Chapter 8
The Occupational Mobility of Return Migrants: Lessons from North America

David P. Lindstrom

8.1 Introduction

Migrant labor is widely considered by population experts and policy makers as essential for meeting the economic challenges posed by population aging in Europe, and in many European countries migration is already a major component of demographic change (Bengtsson and Scott 2011; Bijak et al. 2008; Coleman 2006; Coleman and Rowthorn 2011). Recognition of the critical role of migration in Europe's demographic future has elicited concerns about the capacity of European societies to fully integrate and assimilate immigrants, and the long-term impact of immigrants on the ethnic and cultural identity of the host societies (Coleman 2006). The need for migrant labor in the face of increasing public anxiety and opposition to continued immigration has spurred renewed interest in temporary-migration programs, which are increasingly viewed by policy makers as beneficial to both host and source countries (Amin and Mattoo 2005; Walmsley and Winters 2005; Winters et al. 2003). Such programs provide host countries the labor they need without the social costs of immigrant incorporation, and they provide source countries the saved earnings and enhanced human capital of returning migrants. The success of temporary-migration programs in meeting the expectations of both host and source countries hinges not only on migrants returning home at the end of their contracts, but also on the amount of savings and new skills they bring back (IOM 2010; Plaza 2008). This chapter uses retrospective occupational and migration histories collected in Mexico to examine the occupational experiences of Mexico-U.S. migrants after returning to Mexico. The North American case shares many parallels with contemporary migration patterns in Europe and can highlight factors that influence the transferability of financial

D. P. Lindstrom (✉)
Population Studies and Training Center, Brown University, Providence, RI, USA
e-mail: David_Lindstrom@brown.edu

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and human capital acquired from migration to source country labor markets—a key element of the current rationale for temporary-migration programs.

The chapter examines the impact of the event of return on occupational transitions, and the impact of cumulative U.S. migration experience on occupational transitions and life-time occupational mobility in Mexico. Results from the analysis suggest that the risk of downward occupational mobility at the time of reentry into the Mexican labor market is an added cost to returning home that could discourage return migration. Our results also shed light on the use of remittances for the purchase of land and the establishment of businesses in home communities. In addition to being an avenue for upward economic mobility, investments in capital assets and self-employment may be a substitute for employment in the home country labor market.

8.2 Background: Guest-Worker and Temporary-Migration Programs

8.2.1 The European Experience

Economic recovery and growth in Northwestern Europe after the end of the Second World War created a demand for manual labor that could not be satisfied by the domestic labor force alone. Beginning in the early 1960s, the Federal Republic of Germany and other European countries partially met the demand for workers through the establishment of guest-worker programs with Turkey and later other countries. The oil crisis in 1973 and the accompanying economic slowdown led to the termination of most guest-worker programs (Ünver 2006). The original intention of the guest-worker programs was that migrants would return to their home country after their contracts ended (Coleman and Rowthorn 2004). Many workers did return home, but many remained and were joined by family members. Sluggish economic growth in the 1980s and growing unemployment led to efforts by some European countries to encourage former guest-workers and their families to return to their home countries. The largest importers of guest-workers, Germany and France, initiated repatriation schemes that provided financial incentives to immigrants to return to their countries of origin (Dustmann and Kirchkamp 2002; Fassmann and Munz 1992). Relatively few immigrants took the incentives. The flow of migrants increased in spite of efforts by countries to tighten their borders (Hollifield 1994; Hooghe et al. 2008; Jandl 2007).

In addition to the gradual growth of immigrant stocks in many Northwestern European countries, population aging and the demand for low-skilled workers transformed former labor exporting countries such as Ireland, Portugal, Spain, Italy and Greece into countries of immigration (Arango and Martin 2005; Marques 2010; Peixoto 2009). The expansion of the European Union into Central and Eastern Europe in recent years has been an important stimulus for migration from former

East Bloc countries into Northwestern and Southern Europe (Ruhs and Anderson 2010). Poles, Albanians, and Ukrainians can now be found in large numbers in countries like the UK, Portugal, and Italy (Kosic and Triandafyllidou 2004). Immigrant populations from Africa, Asia, and Latin American are also sizeable in many European countries and constitute approximately 60 % of all non-EU foreign born residents in the EU-27 countries (Vasileva 2010). As of 2009 the percent of foreign born residents in many European countries was comparable to, or higher than, the percent of foreign born residents in the United States (12.2 %) (U.S. Census Bureau 2009: Table 1.1). For example, the percent foreign born in Ireland was 14.1, in Germany 11.6, in France 11.0, in Spain 11.1 and in Denmark 8.8 (Vasileva 2010: 2). With the rise in human smuggling, irregular migration is increasingly viewed as a serious problem in the European Union. A number of responses at the national and EU level have been implemented to try to discourage irregular migration including employer sanctions, stronger enforcement efforts, and exclusionary social policies (Engbersen and Broeders 2009). There is renewed interest in Europe in returning to temporary-migration programs as a way to meet the demand for labor without resorting to permanent immigration (Commission of the European Communities 2005; Hoekman and Özden 2010; Martin 2006; Ruhs and Martin 2008). Several EU countries have established Mobility Partnerships and other programs granting temporary work visas with countries on the outer borders of the EU based on the idea that migration can be managed (Castles 2006; Djajić and Michael 2009; Finotelli and Sciortino 2009; Parkes 2009). The underlying assumption for many of the new temporary migration programs is that both the host and source countries can influence return migration through coordinated policies (Djajić and Michael 2009). Indeed, many migrants from new EU countries as well as countries on the periphery of the EU return to their home countries, and some engage in a pattern of repeated migration, contributing to the renewed confidence that migration flows can be effectively managed (Barrell et al. 2010; Constant and Zimmermann 2011; Rye and Andrzejewska 2010).

8.2.2 The North American Experience

One of the largest cross-border migration systems in the world is Mexico-U.S. migration. As of 2009 an estimated 11.5 million Mexican born persons resided in the United States (Grieco and Trevelyan 2010: 2). About 58 % of this population is estimated to be in the United States without legal documentation (Passel and Cohn 2011: 11). Although migration from Mexico to the United States has a history reaching back to the nineteenth century, the evolution of current migration patterns can be traced to the Bracero program. The Bracero program was initiated by the United States with Mexico in 1942 to address labor shortages in agriculture created by military conscription during the Second World War. The program was repeatedly renewed over the years and by the time of its termination in 1964 a total of 4.6 million Mexican workers had been admitted into the United States on

temporary work visas (Calavita 1992: 218). The actual number of Mexican workers entering the United States during the 22 year history of the Bracero program was much larger due to the undocumented migration that the program generated. Having established personal ties to employers in the United States, many migrants returned in subsequent years without authorization from the program. The termination of the Bracero program did not lead to the end of Mexico-U.S. migration, but rather ushered in a new era of undocumented migration (Massey et al. 2002).

