

# Leaders and Followers: The Development of International Migration Networks in Rural Guatemala

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# Research Questions

- Can we empirically identify a juncture point in the historical development of community based migration that marks the transition from an initial phase of low levels of migration and gradual growth into a take-off phase, in which the prevalence of migration grows at a more accelerated rate?
- Does this juncture point exist at roughly similar levels of migration in the development of community migration streams, across communities?
- Are first-time migrants in the initial phase (the leaders or pioneers) different from first-time migrants in the take-phase (the followers)?
- What is the nature of leader selectivity?

# Background

- The idea that migration levels will grow in a community at an accelerating rate after an initial period of gradual growth, and up to some saturation point, is implicit in the theory of cumulative causation.
- Few attempts have been made to model the early growth and take-off of community migration streams, and to systematically identify juncture points. (Massey, Goldring, Durand 1994 use cutpoints at 10%, 20%, 30%, 40% in migration prevalence ratios to define stages in the development of community migration systems).
- The identification of juncture points and an early pre-take-off stage is useful for describing pioneer migrants.
- The image of early, or pioneer migrants, as a highly self-selective group is common in the migration literature, but there are few systematic, empirical comparisons of pioneer migrants with the migrants that follow.
- In this paper we use linear spline regression models to empirically identify the take-off point in community based U.S. migration in a sample of rural Guatemalan communities, and we compare the social status and human capital of the first migrants (leaders) with subsequent migrants (followers).

# Data and Methods

- Guatemala Migration Survey, 2000-2002.
- Western highland department of Quiché.
- 2 towns (cabeceras), 5 villages.
- Ethnically mixed, ladinos, bi-lingual Mayas, mono-lingual Mayas.
- Random selection of households in the two towns, interviews of all households in the rural villages.
- 574 households; 3,769 individuals.
- Interviews with head and spouse (information on household assets, household register, migration, family networks, and head's life history), separate interviews with currently married women ages 15-44 (reproductive behavior and life-histories).

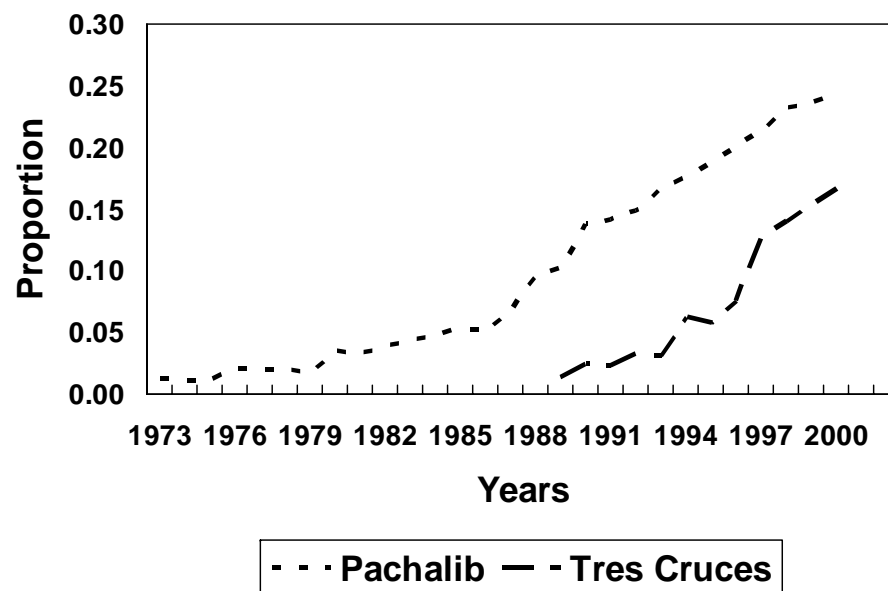
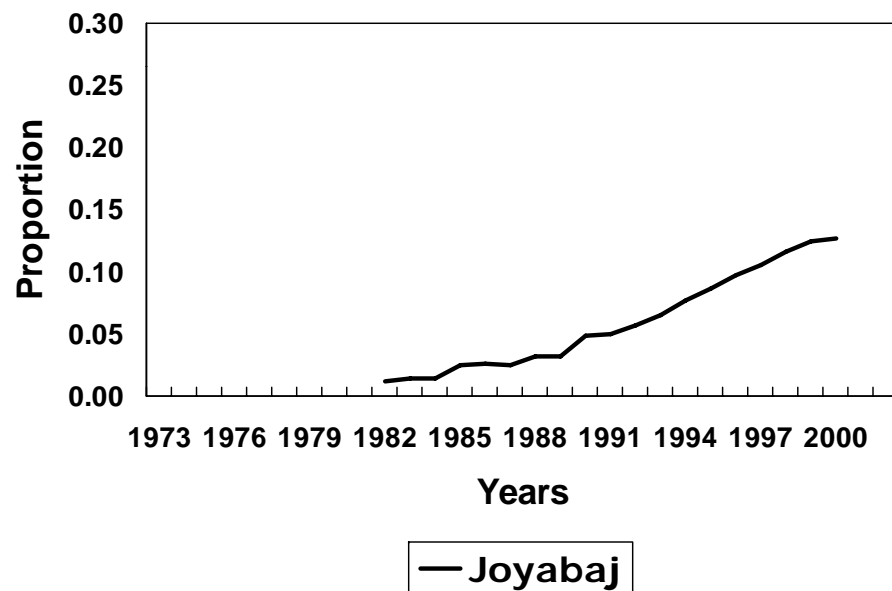
## Sample Characteristics, Guatemala Migration Study, 2000-2002

