only are the fertility rates of immigrant women higher than those of the native-born at every age (particularly at both extremes of the childbearing years) but most immigrant women also had fertility rates higher than those prevailing in their native countries.

When considering the selection hypothesis it is important to keep in mind that migrant selectivity with respect to fertility may be expressed as desires for higher child quality than quantity, a pattern typically characteristic of people who have smaller families. Another selection effect that is important to keep in mind is that of return migration. It has been pointed out by Jasso and Rosenzweig (1990) that couples with large families are less likely to return to their home countries and that looking only at immigrants on one side of the border might result in a biased estimate of the effects of migration on fertility. The present study, however, will compare fertility outcomes of Mexicans with and without migration experience (return migrants vs. never migrants) who are currently residing in Mexico.

METHODS

In this paper, we address the more general question of the effects of temporary migration on fertility by examining two specific hypotheses:

Hypothesis 1. *Mexicans with U.S. migration experience will have fewer children than those without migration experience, and this difference will be greater for women than men.*

Hypothesis 2. *The probability of having a birth during the peak migration ages (25-35 years old) is going to be lower (more disrupted) among U.S. migrants when compared to non-migrants.*

It is expected that U.S. migrants will have fewer children when compared to non-migrants due to the disruptive effect of international migration. The disruptive effect should be stronger for women than for men, and the longer the time spent in the U.S. the greater the expected disruption of fertility. To test this hypothesis the completed fertility of temporary U.S.-migrants and non-migrants is compared. If, however, immigrants are compensating for the time apart from their partner by having children at a faster rate later, then looking only at completed fertility might disguise any effects of a short-term disruption. To assess short-term effects on fertility the probability of having a birth by five-year age groups will also be compared. Evidence in favor of hypothesis # 2 will confirm not only that migrants have lower fertility, but that they specifically experience disruption. A confirmation of hypothesis # 1 (lower complete fertility among return migrants), but not of hypothesis # 2 (lower age-specific fertility among U.S. migrants) may be because the reason one observes lower fertility among migrants is selection, and controlling for the selective factors in the age-specific models would reduce or eliminate these differences.

Data

The data used in this study came from the first wave of the Mexican Health and Aging Study (MHAS). The MHAS is a prospective panel study of health and aging conducted in Mexico in 2001 with a follow-up in 2003.The baseline survey is a national representative sample of Mexicans born before 1951 (ages 50 and over at the time of the survey) as well as their spouse or partner regardless of their age. The design of the MHAS was based on the Health and Retirement Study (HRS) to facilitate cross-national comparisons. The MHAS collected demographic information of the respondents as well as data on health status, household characteristics, support networks and financial transfers across generations. Of special interest for this study is the fact that the survey includes migration history of the respondents. Furthermore, the study oversampled the six Mexican states from which most of the migration to the United States originates.

The interviews were conducted by the National Institute of Statistics, Geography, and Informatics in Mexico (INEGI), which is the government entity in charge of conducting the population and labor censuses in Mexico. The survey has national and urban/rural representation with a response rate of 90%, which is very high for a population-based survey. The MHAS is partly sponsored by the National Institutes of Health/National Institute on Aging (grant number NIH R01AG018016). Data files and documentation are public use and available at *www.MHASweb.org*.

Sample Selection and Missing Values

The analytic sample includes only men and women who were selected respondents (partners were not included). Those cases that were missing information for the main outcome and predictor variables (i.e. fertility and U.S. migration experience) were excluded from the analysis. The duration of the total time in the United States, *Time in the U.S.,* is missing for 19, or 2.2%, of the respondents with U.S. migration experience. The age at the time of the first migration trip to the United States, *Migration age,* is missing for 91, or 10.4%, of the U.S. migrants. These migration variables are more likely to be missing among respondents who are men, older than 75 at the time of the survey, and living in a rural area.

Age Specific Fertility (calculated from living children's age), and *Age of first birth* are missing for 395 of the respondents (4.2%). An analysis of the missing fertility data shows that those individuals missing information were more likely to be older, less educated, living in rural communities, and not US-migrants.