By the mid 1980s, Mexico-U.S. migration had evolved into system of circular flows in which most migrants entered the United States without legal documentation; worked in agriculture, construction, and other seasonal jobs; and returned to Mexico within five years (Massey et al. 2002; Reyes 2001). The largest component of the circular flow was undocumented men, who tended to remain in the United States for durations of less than one year (Reyes 2001). The 1986 Immigration Reform and Control Act changed the dynamics of Mexico-U.S. migration. It provided a pathway to legalization for millions of undocumented immigrants in the United States, and at the same time it increased efforts to restrict unauthorized border crossings and the hiring of undocumented migrants. Both measures contributed to a trend toward longer migrant trips, and family reunification and settlement in the United States (Alba 2010; Massey et al. 2002).

During the most recent decade migration from Mexico to the United States has been marked by an overall decline in the flow of new entries, with the sharpest decline occurring after 2006 (Passel and Cohn 2009, 2010). Although the majority of Mexican migrants entering the United States in any given year continue to enter without legal documentation, the number of migrants entering on temporary work visas has been on the rise (Papademetriou et al. 2009). In 2009, 206,000 temporary work visas were issued for seasonal agricultural and non-agricultural work of which 179,000 went to Mexican workers (Department of Homeland Security 2009). The expansion of temporary worker programs is closely linked to current discussions in the United States of regularizing the status of many immigrants who do not have legal documentation, along with proposals for stepped-up interdiction efforts at the border and controls in the workplace on the hiring of unauthorized migrants.

A common lesson from the European and North American experiences with temporary worker programs is that they are not always temporary: in many instances they lead to the long-term settlement of migrant workers and their families (Jacoby 2003; Massey and Liang 1989). The current renewed interest in temporary-migration programs in Europe and the United States is in large part a response to the gradual, but steady, accumulation of settled immigrants from the earlier guest-worker programs. In spite of the renewed optimism that migrant labor flows can be managed with coordinated policies, very little is known about whether return migrants are able to successfully reincorporate themselves into home country labor markets, and the long-term returns on temporary migration experience in the home country. A better understanding of the occupational trajectories of return migrants can help to identify sources of friction to return migration flows, and policies that can reduce that friction.

8.3 Theory

8.3.1 Temporary Labor Migration and Occupational Mobility

Theories of temporary labor migration are either silent on the short and long-term consequences of temporary migration for occupational mobility in the place of origin, or they only consider the role of migrant savings in making the transition into business or land ownership. As we shall argue below, and as the results of our analysis suggest, there are reasons to believe that expectations regarding occupational outcomes after return may influence decisions about trip durations and eventual return. Most analyses and discussions of temporary labor migration draw upon one or more of three theoretical approaches: target income theory, household survival theory, and the New Economics of Labor Migration theory (NELM).

Target income theory was initially developed to explain temporary labor migration in Africa, and has been extended to the case of international labor migration to industrialized countries (Berg 1961; Hill 1987; Piore 1979). The theory assumes that workers have a strong preference for remaining in their home community, but because of limited local opportunities to earn cash they must resort to temporary labor migration. Optimally, migrants would prefer to spend as little time as possible away from home and yet accumulate enough savings from migrant earnings to reach a particular savings target (Berg 1961) or a desired level of net lifetime income (Hill 1987). The theory predicts that migrants return back to their place of origin after they reach a savings target that is based on specific consumption needs or investment plans in the home community. The theory implicitly views temporary labor migration as supplemental to locally produced goods and income, but is silent on how migration experience impacts earning capacity at home.

Household survival theory also views temporary labor migration as supplemental to local income, but it treats labor activities in the home community as part of an integrated household strategy to adapt to changing income needs and opportunities (Konseiga 2006; Wood 1981). It begins with the assumption that households are economic satisfiers that allocate the labor of household members in a way that meets basic consumption needs. In rural areas with limited sources of off-farm income, and in urban areas with restricted access to stable employment, households use the temporary labor migration of one or more of their members as a way to supplement locally generated income streams. While labor migration is used to cover household income deficits it does not alter long-term income generating capacity in the place of origin, and in some instances it may create a lasting dependence on migrant income to meet revised consumption needs (Reichert 1981). The theory assumes that migrants can smoothly transition back into income generating activities in their home community upon return from the place of destination and continue with those activities up to the timing of a new trip. Circular migration systems in which migrants alternate between work in their

home community and temporary work in a place of destination have been documented in many diverse contexts and are consistent with the view of migration as supplemental to income earning activities in the place of origin (Hugo 1982; Massey et al. 1987; Oucho 1998).

The New Economics of Labor Migration also treats households as production and consumption units in which individual members pool resources and risk. The theory focuses on how the absence of smoothly functioning capital markets influences migration behavior (Stark 1991; Taylor 1999). One important market that is absent or poorly developed in low income countries, and especially in rural areas, is the credit market. The absence of affordable credit means that even in economically dynamic areas with investment opportunities, households may use migration to accumulate savings as a substitute for credit (Lindstrom 1996; Lindstrom and Lauster 1999). Research from a variety of different contexts document how households use migration to accumulate savings for investments in agricultural land and livestock, to capitalize small businesses, or for large lump sum purchases such as a house or a motor vehicle (León-Ledesma and Piracha 2004; Massey and Parrado 1998; Woodruff and Zenteno 2007).

Target income theory and household survival theory were developed to explain migration largely in the context of rural households, and the New Economics of Labor Migration demonstrates how temporary labor migration can be used as a vehicle for making capital investments at home. None of the three theoretical approaches to temporary migration address the re-incorporation of returning migrants into non-agricultural employment and in particular urban labor markets. Whether returning migrants are actually able to smoothly transition back into the occupations they held in their home communities prior to migrating is an open question. The failure to transition back to pre-migration income activities after return creates an element of risk and uncertainty in the process of return, and thereby imposes additional opportunity costs to temporary migration in the form of lost income in both the place of destination and the place of origin.

Results from prior research on the economic returns to temporary migration in place of origin are mixed. In a study of the income returns on foreign work experience in Hungary, Co et al. (2000) find that foreign work experience raises women's earnings but not men's. They suggest that the sectors in which men work after return to Hungary, mainly manufacturing and construction, do not reward foreign experience whereas the sectors in which women work, mainly financial services, reward foreign experience. They also suggest that the loss of contacts that men experience while working abroad may result in lower wages. Carletto and Kilic (2009) find in Albania that work experience in Italy and other more distant countries improves the chances of upward occupational mobility, whereas work experience in Greece has no impact on mobility. They attribute this differential effect of migration experience to the type of work that Albanian migrants typically perform in different destinations. Most Albanian migrants to Greece are engaged in agricultural and low-skilled work, whereas migrants to Italy and other countries are engaged in a greater variety of activities. In a study of Egyptian return migrants, McCormick and Wahba (2004) find that urban-origin migrants were

more likely to report having acquired useful skills while working outside the country than rural-origin migrants. They also find that foreign work experience is associated with the accumulation of financial capital and investment in small businesses. Similarly, Ilahi (1999) in a study of Pakistani return migrants and Coulon and Priacha (2005) in a study of Albanian return migrants find that migrants with large savings from foreign work tend to opt for self-employment and establish small businesses. Two common themes in studies of the returns on foreign work experience are: (1) the type of employment in the destination country influences the opportunities to acquire valuable skills; and (2) foreign work experience is associated with self-employment and small business formation upon return to the home country. Some studies also report higher levels of unemployment among return migrants compared to pre-migration levels (Azam 1991).