Community	Number of households	Number of households in sample	Percent of sampled indigenous population	Percent of adults 15-64 with internal migration experience		Percent of adults 15-64 with U.S. migration experience	
				Men	Women	Men	Women
Joyabaj	1,400	204	48.3	32.3	28.7	19.3	2.6
Pachalib	80	59	22.8	33.1	25.5	36.0	0.0
Tres Cruces	40	39	96.3	46.0	23.6	33.3	5.6
Pachalum	500	149	11.2	34.9	39.6	30.1	0.6
El Cimarron	50	46	0.0	32.3	26.3	39.4	0.0
El Cipres	50	41	91.1	70.9	45.5	36.0	2.3
Las Azucenas	50	36	100.0	78.3	61.8	23.2	0.0
Total		574					

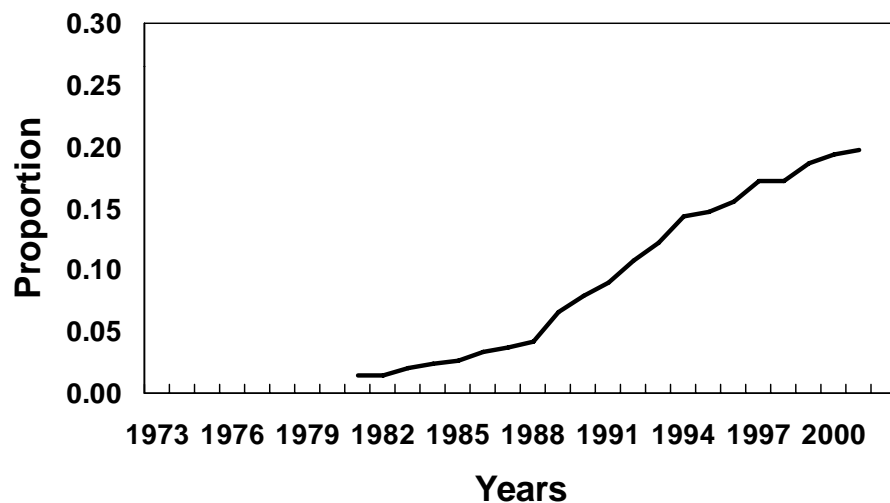
# Methods

- Define male prevalence ratio as proportion of men ages 15 and above alive in a given year who have ever been to the United States.
- Start community migration history with the first year in which the prevalence ratio exceeds 0.01.
- Estimate linear spline regression models for each community for all possible knots (inflection points).
- Select as the best fitting model the model with the largest F-statistic (and positive and significant slopes).
- Find the mean prevalence level at the knots and define this level as the juncture point marking the start of the take-off phase in community migration.

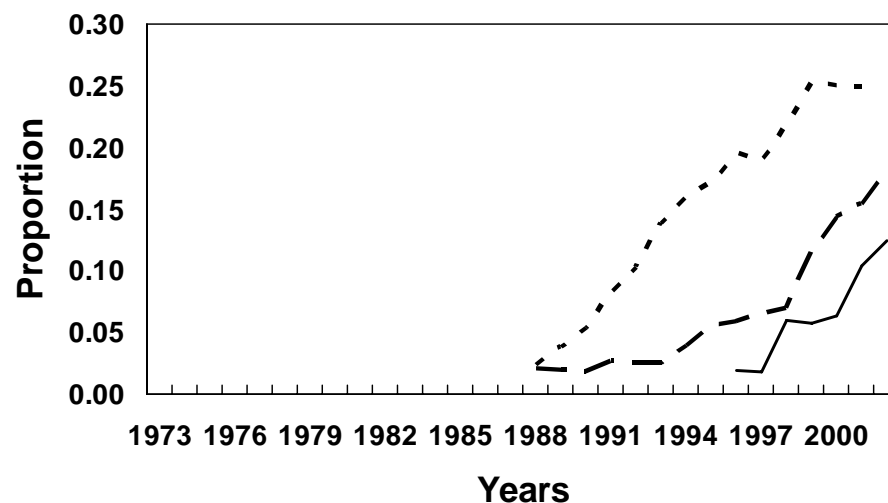
## Prevalence of Male U.S. Migration, Municipality of Joyabaj, Quiche.