The final sample size is N=9,389, which includes 597 men and 164 women with U.S.-migration experience; and 3,640 men and 4,988 women who never left Mexico (See Table 1).

Measurements

Outcome Variables

While these data are derived from retrospective recall of fertility histories, we have reason to believe that such information is valid. Not only is the distribution of the fertility variables (children ever born and age specific fertility rates) similar to what would be expected for these cohorts in Mexico (Rowe, 1979; & United Nations, 1966) but also previous studies that have examined the accuracy of retrospective fertility histories have shown that such reports can be highly accurate (see Beckett, et al. 2001; Rendall, et al 1999; Potter, 1977).

Children Ever Born- For all respondents, information is collected on the number of children ever born. Since the respondents are adults 50 years and older most of them have completed their fertility trajectories.

*Age Specific Fertility-*The number of children born at each age was determined from the family roster, in which resident and non-resident children are enumerated and their ages are listed. For analyses, information was collapsed into five-year age intervals from ages 15 to 49. A limitation of this method of estimating age specific fertility is that for deceased children only the age of death is reported and, therefore, their age of birth cannot be estimated. We know, however, that half of these deaths occurred before the first year of age, and that 70% occurred before age five. This means that the rates more likely to be affected are the ones at both extremes of reproductive age (15-19 and 40-49) since child mortality is higher for mothers under 20 years of age as well as for older mother and high parity births (Bobadilla, Schlaepfer, & Alagon, 1990; Schlaepfer-Pedrazzini & Bobadilla, 1990; Urbina-Fuentes & Echanove-Fernandez, 1989). While these missing data are expected to yield an underestimate of age-specific fertility, the prevalence of "deceased children" is not different by migration status (p=0.269), which is the main independent variable.

Age at first birth – also was estimated from the family roster, using the age of the oldest child. As with the *age specific fertility,* this variable is likely to be biased towards older ages since births from younger mothers are associated with higher mortality. While this variable is not an outcome per-se, it is used to estimate the timing of U.S. migration, relative to first birth.

Predictor Variables

U.S. Migration Experience-This is the main predictor variable. It is a binary variable identifying those individuals who ever worked or lived in the United States.

Time in the U.S- The duration of the total time in the United States, regardless of the number of trips, is divided into two categories: migrants who stayed up to two years in the United States, and those who stayed longer than two years.

Migration age- Base on the age at the time of their first migration trip to the United States, respondents are grouped into those whose first U.S. migration trip occurred by age twenty, and those who migrated to the United States after age twenty.

Migration and Fertility timing –This variable identifies those respondents whose first child was born before their first trip to the U.S., and those that took their first trip to the United States before their transition to parenthood.

Covariates

Education- The number of years of formal schooling were grouped in the following categories: no-formal education, some elementary, completed elementary (6 years in Mexico), and more than elementary school.

Age Cohort- Respondents were divided in three groups according to their age at the time of the survey: those between 50 and 60 years old, those between 60 and 74, and those 75 and older.

Ever in a union- This is a binary variable identifying those who report having ever been "married or in a consensual union". The answer is recorded as yes/no, regardless of whether that union was a legal or religious marriage, or a consensual union.

Urban residence- This variable indicates whether the respondent was living in a community with at least 100,000 residents at the time of interview. This variable is included due to the large variation in fertility between urban and rural areas in Mexico (Quilodran, 2001).

Statistical Analysis

An exploratory analysis of the main outcome variable, *Children Ever Born,* showed that the fertility distributions are right-skewed and over-dispersed, as expected for count data (Figure 1). In this case, the variance exceeds the mean by about 2.5 times, thus violating a key assumption of the Poisson distribution. While it is possible to estimate a Poisson regression using an over-dispersion correction factor, this is a conservative option that does not warranty a good model fit. Figures 2a and 2b show a comparison of a Poisson and a Negative Binomial Distribution against the outcome variable for men and women; the negative binomial is a common alternative to the Poisson regression in cases of over-dispersion. While the Poisson distribution assumes that the mean and the variance are the same, the Negative Binomial has an extra parameter than can be used to model the variance independently. The mean of the negative binomial, like the Poisson, is λ but the variance is $\lambda + \frac{\lambda^2}{r}$, where r is the dispersion parameter. Thus the variance is always larger than the mean.