8.3.2 Reentry into the Labor Market as a Type of Job Search

For theoretical and analytical purposes we identify two components of the relationship between international migration experience and occupational mobility in the country of origin. The first component is the impact that withdrawal from the origin labor market has on the chances that one is able to reenter the same occupation upon returning to the community of origin. The mere fact that one has left a job to out-migrate places one at risk of not returning to the same occupation that one held prior to migration. This potentially disruptive component of migration is present regardless of how international migration experience is valued in the origin labor market. The second component of the relationship between international migration experience and occupational mobility is the economic return in the home country on cumulative migration experience. International migrants may acquire skills while working abroad that enhance productivity and that are valued in the origin labor market. Migration experience can impact occupational transitions in the home community at the time of return, and can have a cumulative effect across migrants' working careers that impacts life-time occupational mobility.

8.3.3 Return Migration and the Job Search Process

To explain the process of reentry into the origin labor market we present a simple job search model. Let us assume that currently employed workers compare wage offers to their current wage and transition to a new job when a wage offer is better than their current wage. In this case we would expect voluntary job transitions to result in a wage that is equal to, or better than the current wage. In the absence of a better wage offer, employed workers remain in their current job (Parsons 1973). In the case of unemployed workers, wage offers are compared to a reservation wage,

which is the lowest wage a worker is willing to accept. Unemployed workers remain unemployed until they locate a wage offer that is above the reservation wage (Lippman and McCall 1976). There is an opportunity cost, in the form of lost wages, associated with remaining unemployed during the job search (Mattila 1974; Mortensen 1986). There are also diminishing returns in the job search process. As the most promising and desirable job potentials are exhausted, the search is extended to increasingly less desirable jobs and more distant labor markets, which places downward pressure on the reservation wage (Kasper 1967).

In both the case of employed and unemployed workers, the expected waiting time to a better wage offer and a job transition is determined by the worker's skills, experience, and age; labor market conditions including turn-over and growth in positions for which the worker's human capital endowments are a good match; and the extensiveness and labor market location of the worker's social networks (Montgomery 1991). There is also a stochastic component in the occurrence and timing of better wage offers. From the perspective of an employed or unemployed worker the waiting time until a desirable job becomes available is not predictable (Mortensen 1986; Van Dijk and Folmer 1985).

Let us now extend this simple job search model to the case of return migration and occupational change. If the decision to return to the place of origin is linked to job offers in the place of origin, then the process of return migration and reentry into the origin labor market is similar to the situation of the currently employed. Temporary migrants in a destination who have met a savings target, begin the search for employment in their place of origin while they are still working in the place of destination and time their return to a job offer that is comparable or better to the last job they held in the place of origin before migrating to the destination country. In this case we expect:

1. Return to be associated with reentry into a similar or better paying occupation.

The timing of return migration in connection to securing a job that is comparable or better to the job that one left prior to migration minimizes the lost income that is associated with the job search process after return. It also maximizes the total amount of migrant savings that can be used for capital investments or non-essential expenditures by establishing an income stream in the place of origin as soon as possible.

If the decision to return is not linked to job offers in the place of origin, then the process of return migration and reentry into the origin labor market is similar to the job search process of the unemployed. The event of returning to the origin labor market is equivalent to being involuntarily separated from a job in the sense that the state of being without employment and engaged in the job search is not timed to existing wage offers. Because of both the stochastic component in the timing of desirable job offers and the diminishing returns in the job search process we expect that:

2. Return migration is associated with both transitions into a better paying and a worse paying occupation than the one held prior to out-migration from the place of origin.

Because being unemployed while engaged in the search process is associated with the depletion of migrant savings there is a strong incentive for return migrants to accept a less desirable job (or lower occupation) in the absence of a comparable or better job offer. Therefore, we expect:

3. The risk of returning to a worse paying occupation to be larger than the risk of returning to a better paying occupation.

This last hypothesis is consistent with the observation made by Blau and Robins (1990) that employed workers are more successful in the job search process than unemployed workers, and therefore, unemployed workers might improve their chances in the search process if they accept the first offer available and then continue the job search as an employed worker. The pressure on returning migrants to take the first job available is also consistent with negative duration dependence in the time it takes the unemployed to find a job—the longer the unemployed search for a job the less likely they will find one (Pissarides 1992).

8.3.4 The Returns on Cumulative Migration Experience in the Place of Origin

The second component in the relationship between international migration experience and occupational mobility is the return on cumulative migration experience. We identify three possible mechanisms that link cumulative migration experience with occupational mobility in the place of origin. The first mechanism is migration as an investment in human capital. Employment in more economically advanced labor markets may provide migrants with new skills and work habits that enhance their productivity in the origin labor market. Many migrants also acquire experience in small service and manufacturing establishments such as restaurants, automobile and machinery repair shops, and metal fabricating that when combined with migrant savings can be used to establish a business in the place of origin. Under the human capital approach the impact of work experience in the destination labor market on occupational mobility in the place of origin will depend on the transferability of skills acquired in the destination labor market to the origin labor market, the extent to which migrant work experience actually enhances productivity, and the extent to which employers in the origin labor market value migration experience. If migration is an investment in human capital that enhances productivity and occupational mobility in the place of origin, then we expect:

4. Cumulative migration experience to improve the chances of upward skill-based mobility through the acquisition of new skills.
5. Nonagricultural work in the country of destination to have a bigger impact on upward mobility than farm work.

The second mechanism linking cumulative migration experience to occupational transitions in the place of origin is the use of migrant savings for capital investments. This mechanism is described by the New Economics of Labor Migration and it directly links the duration of cumulative experience to the total amount earnings that migrants are able to save and remit back home for investment purposes. If migration is a substitute for credit, then we expect:

6. Cumulative migration experience to improve the chances of movement into agricultural land or business ownership in the place of origin.

Because nonagricultural wages tend to be higher than agricultural wages, we expect:

7. Cumulative nonagricultural work to have a bigger impact on movement into agricultural land or business ownership than farm work.