## Prevalence of Male U.S. Migration, Municipality of Pachalum, Quiche.



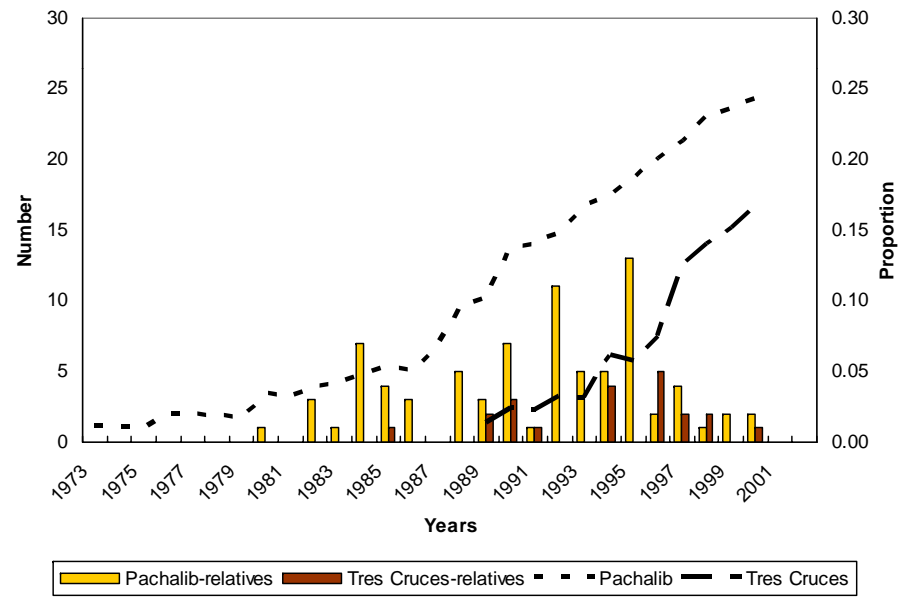
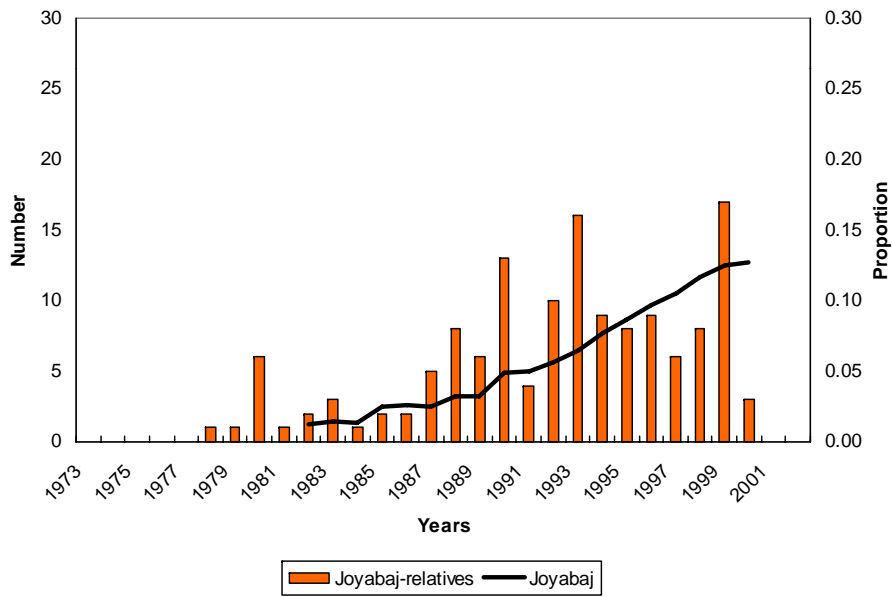
— Pachalum



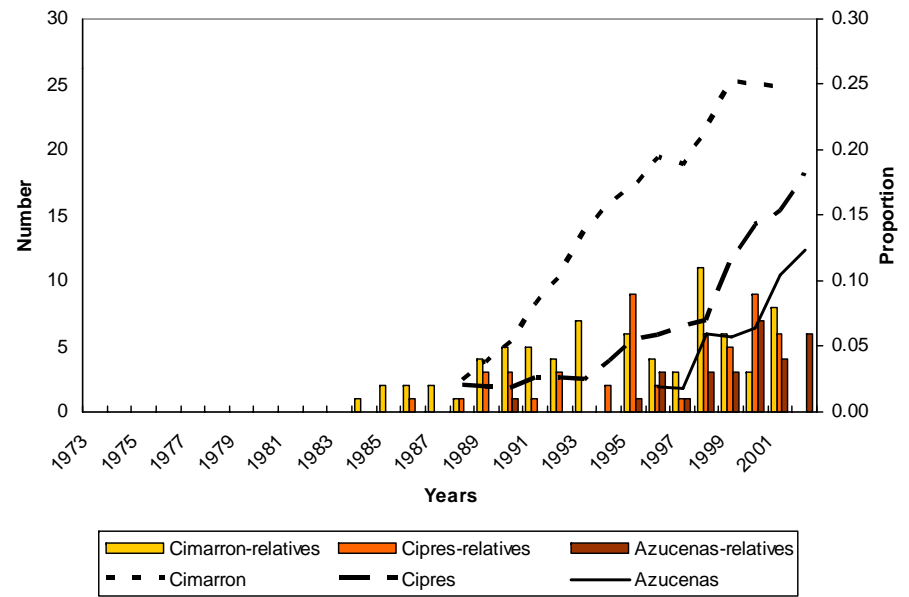
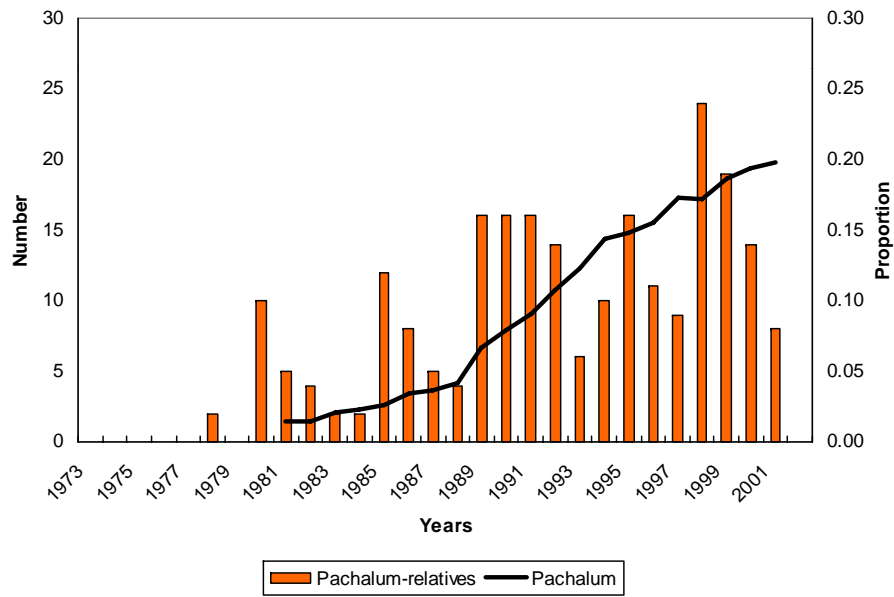
- - - Cimarron - - Cipres — Azucenas