A Negative Binomial regression was used to model the number of *Children Ever Born*. Several models were fit to assess the association between temporary migration to the United States and fertility based in the occurrence, duration, and timing of U.S. migration.

Also, a set of negative binomial regressions was used to model *Age Specific Fertility,* i.e. the number of children born by five-year age groups from 15 to 49 (15-19, 20-24, … 45-49). The main independent variable in all these models was simply U.S. migration experience.

Estimates for all models were obtained independently for men and women using individual sampling weights. The results of the negative binomial models, expressed as Incidence Rate Ratios (IRR), can be found in Tables 2a and 2b for complete fertility, and Table 3 for age specific fertility. All of the statistical analyses were performed using Stata (v.11).

RESULTS

Sample Characteristics

Table 1 describes the demographic and socioeconomic characteristics of the sample by gender and migration experience. The dependent variable, average number of children ever born, is significantly higher among men with U.S. migration experience (6.4) than for non-migrant men (5.7). Among women the relationship is inverted; women with U.S. migration experience have a mean of 4.8 children, which is below the 6 children averaged by their non-migrant counterpart. The likelihood of ever having children does not vary significantly across gender subsamples despite the lower prevalence among U.S. migrant women. The likelihood of ever being in a union is slightly higher among men and women with U.S. migration experience, but not significantly different than their non-migrant counterpart.

The mean age of the baseline sample is 63.1 (SD = 10.3) years old. Female respondents are, on average, a year older than male respondents (63.5 vs. 62.6), which is consistent with a longer life expectancy among Mexican women (INEGI). Migrant men have a mean age of 64 year compared to 62.5 for non-migrant men. The mean age among women is 64.2 years for migrants and 63.3 for non-migrant. This older age of men and women with migration experience is possibly due to the temporary working programs between Mexico and the United States, like the Bracero Program (1942-1964), that benefited the older generations of the sample.

Education differences are perhaps more interesting. While among men, those with U.S. migration experience report lower education, this relationship is reversed for women where those with U.S. migration experience have on average over 2 years more formal education than those who were never in the U.S. Women with U.S. migrant experience have significantly more education than any other group in the sample. This is probably and indicator than among this cohorts female migrants were a rare occurrence and are, therefore, highly selected. Some other differences reinforce this hypothesis: A little over eleven percent (11.4%) of men respondent report having ever lived or worked in the U.S. compared to only 2.7% of the women. Women with U.S. migrant experience are more likely to reside in urban areas while migrant men are more mostly residing in rural areas. Again, this is consistent with the temporary labor programs that recruited several farm workers between the decades of 1940 and 1960. Return migrant men are also more likely to reside in one of the six states identified as high out-migration states (Durango, Guanajuato, Jalisco, Michoacán, Nayarit, and Zacatecas) than migrant women are.

The reported U.S. migration experiences are also very different. Women spend, on average, more time in the U.S. than men do (8.3 vs. 5.3 years), even though their first trip occurs at age 32 compared to age 27 for men. This could be explained by the different reasons for migrating among Mexican men and women; while most men migrate to the U.S. as temporary workers, women, especially from these cohorts, were likely joining some other family member.

Complete Fertility

Tables 2a and 2b present both bivariate (gross) and multivariate (net) estimates of the negative binomial models for Children Ever Born in the form of incidence rate ratios (IRR). As seen on the descriptive statistics before, the bivariate analysis (Model 1) confirms that the rate of children ever born is 11% larger among men with migrant experience compared to non-migrant men (95% CI = 1.02-1.2). For women, the relationship between US migration experience and number of children ever born is the opposite. Migrant women have a rate of children ever born that is 21% lower than the rate for non-migrant ones (95% CI=0.65-0.97).