The third mechanism linking migration experience to occupational transitions is the disruptive impact of being away from the origin labor market. While they are away from home, temporary migrants experience some deterioration in their origin-specific human capital. As migrants spend more time in a destination labor market and interact with fellow migrants, work mates, and employers, they build-up the quality and breadth of their social networks and job connections in the destination labor market, yet they also neglect their social and employment networks in the place of origin. The drop in investments in origin network connections reduces the quality of information about job-openings that returning migrants can expect to receive, and the quality of references and recommendations that migrants can expect to receive from former employers. If the skills acquired while working in the destination labor market are not transferable to the place or origin, or if few or no new skills are acquired, then migrants will also lose out on the place-specific skills and experience they would have acquired in the place of origin if they had not migrated. Returning migrants, therefore, experience some depreciation in the value of the work experience they accumulated in the place of origin before migrating and are not able to compensate for this depreciation with the experience they accumulated in the place of destination. Employers in the place of origin may also discriminate against return migrants because they view temporary migrants as being weakly attached to the origin labor market or they may view return as a sign of failure in the destination labor market (Barrett and O'Connell 2001; Schwab 1999). In either case, employers may be reluctant to hire return migrants or to make on-the-job investments in their training. The expected

deterioration in origin-specific human capital associated with temporary migration and the potential employer penalty on migration experience leads to the expectation that:

8. Cumulative migration experience has no effect or a negative effect on upward skill-based mobility, and increases the chances of downward mobility, with no difference in the effects of nonagricultural and agricultural experience.

8.4 Data and Methods

For the analysis, we use retrospective life-history data collected by the Mexican Migration Project for male household heads in 88 Mexican communities. The communities are drawn from 17 of the 32 Mexican states, and incorporate traditional migrant sending regions and relatively new source areas of migration to the United States. The communities were purposively selected to represent a range of sizes, economic bases, and migration levels. They encompass villages and secondary towns, market towns, cities, and metropolitan areas. In most communities the sample consists of 200 households selected through simple random sampling, although samples tended to be smaller in the less populated places. Sampling frames were constructed by conducting a census of all dwellings in the community, or of specific neighborhoods in the case of large urban areas. Interviews in Mexico were typically conducted in December and January, when the return of migrants to Mexico for the Christmas holidays is at a peak. Interviews were conducted with the household head and spouse of the head if the household was headed by a couple. In cases where the household head was away in the United States at the time of the survey, the spouse or another senior member of the household provided data on the household head's migration and occupational history. Data for the 88 communities were collected between 1987 and 2002, with 3–6 communities surveyed in most years (http://mmp.opr.princeton.edu).

The occupational histories record change in occupations (not jobs), and change in place of occupation at the municipal, state, and country level. We use the retrospective migration and occupational histories for male household heads ages 25 and above to construct a life history file in which each record represents one life year. The life-histories start at age 17 or the age at first occupation if the household head started working after age 17, and are right-censored at the year of the survey, or at age 65, or in the last year of economic activity for men who became disabled or retired before age 65. Complete migration and occupational histories were available for 9,356 male household heads.

We classified the occupations into five categories: farm workers with 10 hectares or less of farm land, unskilled, skilled, professional, and land (more than 10 hectares) or businesses owners. Street vending and market stalls were not considered businesses. We treat the farm workers, unskilled, skilled, and professional occupations as ordered categories from lowest to highest based on education

and skill requirements, and earnings. An analysis of the mean incomes for household heads in these categories validated this ordering. Although the mean income for land and business owners was greater than that of professionals, we treat the land and business owner category as an unordered occupational category. We defined occupational transitions as a change in occupational category from one life year to the next. Because we are interested in occupational change in Mexico, and in particular occupational change among return U.S. migrants, we assign the occupation a migrant held in Mexico prior to departure on a U.S. trip to the life years during which the migrant was in the United States. An occupational transition upon return to Mexico occurs if the occupation the migrant enters after return is different from the occupation held prior to migrating to the United States. Because the time unit used for the occupational histories is a year, unemployment spells of less than one year are not recorded. The year in which an unemployment spell occurs is classified by the primary occupation during the year or the last occupation held prior to unemployment.

Figure 8.1 presents a graphical image of a migration and occupational history. At age 17 and year t_1 the subject is in an unskilled occupation. In year t_a the subject migrates to the United States and in year t_b the subject returns to Mexico. Upon return to Mexico the subject enters into a skilled occupation and thus experiences an upward skill-based occupational transition. In year t_c the subject experiences a downward occupational transition into an unskilled occupation, and remains there until the year of the survey. The life years t_1 to t_b constitute an occupational spell during which there is no change in the occupational category in Mexico. The life years t_b to t_c constitute a second occupational spell during which the subject remains in a skilled occupation, and the years t_c to t_{survey} constitute a third occupational spell that ends in censoring. In this example the subject contributes $t_{\text{survey}}-(t_1-1)$ life years and three occupational spells to the occupational transition analysis file.

We use hazard regression models to estimate the impact of return migration and cumulative migration experience on the likelihood of making upward and downward skill-based occupational transitions, and transitions into land or business

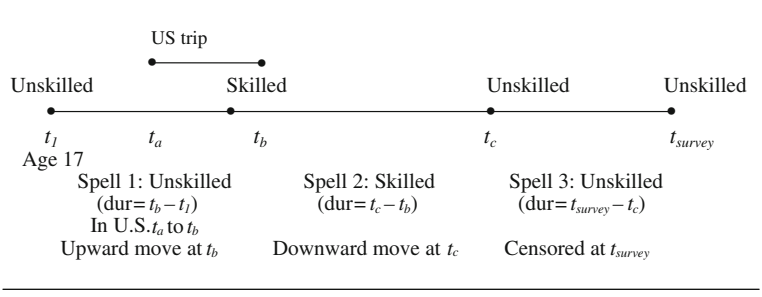

Fig. 8.1 Occupational spells and life-time mobility

ownership. The conditional hazard of an occupational transition in year t_i is defined as:

$$h_i(\mathrm{t_i}|\mathrm{X}, \theta) = \exp[\beta_{i0} + \mathrm{X}(t_i)\beta_i + \gamma_i(t_i^{\gamma} - 1) + c_i\theta]$$

where β_{i0} is a constant term, $\mathrm{X}(t_i)$ is a vector containing the values of the independent variables at time t_i, β_i is a vector of coefficients, γ_i $(t_i^{\gamma}-1)$ is a term for modeling Weibull duration dependence, and $c_i\theta$ is a non-parametric correction term for unobserved heterogeneity specified by Heckman and others (Flinn and Heckman 1982; Heckman and Singer 1984).

We estimate three transition models: the first model estimates the risk of an upward skill-based transition, the second model estimates the risk of a downward skill-based transition, and the third model estimates the risk of a transition into land or business ownership. In each model the risk of a transition is compared to making no transition, and the occupational spell is right-censored if the spell ends in a transition different from the type of transition that is being examined (e.g. the occurrence of a downward transition in the model estimating the risk of an upward transition), or the spell ends at age 65 or the year of the survey.[1] We do not model the risk of transitioning out of land or business ownership because very few individuals move out of this category.

After analyzing occupational spells, we look at the impact of cumulative migration experience on life-time occupational mobility in Mexico using the first and last occupational spells in the occupational history file. For the analysis of life-time occupational change we define three occupational starting points (farm worker, unskilled/skilled, and professional) based on first occupation. We then use multinomial logistic regression models to estimate the impact of cumulative migration experience on the likelihood of being in a different occupational category (downward mobility, upward mobility, or land/business ownership) at age 65 or in the year of the survey (the last observation point). We estimate separate models for each starting point because the set of possible outcomes varies. Men starting as farm workers can only experience upward mobility into an unskilled, skilled, or professional occupation, or mobility into land or business ownership. Men starting in unskilled or skilled occupations can experience upward mobility, downward mobility, or mobility into land or business ownership; and professionals can experience downward mobility or mobility into land or business ownership. Similar to the case of occupational spells, we do not model life-time occupational mobility out of land or business ownership because relatively few men start their working lives in this category, and very few men experience mobility out of it.