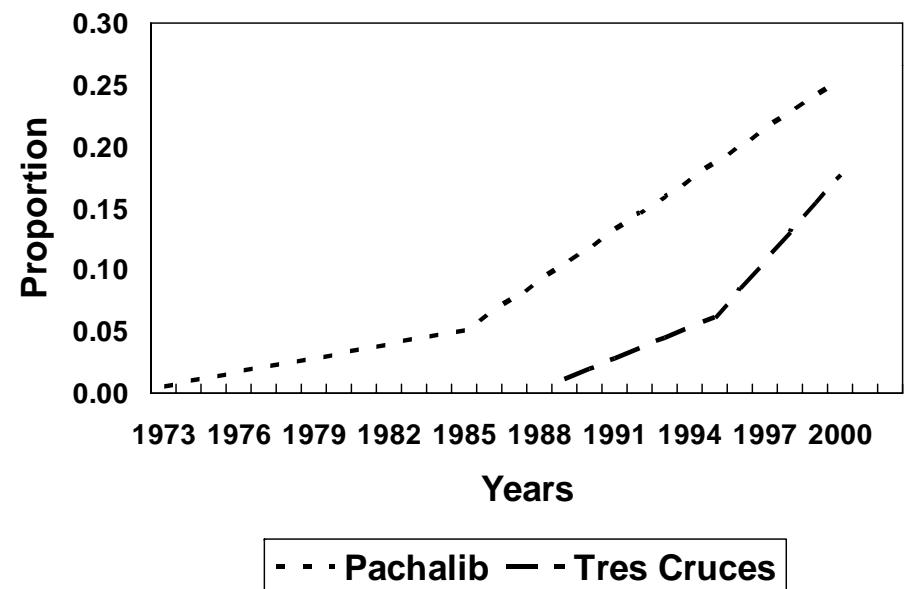
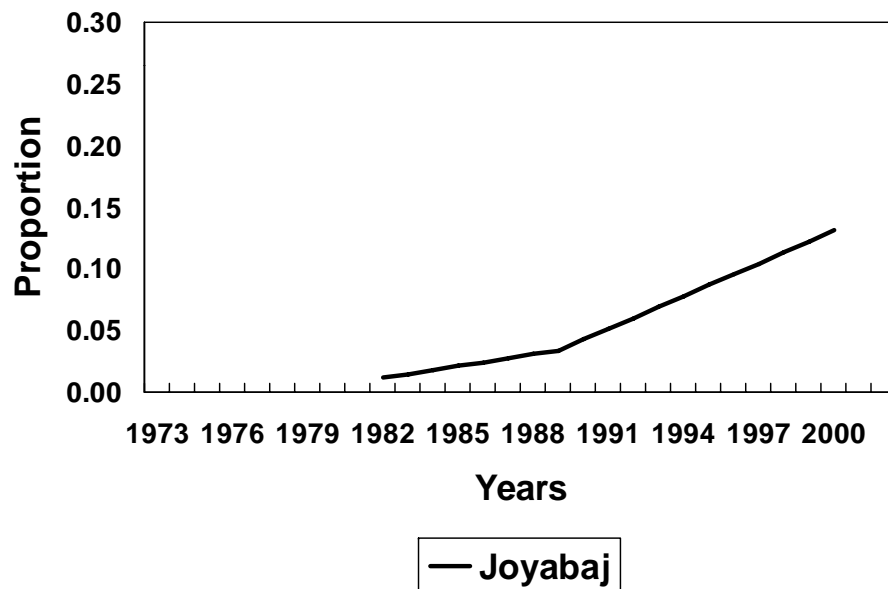
# Number of Origin Family U.S. Migrants by Year of First Trip, Household Heads in Joyabaj, Quiche.