In all multivariate models (Models 2-5), the relationship between fertility and the other variables follows expected patterns. Higher *education* is inversely associated with fertility in both men and women regardless of migrant status. *Age* is positively associated with fertility with the older cohorts showing higher fertility than the younger ones, which is consistent with decreasing fertility in Mexico. The high incidence rate ratios related to *ever being in a union* are reflective of the strong association between union and fertility among these cohorts. This association is much stronger for men than it is for women because, among these cohorts, less than 6% of men who have never been in a union report having children compared to 35% of single women. Finally, living in an *urban* area is related to lower fertility in all subsamples.

After controlling for all the variables mentioned above in Model 2, the association between temporary migration to the U.S. and the number of children ever born remains positive for men and negative for women but, in both cases, the effect is attenuated and no longer statistically significant. In Model 3 migration is measured in terms of the total *time in the United States* and, while the direction of the effect is the same as in models 1 and 2, and the effect appears slightly stronger for men and women who stay for more than two years, they are still non-significant. Model 4 looks at the effect that the *age of first U.S migration* has on total fertility and finds a positive and significant association for men that migrate before age 20 compared to never migrants (IRR=1.14, 95% CI: 1.01-1.3). For female migrants there is a negative and significant association between complete fertility and U.S. migration before age 20 (IRR=0.75; 90%CI: 0.56-0.99). There is no-significant difference in the level of fertility among men and women that migrated to the U.S. after age 20 compared to their non-migrant counterparts.

In the final model of complete fertility the independent variable is the timing of migration relative to fertility. For men that start having children before they migrate to the U.S. there is a significant and positive association with complete fertility (IRR=1.13; 95% CI: 1.02-1.2), but no difference in fertility when men migrate after having their first child. For migrant women the relationship is the opposite; there is no difference in fertility when they migrate after having their first child, but there is a significant decrease in fertility if they migrate before having children (IRR=0.56; 95% CI: 0.36-0.89).

Age-Specific Fertility

Estimated Age Specific Fertility rates for men and women are shown in Figure 3. Table 3 shows the effect that temporary migration to the U.S. has on Age Specific Fertility stratified by gender. Both adjusted (net) and unadjusted (gross) Incidence Rate Ratios are reported on the table. The variable identifying having ever been in a union was not included in the age-specific multivariate regressions because there was not enough variation to fit the models.

Without controlling for any other variables, the fertility of migrant men is higher than the fertility of non-migrant men at every age. The largest differences occur at ages 35-39 and 40-44 and, although slightly attenuated, remain significant after controlling for age-cohort, education, and urban residence.

In the case of women the opposite is true. The fertility of migrant women is lower than that of women without migration experience at almost all ages. The only exception is for ages15-19, when the fertility of women with U.S. migration experience is higher than non-migrant ones, but only significant after controlling for other covariates. The only other significant difference, before and after controlling for other individual and contextual variables, occurs at age 30-34. It is important to point out that the average age of first trip to the U.S. among these group of women was 32 years.

DISCUSSION

This study provides evidence that disruption plays an essential role in both the short-term and long-term fertility of Mexican women who temporarily migrated to the U.S. Not only do migrant women have fewer children at the end of their reproductive lives than those who never migrated but, looking at the number of children born by five-year age groups, there was a significant decrease in fertility around the age of their first trip to the U.S. (ages 30-34). Migrant women were selected on characteristics associated with lower fertility: they were more likely to reside in an urban area and had more years of education compared not only to non-migrant women, but also to both migrant and non-migrant men. This is why the migration effect on fertility loses significance after controlling for other covariates in Model 2, even after accounting for the length of the stay in the U.S. in Model 3. The significant negative association between migrating before age twenty in Model 4 and migrating before fertility in Model 5 confirms the disruptive effect that migration to the United States can have on fertility among temporary migrant women. Migration age captures this to a degree for women; 66% of women who migrated by age 20 did it before having children and they both end up having fewer children compared not only to non-migrants, but to migrants who migrate at a later time too. The effect is much stronger among women who migrate before having children (Model 5) due to the high prevalence of childlessness. While the lower prevalence of children ever born among (85.6%) U.S. migrant women reported in Table 1 was found non-significant when compared to non-migrant women (92.5%), only 67% of women who migrated before fertility report ever having children.