[1] Professional occupation spells are excluded from the model of upward mobility because there is no occupational category above professional. Similarly, farm worker spells are excluded from the model of downward mobility because there is no occupational category below farm worker.

8.5 Descriptive Statistics

Table 8.1 presents selected descriptive statistics for the sample of male household heads. The characteristics presented in the table correspond to the year of the survey or age 65. The study subjects are drawn from birth cohorts spanning almost 44 years and their working years cover a half century of change in the Mexican economy and U.S. immigration policy.

On average men in the sample have 6.5 years of completed schooling, although the spread in the distribution is substantial. Roughly one-in-three men had three or fewer years of completed education and another one-in-three men had some secondary education or beyond (figures not shown). Entry into marriage or consensual unions for men and women in Mexico is nearly universal. By age 65, or the

Table 8.1 Selected descriptive statistics, male household heads. Mexican migration project, 1987–2002

	Percent	Mean (std dev.)
Background characteristics		
Cohort 1933–1939[1]	12.7	
1940–1949	25.7	
1950–1959	29.9	
1960–1977	31.7	
Period (life years)[2]		
1950–1964	8.8	
1965–1981	37.6	
1982–1989	28.1	
1990–2002	25.5	
Years of schooling[1]		6.5 (4.7)
Married[1]	96.4	
Migration experience[1]		
U.S. experience	35.2	
U.S. farm experience	16.8	
U.S. nonfarm experience	23.6	
U.S. legal documents	7.3	
Internal migrant	41.6	
Family of origin U.S. migration experience[1]		
Parents U.S. migrants	14.4	
Siblings U.S. migrants	39.9	
Community context[1]		
Prevalence of male U.S. migration		0.29 (0.17)
Rural village	19.6	
Town	24.4	
City	27.9	
Metropolitan area	28.1	
Number of observations = 9,356		

Note [1] Corresponds to year of survey or age 65, [2] Percentages based on all life years in occupational transition file

year of the survey, slightly more than 96 % of the men were in a marital or consensual union.

U.S. migration experience is relatively common in the sample with around one-third of the men having worked in the United States. Close to 17 % of men worked in the United States in agriculture, and around 24 % worked in non-agricultural jobs. Possession of immigration documents permitting employment and entry at will was less common in the sample—only 7 % of men possessed U.S. citizenship or a residency card. Internal migration experience is also fairly common in the sample. Around 40 % of the men either migrated temporarily in Mexico to work in another location, or moved away from their place of birth to another community. An important facilitator of U.S. migration behavior is being socially connected to other experienced migrants. Close to 15 % of the men had at least one parent with U.S. migration experience and 40 % had at least one sibling with U.S. migration experience. At the community level, men in the sample on average lived in communities where roughly 30 % of the adult men had been to the United States at least once.

Figure 8.2 presents a life-time occupational mobility table with first occupation presented in the rows and the last or most recent occupation presented in the columns. The shaded cells along the main diagonal correspond to men who were in the same occupation at the time of last observation that they held at age 17. The cells above the main diagonal correspond to upward occupational mobility and the cells below the main diagonal correspond to downward mobility. The column and row corresponding to land or business ownership are set apart from the rest of the table to indicate that we treat this occupational category as unordered.

	Last Occupation					
First Occupation	Farm work	Unskilled	Skilled	Professional	Land/busi. owner	Total
Farm worker	19.4%	4.8%	5.6%	0.9%	6.9%	37.6%
Unskilled	1.7%	10.7%	8.6%	1.6%	7.1%	29.6%
Skilled	0.7%	2.7%	12.4%	1.4%	5.4%	22.6%
Professional	0.1%	0.4%	0.5%	4.8%	1.8%	7.5%
Land/business owner	0.1%	0.1%	0.1%	0.0%	2.3%	2.5%
Total (Number of cases)	22.0%	18.6%	27.2%	8.8%	23.5%	100.0% (9,356)

Fig. 8.2 Life-time occupational mobility, male household heads, Mexican migration project, 1987–2002

Close to one-half of the men had yet to experience any life-time occupational mobility at the time of last observation, whereas close to one-in-four men (22.9 %) experienced upward skill based mobility and a slightly smaller percentage of men (22.1 %) had moved into land or business ownership. Only 6 % of men experienced downward life-time occupational mobility, and very few men who started out as land or business owners moved into a different occupation. The overall upward shift in the occupational distribution and the movement into land or business ownership reflects both the gradual industrialization of the Mexican economy that occurred during the lifetimes of the men in the sample, and the processes of skill-building and capital accumulation that occur within cohorts as part of the aging process. The two biggest occupational shifts across the life-course are the movements out of farm work and unskilled labor, and the movement into land or business ownership. At the outset of their working lives only 2.5 % of the men owned more than 10 hectares of agricultural land or a business. At the time of last observation 23.5 % of the men were land or business owners.

While only 6 % of the men in the sample had a last occupation that was less skilled than their first occupation, a much larger percentage of men experienced downward occupational mobility at some point in their work careers. Figure 8.3 presents an occupational transition table. The unit of analysis in this figure is an occupational spell. An occupational spell is defined as a continuous time period during which a subject remains in the same occupation. Forty-two percent of the men in the sample contribute only one occupational spell to the analysis, whereas 25 % contribute three or more spells (not shown in figure). The rows correspond to occupation at the start of a spell and the columns correspond to occupation at the end of the spell or the start of the next spell. The cells on the main diagonal correspond to spells that do not end with a transition into another occupation (right censored), and the off-diagonal cells correspond to occupational spells that end with a transition into a different occupation. Roughly one-in-eight (13.4 %) occupational spells end in a transition into a less-skilled occupation. Most of these transitions occur among unskilled and skilled workers who transition into farm work or unskilled occupations. Similar to what we saw in the case of life-time mobility, very few men who enter into land or business ownership transition out of this occupational category, suggesting that men who are able to accumulate capital assets are generally able to hold onto them.

In the next section we use multivariate regression models to estimate the strength and nature of the relationship between return migration and cumulative migration experience, and occupational change. We expect return migration to be associated with a higher risk of occupational change of any type. Temporary labor migration to the United States entails withdrawal from the Mexican labor market, which automatically places return migrants at risk of entering into an occupation different from the occupation they held prior to migration.

8.6 Occupational Transitions

We first analyze the occupational spells summarized in Fig. 8.3. We estimate separate Weibull hazard regression models for each of the three possible types of occupational transitions: upward mobility, downward mobility, and movement into land or business ownership. Spells starting in a professional occupation are excluded from the analysis of upward mobility because upward mobility out of the highest occupational group is not possible. Similarly, spells starting in farm work are excluded from the analysis of downward mobility. The spells are right censored if a transition other than the one being modeled occurs, or if the spell ends at age 65 or the year of the survey.