# Number of Origin Family U.S. Migrants by Year of First Trip, Household Heads in Pachalum, Quiche.

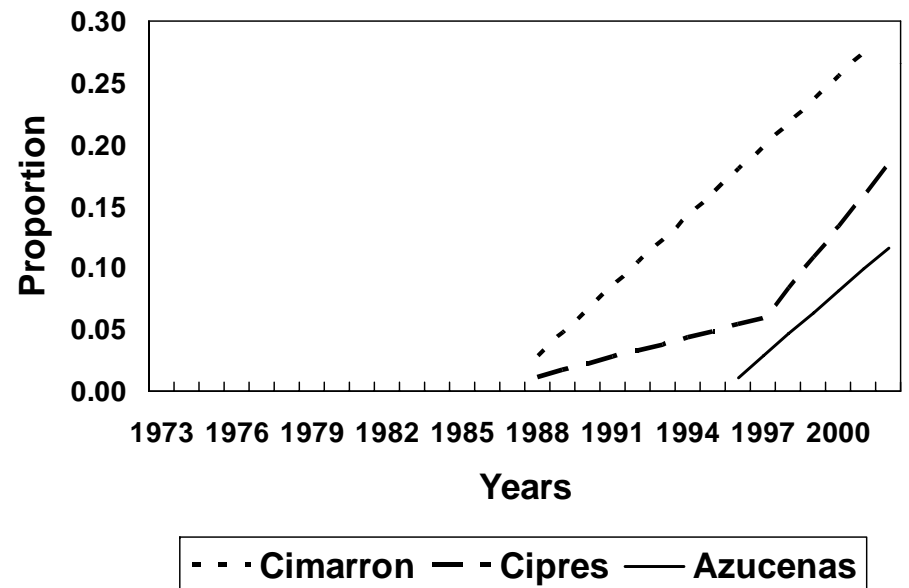
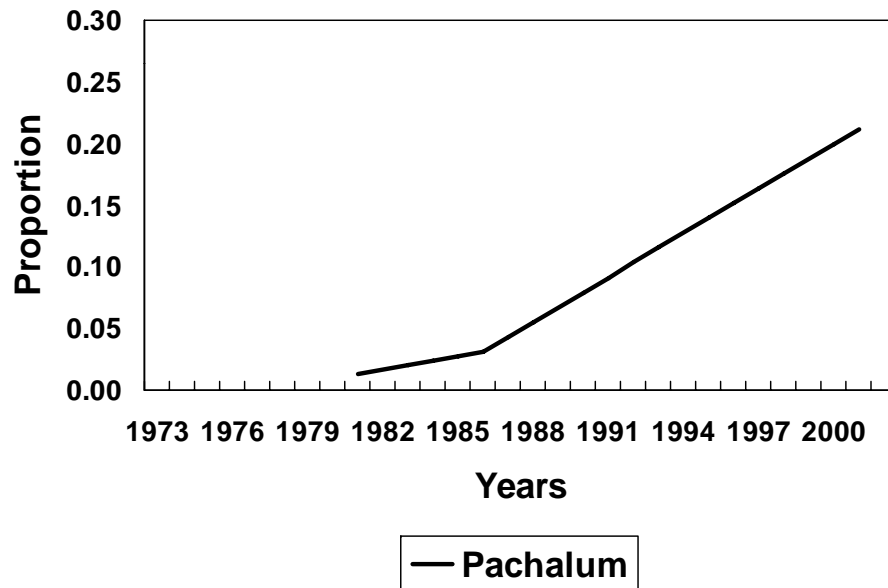


## Linear Spline Estimates of Prevalence of Male U.S. Migration, Joyabaj.



$R^2$ : Joyabaj 0.994; Pachalib 0.993; Tres Cruces 0.972.

# Linear Spline Estimates of Prevalence of Male U.S. Migration, Pachalum.



R<sup>2</sup>: Pachalum 0.989; Cimarron 0.973; Cipres 0.981; Azucenas 0.914.