Among Mexican men the results do not support the hypothesis that temporary migration to the United States has a disruptive effect on complete or age-specific fertility. While a bivariate analysis hints at higher complete fertility, a multivariate analysis renders this difference no longer significant, even when taking the duration of the time in the U.S. into account. This is probably explained by the composition of the group of men who temporarily migrates to the United States; these men are, on average, from older cohorts, less educated, and more likely to come from rural areas. All these are characteristics associated with higher fertility and more consistent with the selection hypothesis. Thus, both Mexican men and women who migrate to the United States are selected on characteristics associated with fertility.

The timing of the first trip to the United Sates, both in terms of age of migration and relative to first birth, is important in understanding the relationship between migration and fertility among temporary migrant men. Those men who migrate by age twenty have significantly higher fertility than non-migrants (Model 4). Conversely, men who have children before migrating also have a positive and significant association with complete fertility (Model 5). The mechanisms behind this significant associations are likely different. Mexican men who migrated by age 20 did it, on average, at 17 (SD= 4yrs) probably before forming a union. Their migration experience, however, is likely to make them more attractive mates and to "afford" them to have more children (Carslon, 1985; Parrado, 1998; Andersson, 2004; & Jampaklay, 2006).

On the other hand, having children before migrating to the U.S. is associated with higher fertility among men. This seems contradictory to the previous positive association between early migration and high fertility. Early fertility, however, is associated to higher fertility, and Mexican men who have children before migrating have a lower mean age of first childbearing than non-migrant men (24.3 vs. 26.9) and than men who migrate before having children (30.3). Therefore, despite the fact that migrating before having children is not significantly associated to having children (IRR=0.98; 95%CI:0.88-1.1) it might well be the case that there is a disruption effect around the time that the trip to the U.S. takes place; the mean age of migration to the U.S.

among these men is 34.3. Figure 3 and Table 3 both show a convergence of the age specific fertility rates of migrant and non-migrant men at ages 30-34, followed by significantly higher fertility at ages 35-39 and 40-44 that hint of a "catch up" effect on fertility that was likely delayed by the trip to the United States.

CONCLUSION

In conclusion, both Mexican men and women that migrated to the United States temporarily are selected on fertility characteristics. Mexican migrant women are selected on low fertility characteristics while men are selected on high fertility characteristics. While there is an obvious disruption effect on the fertility of female migrants the effect is harder to point out among migrant men. To do this is necessary to recognize different patterns of migration and fertility and how the interaction between these two is different based on their relative timing of occurrence. While the results coincide with previous findings on how selection and disruption help understand the fertility of Mexican immigrants to the United States (Lindstrom & Giorguli, 2002 & 2007) it would be interesting to look at the patterns of union formation and dissolution as likely intermediary process in the relationship between migration and fertility (Hoem & Nedoluzhko, 2008). Also, the group of permanent Mexican migrants to the United States is an important comparison group to fully understand the relationship between migration and fertility.

It is important to remember that these results can only be generalized to Mexican men and women born on or before 1950. Despite its limitations this study contributes to the literature on fertility and migration by providing a rare look at the long-term effects among temporary Mexican migrants to the United States. Furthermore it gives a glimpse to the migration experience of Mexican women that, although infrequent among these cohorts, it is key to understand international migration as a resource in family formation.

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TABLES AND FIGURES

Table 1. Descriptive Statistics of the Analytic Sample by Gender and Migration Experience. Mexican Men and Women 50 years and older residing in Mexico in 2001.