Table 8.2 presents parameter estimates from the hazard models predicting occupational transitions. The models include as background characteristics age and age-squared at the start of the occupational spell, years of completed education, occupation at the start of the spell, and marital status at the start of the spell. Measures of migration experience include a time-varying dummy variable indicating return from the United States in a given year, cumulative U.S. farm and nonfarm work experience at the end of the most recent U.S. migrant trip, a time-varying dummy variable indicating possession of U.S. legal residency or citizenship,[2] a dummy variable indicating U.S. migration status in the prior year, and

	Occupation at end of spell					
Occupation at start of spell	Farm work	Unskilled	Skilled	Professional	Land/busi. owner	Total
Farm worker	10.8%	6.2%	4.7%	0.6%	3.1%	25.4%
Unskilled	3.8%	9.0%	9.1%	1.5%	3.9%	27.3%
Skilled	2.3%	5.3%	13.2%	1.8%	4.1%	26.6%
Professional	0.2%	0.7%	1.1%	4.3%	1.6%	7.8%
Land/business owner	0.5%	0.7%	0.7%	0.3%	10.8%	12.9%
Total (Number of spells)	17.5%	21.7%	28.9%	8.4%	23.5%	100.0% (18,569)

Fig. 8.3 Occupational transitions, male household heads, Mexican migration project, 1987–2002

[2] Legal documents includes legal resident (Green card), citizenship, Silva letter (special status given primarily to Mexican immigrants in the late 1970s that led to legal residency in the 1980s, and refugee or asylum status.

Table 8.2 Parameter estimates from Weibull hazard regression models predicting occupational transitions, male household heads, life years ages 17–65, Mexican migration project, 1987–2002

	Model 1		Model 2		Model 3	
	Upward mobility		Downward mobility		Land/bus. ownership	
	β		β		β	
Background characteristics						
Age	−0.045	***	−0.062	***	0.022	
Age-squared	0.001		0.002	***	0.000	
Education	0.114	***	−0.050	***	0.092	***
Farm worker (ref. model 1, 3)	0.000		N.A.		0.000	
Unskilled occupation (ref. model 2)	−0.353	***	0.000		0.591	***
Skilled occupation	−2.892	***	0.847	***	0.327	***
Professional occupation	N.A.		1.084	***	0.134	
Married	0.159	***	−0.055		0.518	***
Migration experience						
Return from U.S.	2.441	***	2.854	***	1.009	***
U.S. farm exp. (log months)	−0.148	***	0.011		0.063	**
U.S. nonfarm exp. (log months)	−0.111	***	−0.068	**	0.131	***
U.S. documents	−0.858	***	−0.564	*	0.039	
Lag_1 in U.S.	−0.720	***	−0.909	***	−0.411	***
Internal migrant	1.973	***	1.417	***	0.440	***
Family of origin U.S. mig. exp.						
Parents U.S. migrants	0.267	***	−0.000		0.252	***
Siblings U.S. migrants	−0.041	*	0.016		0.068	***
Community context						
Prevalence of male U.S. migration	−0.546	***	0.550	**	0.387	**
Employment opportunity index	0.185	***	−0.332	***	−0.114	**
Rural village (ref.)	0.000		0.000		0.000	
Town	0.443	***	−0.522	***	0.185	**
City	0.537	***	−0.571	***	0.119	
Metropolitan area	0.567	***	−0.377	**	−0.015	
Period and spell controls						
Pre-1965 (ref.)	0.000		0.000		0.000	
1965–1981	0.141	**	0.096		−0.286	***
1982–1989	0.159	**	0.231	**	−0.311	***
1990–2002	0.103		0.255	*	−0.121	
Spell 1 (ref.)	0.000		0.000		0.000	
Spell 2	−0.372	***	0.528	***	0.012	
Spell 3	−0.421	***	0.187		0.099	
Spell 4	0.156		1.131	***	0.278	**
Model parameters						
Constant	−3.907	***	−3.179	***	−5.654	***
Duration dependence γ	−0.019	***	−0.022	***	0.037	***
Heterogeneity parameter c	−2.569	***	−2.880	***	−2.727	***
Latent group proportion p	0.573	***	0.338	***	0.442	***
Likelihood ratio chi square	3,224	***	2,635	***	1,067	***
Number of spells	14,726		11,456		16,171	

Note ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$; N.A., occupational group not included in analysis
N.A. = Spells in occupational category excluded from the model

a dummy variable indicating internal migration experience in any year prior to the current year. To measure migration social capital the models include time-varying dummy variables indicating whether either parent or any siblings were U.S. migrants in any prior year, and the prevalence of male U.S. migration in the home community at the start of the occupational spell. In addition to the prevalence of U.S. migration, the models include an index of employment opportunities in the home community, and the level of urbanization. The employment index is constructed from eight municipal-level measures of economic activity taken from the 1950–2000 Mexican censuses using principal components analysis.[3] The models also include control variables for period and spell number, and a non-parametric control for spell-specific unobserved heterogeneity.

The first column in Table 8.2 presents coefficients from the model predicting the hazard of upward mobility, the second column presents results for the hazard of downward mobility, and the third column presents results for the hazard of making a transition into land or business ownership. Turning first to the human capital measures, we find that as men age they are less likely to make a skill-based occupational transition of any type. Occupational transitions tend to happen at younger ages when men are less risk averse and more actively engaged in the search for the best occupational match to their skills and interests. Having a higher level of education increases the chances of upward mobility and decreases the risk of downward mobility. More educated men are also more likely to turn to land or business ownership as a primary occupation. Controlling for age, married men are more likely than single men to experience upward skill-based mobility and movement into land or business ownership.

The year of return from the United States is associated with a significantly higher risk of all three types of occupational moves. Returning migrants are 11 ($e^{2.441}$) times more likely to transition into a higher skilled occupation and 17 ($e^{2.854}$) times more likely to transition into a less skilled occupation compared to non-migrants and return migrants in subsequent years. As expected, the mere fact that return migrants are reentering the labor market places them at a very high risk of experiencing some type of occupational change. The fact that the risk of experiencing a downward change is even higher than the risk of an upward change suggests that the timing of return migration is not linked to having a job waiting in Mexico, and the condition of reentry is more comparable to involuntary separation

[3] The index of employment opportunities is constructed from the female labor force participation rate, the proportion of economically active females working in the service sector, the proportion of economically active females working in manufacturing, the proportion of economically active males working in the service sector, the proportion of economically active males working in the manufacturing sector, the proportion of economically active adults who are employers, the proportion of economically active adults earning more than twice the minimum wage, and the municipal population. Principal components analysis was used to construct a composite index of employment opportunities for each municipality in each of the six census years (1950, 1960, 1970, 1980, 1990, and 2000). Linear interpolation was used to estimate values of the index in the intercensal years, and the value of the index in 2000 was used for the years 2001 and 2002 in communities that were surveyed after 2000.

from a job than voluntary separation. The chance of moving into land or business ownership is comparatively smaller than making a skill-based transition, but still important. Returning migrants are 2.7 ($e^{1.009}$) times as likely to acquire farmland or start a business in the year they return than nonmigrant or return migrants in subsequent years. The substantially lower risk of a transition into land or business ownership in the year of return compared to the risk of a skill-based occupational transition is consistent with the high financial barriers to entry into ownership, and the absence of a stochastic component in the determinants of land and business ownership. Returning to become a land or business owner is not a matter of being lucky or unlucky, rather it requires substantial savings and is the result of long-term planning and strategic action.