## Summary: Analysis of Prevalence Levels

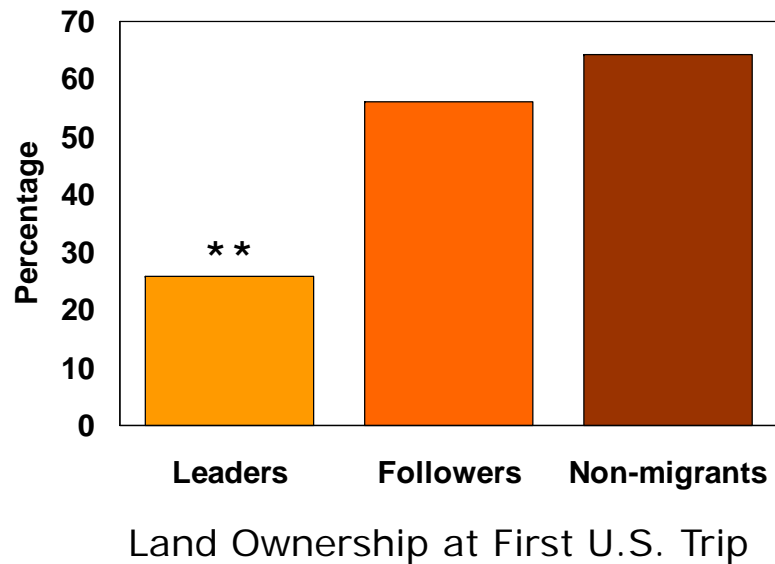
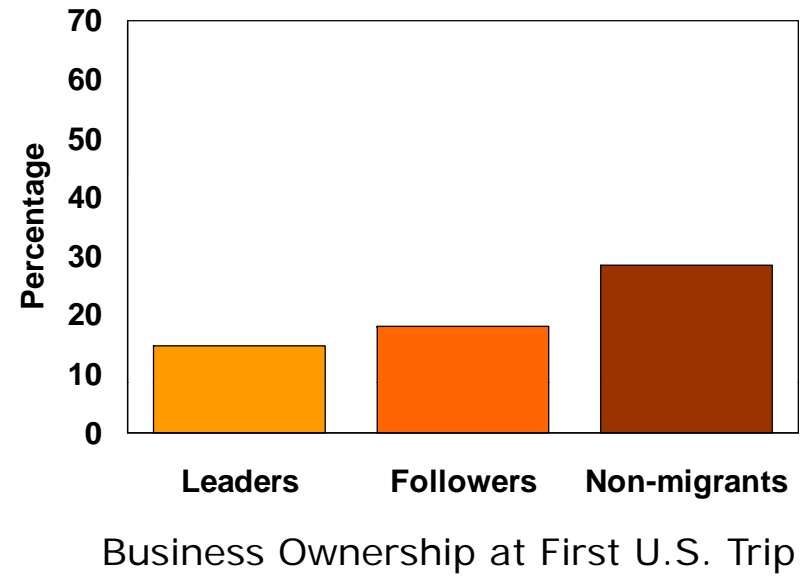
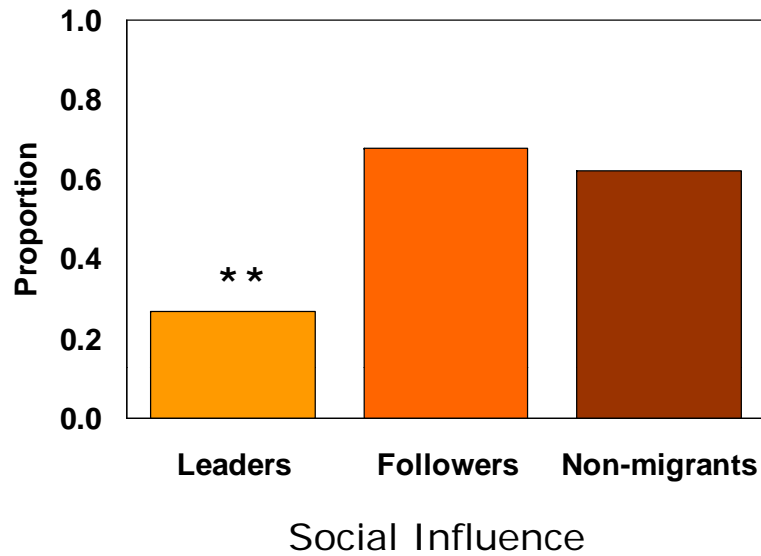
- Linear spline model fits data exceptionally well in five of the seven communities.
- Migration prevalence ratio at the take-off points (knots) range from 0.03 to 0.06, with a mean of 0.05.
- In two communities migration spreads so rapidly there is no inflection point in the time trend in the prevalence ratio.
- Define pioneers or leaders as men who migrate to the U.S. for the first time before the prevalence ratio reaches 0.05.

# How Do Leaders and Followers Compare?

Four dimensions

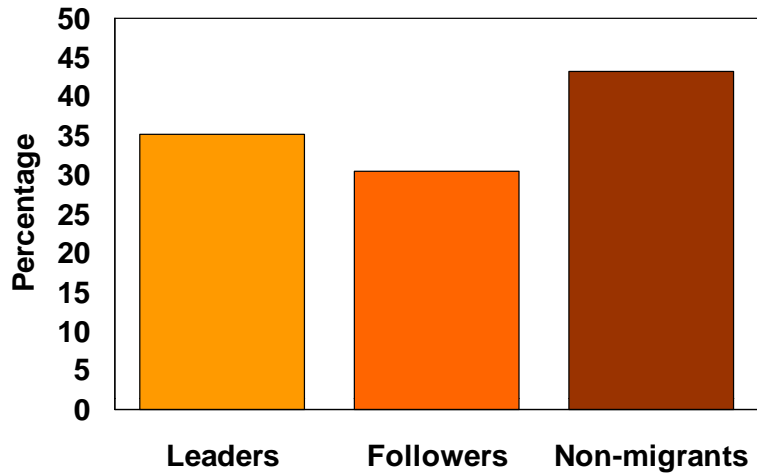
- **Social and economic resources:** index of social influence (0-9 has siblings-parents in positions of influence in community), business, land ownership.
- **Migration resources:** previous internal migration experience, siblings-parents prior U.S. migration experience, legal documents first U.S. trip.
- **Human capital:** years of schooling, language.
- **Life course:** age and marital status at time of first U.S. trip.