Variables	Non-migrant Men *n=3640*	US-migrant Men *n=597*	Non-migrant Women *n=4988*	US-migrant Women *n=164*
Ever had children (%)	92.6	92.9	92.5	85.6
Mean number of children (SD)	5.7 (3.7)	6.4 (4.0)	6.0 (3.7)	4.8 (3.4)
Mean age of first birth (SD)	26.9 (6.9)	27.3 (7.5)	22.7 (5.9)	22.0 (6.1)
Q1	22	22	19	17
Median	26	26	21	21
Q3	30	31	26	24
Ever in a union (%)	95.1	96.1	92.7	93.2
Mean age (SD)	62.5 (10.1)	64.0 (9.8)	63.6 (10.6)	64.2 (9.9)
Age Cohort (%) 50-60	47.8	38.6	44.0	32.2
60-74	38.2	42.7	38.5	53.7
75+	14.0	18.7	17.5	14.1
Mean years of education (SD)	4.4 (4.6)	3.8 (4.2)	3.6 (3.8)	6.4 (5.7)
Formal education (%) None	27.3	28.6	34.5	17.6
Some elementary	51.0	58.9	48.9	41.1
More than elementary	21.7	12.5	16.6	41.3
Urban area resident (%)	42.1	37.5	49.6	59.7
High Migration State (%)	14.2	42.6	19.2	25.5
Ever in the U.S. (%)		11.4		2.7
Mean number of yrs in U.S. (SD)		5.3 (8.9)		8.3 (10.8)
Q1		1		1
Median		2		3
Q3		5		10
Time in the U.S. (%)				
Up to two years		55		46
More than two years		45		54
Mean age of frst U.S. trip (SD)		27.1 (10.4)		31.9 (16.5)
Q1		20		22
Median		25		33
Q3		32		40
Migration and Fertility Pattern (%)				
Fertility first		46		67
Migration first		54		33

Source: MHAS 2001, weighted estimates

Figure 1. Complete Fertility by Gender and U.S. Migration

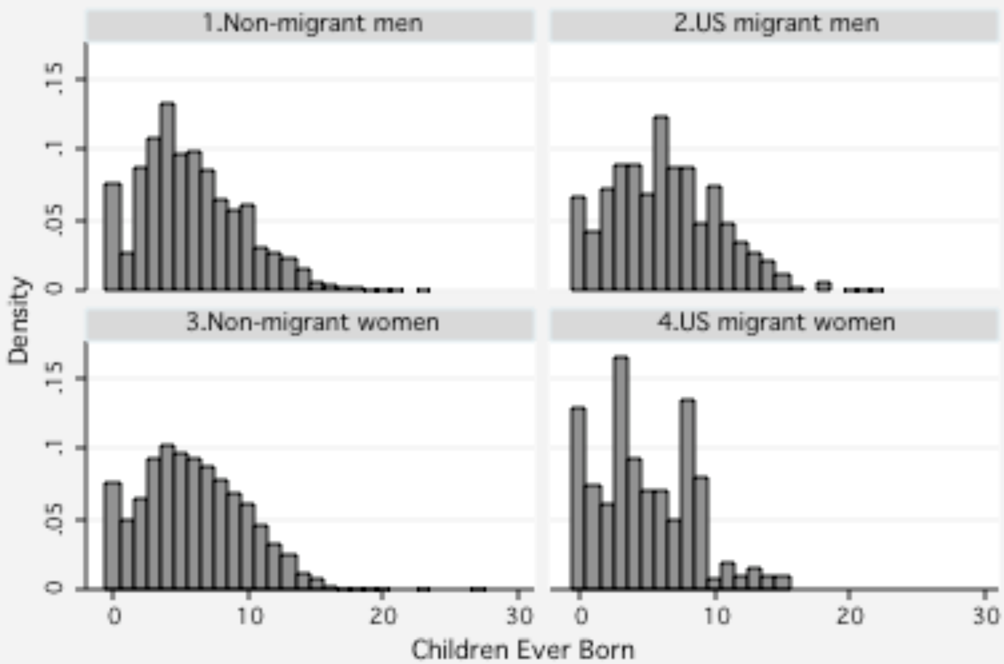
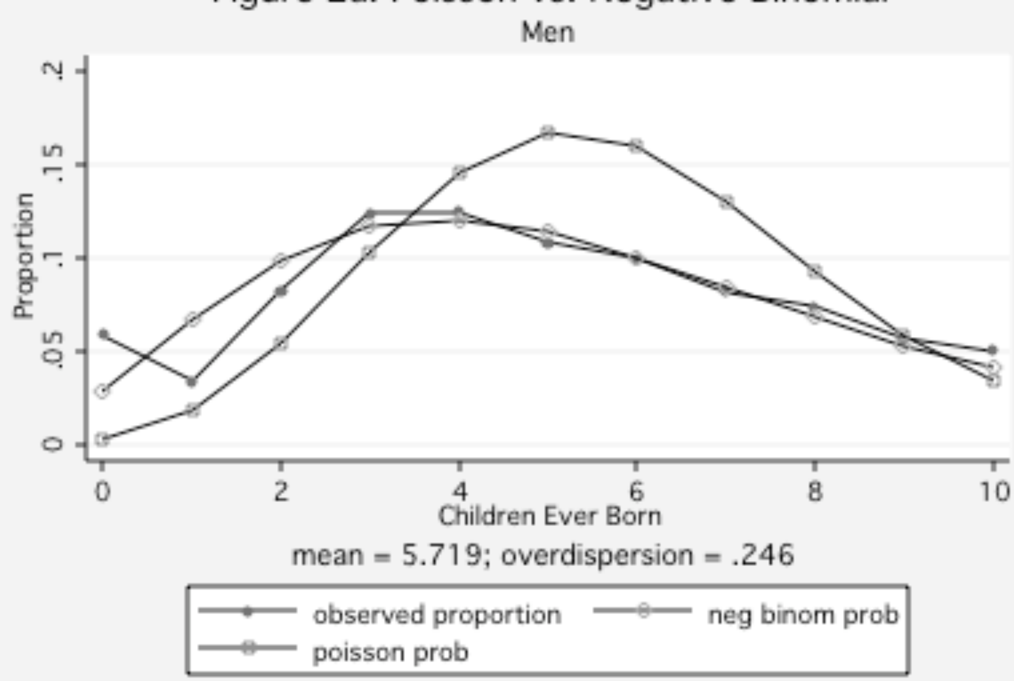