Cumulative U.S. migration experience represents both time working in the U.S. labor market as well as time spent away from the Mexican labor market. Both farm work and nonfarm work experience in the United States are associated with a significantly lower chance of upward mobility in Mexico. This result is consistent with the existence of a stochastic component in the relationship between return migration and occupational change. Reentering the Mexican labor market increases the risk of all types of occupational moves, but the increased risk of upward mobility is not due to any positive valuation of U.S. experience in the Mexican labor market. In fact, there appears to be a penalty associated with spending long periods of time in the United States in the form of a lower chance of upward mobility.

U.S. farm experience has no significant effect on downward mobility, however, nonfarm work is associated with a significantly lower risk of downward mobility. Generally, nonfarm wages are higher than farm wages and therefore provide a greater opportunity for migrants to save earnings and send money home. Returning migrants with more experience in nonfarm work are likely to have more savings to draw upon during the job search process, which allows them to extend the search for a desirable job longer than returning migrants with less experience or experience in agriculture. As predicted, both farm and nonfarm experience in the United States is associated with a significantly greater likelihood of becoming a land or business owner in Mexico. Also as predicted, the effect of experience is larger for nonfarm work than farm work because of the greater earnings potential typically associated with nonfarm work.

Possession of legal residency or U.S. citizenship is associated with a significantly lower risk of making either an upward or a downward skill-based occupational move in Mexico. Having U.S. documents is generally associated with a strong residential and work attachment to the United States. Migrants, who have legal residency or citizenship in the United States and continue to maintain a residence in Mexico, typically use the Mexican residence for rest and relaxation and as an option for

retirement. Their attachment to the Mexican labor market is weak or completely severed and therefore they have little or no risk of occupational change in Mexico.[4]

Prior internal migration experience in Mexico is associated with an increased risk of all three types of occupational moves. Men migrate internally to take advantage of better occupational and investment opportunities available in other locations. However, they also migrate in search of employment if they experience employment loss in their place of origin.

Having a parent or parents with prior U.S. migration experience is associated with a significantly higher likelihood of both upward skilled-based mobility and movement into land or business ownership. Given the well-established relationship between migration and the family life-cycle, most of the parents would have been migrants when the men in our analysis were children. Migrant parents may pass-on higher economic aspirations to their children than non-migrant parents that subsequently get translated into occupational mobility and capital accumulation. In contrast to parental experience, having siblings with U.S. migration is associated with a significantly lower risk of upward mobility. Men whose siblings are in the United States have weaker social network ties to the local labor market than men whose siblings remain in Mexico. These weaker ties mean they are less likely to have leads on job openings in Mexico than would be the case if all their siblings were in Mexico. Having siblings with U.S. migration experience is also associated with a higher risk of moving into land or business ownership. Men with fewer employment options in Mexico are more likely to establish a business as an alternative to wage employment.

The effects of the prevalence of U.S. migration in the community of origin on occupational change are consistent with the results for individual migration experience and the migration experience of siblings. Men who live in communities with a high prevalence of U.S. migration are less likely to experience upward occupational mobility and are more likely to experience downward mobility or movement into land or business ownership. In communities where migration is common, men are likely to have better leads on job opportunities in the United States than in Mexico. These weaker social ties to the origin labor market compared to the destination labor market translate into fewer opportunities for upward mobility and a greater risk of downward mobility after separation from a job. The weaker social ties to the local labor market that are associated with a high prevalence of migration are also associated with a greater likelihood of investments in farm activities or small businesses as an alternative to employment based mobility.

The results for the index of employment opportunities and the level of urbanization are consistent with expectations. Better employment opportunities are associated with a greater likelihood of upward occupational mobility and lower likelihoods of downward mobility or movement into land or business ownership. This result is consistent with the idea that land and business ownership functions as

[4] By definition, the occupation in the life history remains unchanged until an occupational transition is made in Mexico.

an alternative to attractive employment opportunities. The likelihood of experiencing upward occupational mobility also increases with the level of urbanization, and the likelihood of experiencing downward mobility tends to decrease with the level of urbanization.

Overall the results from the analysis of occupational transitions are consistent with U.S. migration being disruptive of occupational trajectories in Mexico. The chances of experiencing upward mobility upon return to Mexico are not linked to U.S. migration experience, but rather to the reentry of returning migrants into the Mexican labor market. The chances that return migrants experience downward occupational mobility at the time of return are even larger than the chances of experiencing upward mobility. Consistent with other studies on the use of remittance income, we find that returning U.S. migrants are more likely to purchase farm land or establish a business than nonmigrant or migrants in subsequent years. While migration certainly functions as a substitute for scarce credit as argued by the New Economics of Labor Migration, the results suggest that investment in land and businesses is also a substitute for poor employment opportunities, especially for returning migrants. In the next section we look at life-time occupational change to determine whether return migrants are eventually able to overcome the disruptive effects of migration on employment trajectories in Mexico or if the disruptive effects persist over time.

8.7 Life-Time Occupational Mobility

Table 8.3 presents the results from the multinomial logistic regression models predicting life-time occupational change. We estimated three models conditional on type of first occupation. Model 4 estimates the likelihood of upward mobility and movement into land or business ownership for men starting in agriculture. Model 5 estimates the likelihood of upward mobility, downward mobility, and movement into land or business ownership for men starting in unskilled or skilled occupations; and Model 6 estimates the likelihood of downward mobility or movement into land or business ownership for men starting in professional occupations. The results for education are consistent with what we found in the case of occupational transitions: more years of schooling are associated with a greater likelihood of upward mobility and a lower likelihood of downward mobility. Higher education is also associated with a greater likelihood of becoming a land or business owner among farm workers and unskilled and skilled workers, but not among professionals.