# Social and Economic Position

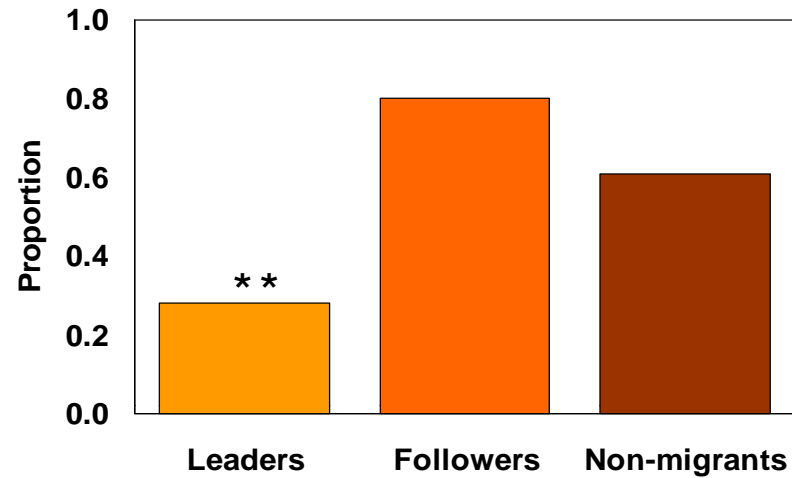


\*\*p<0.01, \*p<0.05, †p<0.1

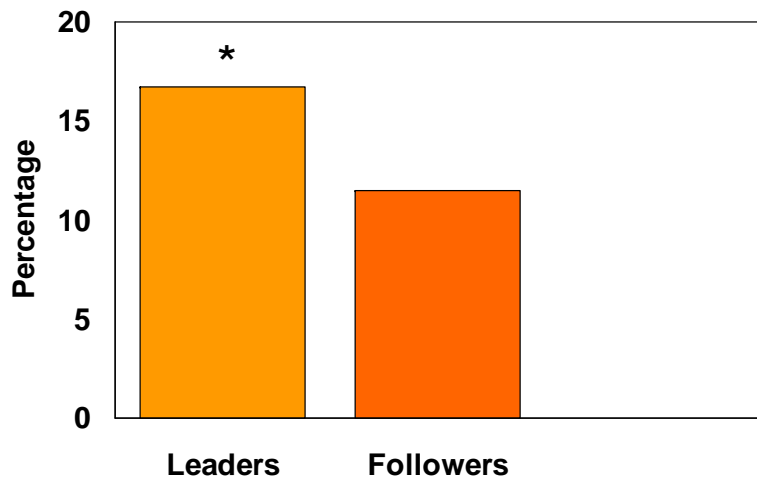
# Migration Resources



Previous Internal Migration Experience



Siblings/Parent U.S. Migrants at First U.S. Trip

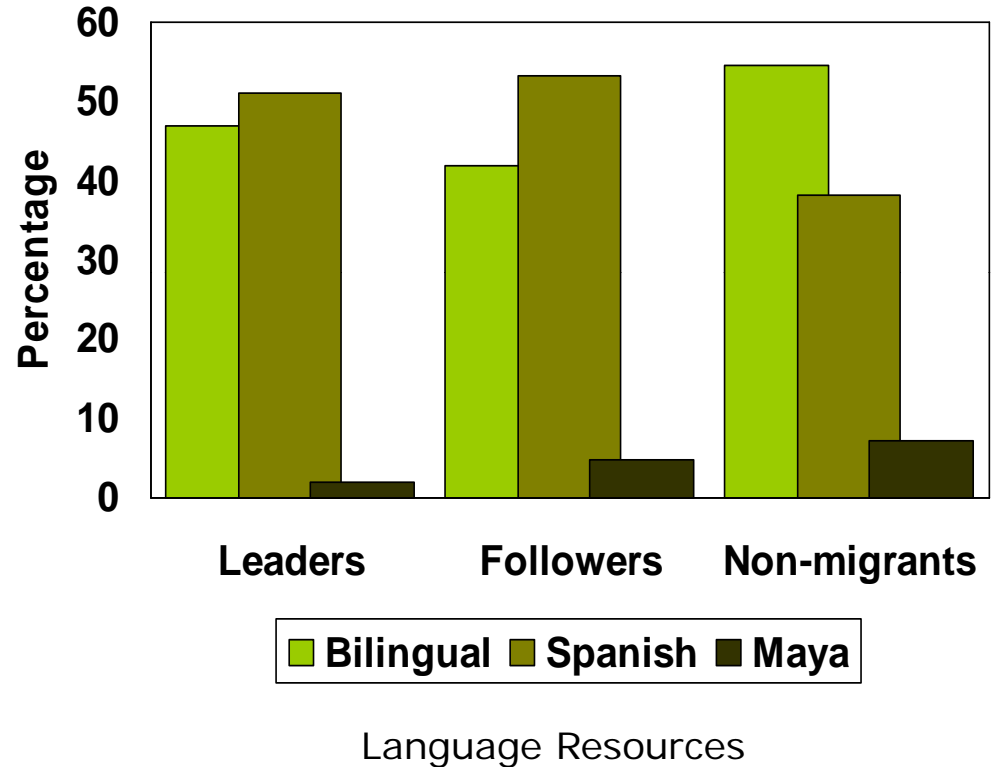
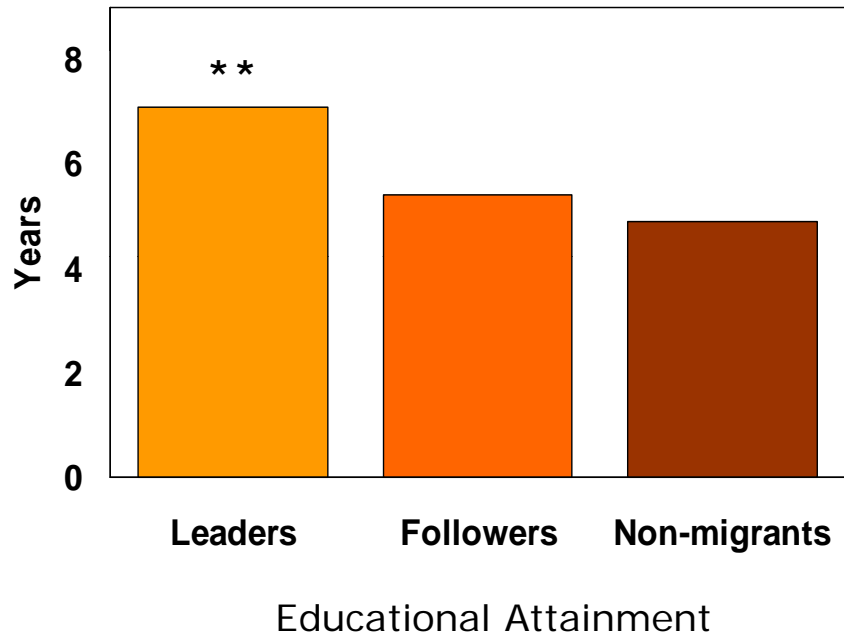