Figure 2a. Poisson vs. Negative Binomial



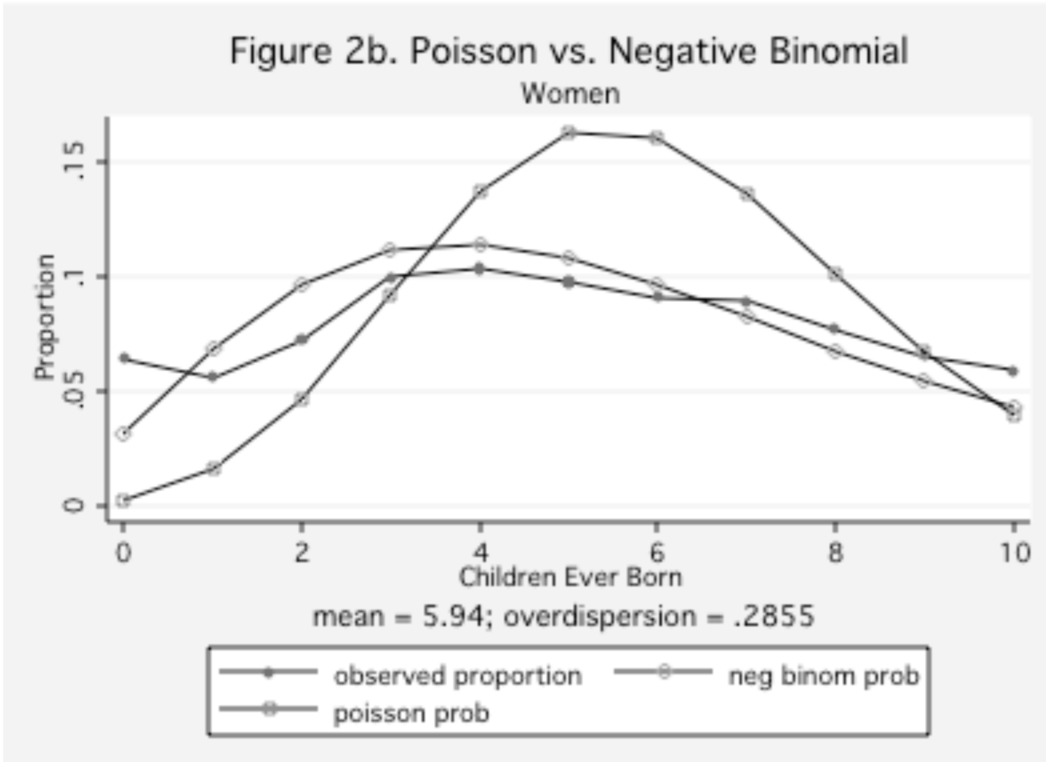


Table 2a. Children Ever Born among Mexican Men by temporary U.S. migration experience. Coefficients are expressed as Incidence Rate Ratios					
	Model 1. ***Unadjusted***	**Model 2.** ***Adjusted***	**Model 3.** ***Duration***	**Model 4.** ***Age***	**Model 5.** ***Timing***
US migration	1.11**	1.05			
Never in the US In the US for up to 2yrs In the US longer than 2yrs			ref 1.04 1.06		
Never in the US In the US before age 20 In the US after age 20				ref 1.14** 1.01	
Never in the US 1st child before migration Migration before 1st child					ref 1.13** 0.98
Age cohort 50-60 60-74 75+		ref 1.17*** 1.24***	ref 1.17*** 1.24***	ref 1.17*** 1.24***	ref 1.18*** 1.24***
Education None Some elementary More than elementary		ref 0.92** 0.65***	Ref 0.92** 0.65***	ref 0.92** 0.65***	ref 0.92** 0.65***
Ever in a union		29.61***	29.61***	29.61***	29.39***
Urban Community		0.82***	0.82***	0.83***	0.82***
N	*4237*	*4237*	*4237*	*4237*	*4237*
Source: MHAS, 2001 weighted statistics, ref = reference category *p<0.10, **p < 0.05, ***p <0 .01					

Table 2b. Children Ever Born among Mexican Women by temporary U.S. migration experience. Coefficients are expressed as Incidence Rate Ratios					
	Model 1. ***Unadjusted***	**Model 2.** ***Adjusted***	**Model 3.** ***Duration***	**Model 4.** ***Age***	**Model 5.** ***Timing***
US migration	0.79**	0.90			
Never in the US In the US for up to 2yrs In the US longer than 2yrs			ref 0.85 0.94		
Never in the US In the US before age 20 In the US after age 20				ref 0.75* 0.94	
Never in the US 1st child before migration Migration before 1st child					ref 1.04 0.56**
Age cohort 50-60 60-74 75+		ref 1.10*** 1.07	ref 1.10*** 1.07	ref 1.10*** 1.07	ref 1.10*** 1.07
Education None Some elementary More than elementary		ref 0.87*** 0.51***	ref 0.87*** 0.51**	ref 0.87*** 0.51***	ref 0.87*** 0.51***
Ever in a union		4.45***	4.45***	4.44***	4.42***
Urban Community		0.88***	0.88***	0.88***	0.88***
N	*5152*	*5152*	*5152*	*5152*	*5152*

Source: MHAS, 2001 weighted statistics, ref = reference category
*p<0.10, **p < 0.05, ***p <0 .01

Table 3. Negative Binomial Regression Results predicting Agee Specific Fertility due to U.S. Migration Experience. Coefficients are expressed as Incidence Rate Ratios.				
Age	**Men** *n=4,237*		**Women** *n=5152*	
	Gross	**Net**	**Gross**	**Net**
15-19	1.06	1.06	1.11	1.42*
20-24	1.16	1.15	0.94	1.03
25-29	1.07	1.09	0.89	0.97
30-34	1.04	1.02	0.72**	0.79*
35-39	1.23***	1.17**	0.89	0.99
40-44	1.29***	1.20**	0.73	0.79
45-49	1.16	1.05	0.39	0.58

Source: MHAS, 2001 weighted statistics.
Models adjust for education, cohort, and urban residency
*p < 0.10, ** p < 0.05, ***p < 0.01