Legal Documents on First U.S. Trip

\*\*p<0.01, \*p<0.05, †p<0.1

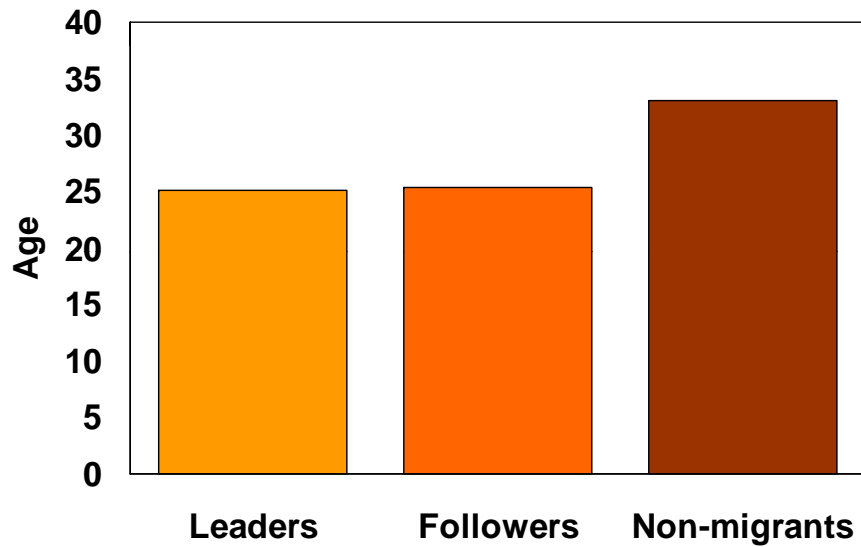


# Human Capital

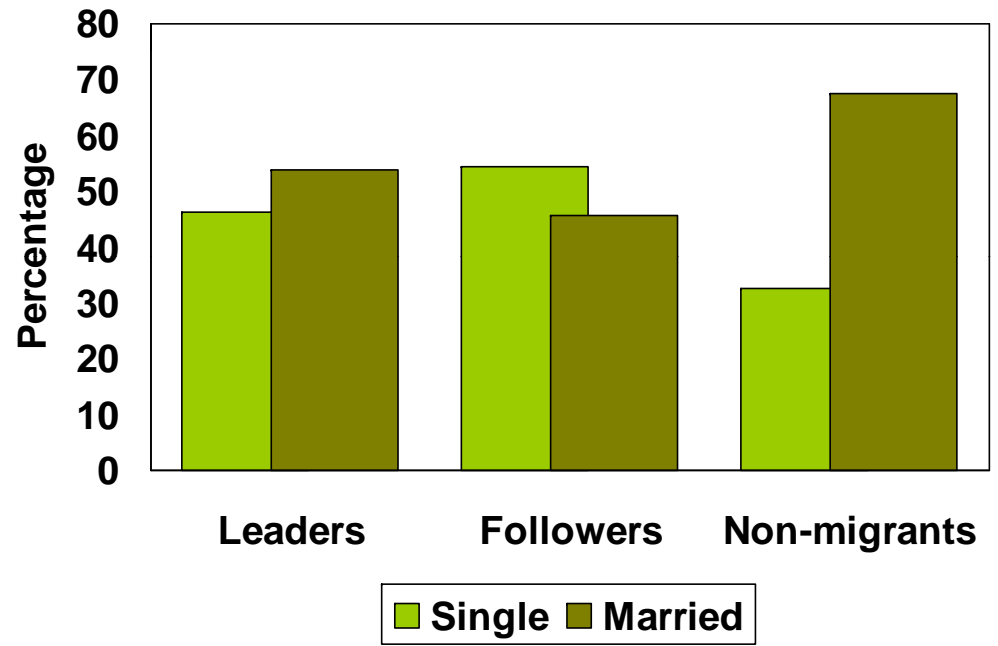


\*\*p<0.01, \*p<0.05, †p<0.1

# Life Course



Age at First U.S. Migration



Marital Status at First U.S. Migration

## Summary

- Migrant leaders are in a marginal social and economic position in their communities before they migrate.
- They come from families that do not occupy positions of influence in the community, and they are likely to be landless.
- Migrant leaders, however, tend to possess somewhat better human capital than followers – on average they are better educated and are more likely to speak Spanish.
- Migrant leaders have much to gain from migration in terms of the opportunity to improve their relative position in the community of origin.

## Implications for Subsequent Research

- We present a simple method for defining the take-off point of community migration streams that can be used for comparative purposes.
- In the context of western Quiche our method provides very similar results across seven communities.
- Clear evidence that first migrants are in a social and economic marginal position in their communities. Subsequent work will focus on developing composite index to better identify relative socioeconomic position of migrant leaders in their communities at the time of migration.