In the case of life-time occupational change, cumulative U.S. migration experience has no impact on upward mobility among unskilled and skilled workers, and a negative impact on upward mobility among farm workers. Even more telling, U.S. migration experience actually increases the likelihood of long-term downward mobility among men starting out in non-farm occupations. These results strongly suggest that men who work in the United States and return to Mexico are

Table 8.3 Parameter estimates from multinomial logistic regression models predicting life-time occupational change, male household heads, Mexican migration project, 1987–2002

	Model 4		Model 5			Model 6	
	First occupation agriculture		First occupation unskilled/skilled			First occupation professional	
	Upward mobility	Land/bus. ownership	Upward mobility	Downward mobility	Land/bus. ownership	Downward mobility	Land/bus. ownership
	β	β	β	β	β	β	β
Background characteristics							
Age	−0.028 *	0.056 **	0.045 ***	0.028 *	0.050 ***	0.012	0.076 ***
Age-squared	−0.000	−0.002 **	−0.001 *	0.001	−0.001 **	0.002	−0.000
Cohort 1933–1939 (ref.)							
Cohort 1940–1949	−0.083	−0.250	0.119	0.488	−0.375 *	0.724	0.329
Cohort 1950–1959	−0.164	−0.420	0.293	0.719 *	−0.503 *	1.323	0.761
Cohort 1960–1977	−0.745	−0.986 *	0.466	1.122 **	−0.802 **	1.520	1.066
Education	0.125 ***	0.167 ***	0.094 ***	−0.010	0.107 ***	−0.192 ***	−0.030
Married	0.120	−0.096	0.382 **	0.132	0.513 **	-0.753	0.745
Migration experience							
U.S. farm exp. (log months)	−0.073 *	0.077 **	0.006	0.063	−0.022	0.188	−0.132
U.S. nonfarm exp. (log months)	0.025	0.051	0.040	0.094 **	0.083 **	0.217 *	0.175 *
U.S. documents	−0.547 **	−0.275	−0.787 ***	−0.384	−0.743 ***	0.131	0.575
Internal migrant	1.002 ***	0.544 ***	0.493 ***	0.536 ***	0.311 ***	0.850 **	0.100
Family of origin U.S. mig. exp.							
Parents U.S. migrants	−0.032	0.243	0.142	−0.267	−0.044	0.118	0.412 *
Siblings U.S. migrants	−0.004	0.086 **	−0.011	0.009	0.059 **	−0.008	0.041
Community context							
Prevalence of male U.S. mig.	−0.895	−0.665	−0.618	0.637	0.004	0.497	0.165
Employment opportunity index	0.615 ***	0.059	0.061	−0.303 **	−0.310 ***	−0.168	−0.302 *
Rural village (ref.)							

(continued)

Table 8.3 (continued)

	Model 4		Model 5			Model 6	
	First occupation agriculture		First occupation unskilled/skilled			First occupation professional	
	Upward mobility	Land/bus. ownership	Upward mobility	Downward mobility	Land/bus. ownership	Downward mobility	Land/bus. ownership
	β	β	β	β	β	β	β
Town	0.643 ***	0.421 *	−0.018	−0.648 **	−0.073	0.820	0.073
City	0.658 ***	0.235	0.158	−0.804 ***	0.042	1.381 **	0.031
Metropolitan area	1.733 ***	1.494 ***	0.023	−0.747 *	−0.077	2.326 ***	0.664 *
Model parameters							
Constant	−1.413 **	−2.002 ***	−2.407 ***	−2.270 ***	−1.420 ***	−2.000 *	−2.846 **
Likelihood ratio chi square	1,053 ***		1,141 ***			249.7 ***	
Number of cases	3,520		4,892			706	

Note ***$p < 0.01$, **$p < 0.05$, *$p < 0.10$

unlikely to experience any wage returns on their U.S. work experience and in fact may be penalized for their experience. The penalty likely derives from the deterioration in location-specific human and social capital that migrants experience as a result of being away from the Mexican labor market. It is also possible that employers discount U.S. migration experience because they perceive return migrants as being at a higher risk of quitting in order to undertake another trip to the United States. As expected, return migrants who have spent more time in the United States are also more likely than others to purchase farm land or establish a business. These results for cumulative migration experience reinforce our interpretation of the significant effects of return migration on upward and downward occupational transitions as capturing the impact of reentry into the labor market rather than the valuation of migration experience by potential employers.

Consistent with what we found in the case of occupational transitions, possession of U.S. immigration documents is associated with a significantly lower chance of upward mobility, and a lower chance of movement into land or business ownership among unskilled and skilled workers. Having siblings with U.S. migration experience increases the chances of becoming a land or business owner, although, having parents with U.S. migration experience does not have a significant effect on upward mobility as it did in the case of occupational transitions. The prevalence of male U.S. migration in the home community also has no significant effect on life-time mobility even though it was associated with a higher risk of downward occupational transitions and lower chances of upward transitions and transitions into land or business ownership. The weaker effects of family and community U.S. migration ties on life-time mobility compared to occupational transitions suggests that return migrants may be able to overcome some of the mobility setbacks associated with separation from the Mexican labor market.

8.8 Conclusions and Discussion

We find no evidence to suggest that Mexico-U.S. migrants returning to Mexico are able to convert their experience working in the United States into upward occupational mobility in Mexico. Both in terms of occupational transitions and life-time occupational change cumulative U.S. experience does not increase the chances of upward mobility and in some situations it is associated with a lower chance of upward mobility. The absence of any skill-based occupational gains to U.S. migration experience could be due to any of the following reasons: Mexican migrants are concentrated in low skilled jobs in the United States and have few opportunities to acquire new skills; the skills they acquire are not fully transferrable to the Mexican labor market; and Mexican employers do not value U.S. work experience and may even discount it. In contrast to the lack of evidence of positive returns on experience, we find evidence that cumulative nonfarm work experience in the United States is associated with a higher risk of downward life-time occupational mobility. The flipside of time spent working in the United States is

time spent away from the Mexican labor market which leads to a deterioration of location-specific human and social capital that is critical for locating better paying jobs. To the extent that there is an element of randomness in finding a better job, workers who spend time in the United States are also exposed to the risk of finding a better job for less time than comparable nonmigrant. Mortensen (1986) suggests that the earnings of workers rise with experience not because of the returns on experience but because workers with longer experience have had more time to find a higher paying job. Even if there were no deterioration of human and social capital in the home country, just by being absent from the home country labor market temporary migrants have fewer opportunities over their life time to locate a better job than non-migrants.

Higher levels of cumulative U.S. experience are associated with an increased likelihood of purchasing farmland or establishing a business in Mexico. Prior research has linked migrant investments in capital assets to the expected returns on investments in the community of origin. The New Economics of Labor Migration theory predicts that migration is used to accumulate savings for investments in family enterprises when credit is scarce. Our result is consistent with this position, but we suggest that another reason for investment in land and businesses is the lack of attractive employment opportunities for returning migrants. The disadvantaged position of returning migrants in their origin labor market makes self-employment through business formation an attractive alternative to wage employment. We find that stronger parent and sibling ties to the United States and consequently weaker ties to the Mexican labor market are also associated with a higher likelihood of moving into land or business ownership. Consistent with our predictions, nonfarm work experience in the United States provides a better opportunity to accumulate savings for capital investments in Mexico than farm work because of the higher earnings associated with nonfarm work.

The biggest impact that U.S. migration has on the occupational trajectories of returning migrants is associated with reentry into the Mexican labor market. Some migrants are able to return to the work they held up to the time they migrated to the United States, this is especially the case with farmers and the self-employed. However, most migrants must locate new employment. We presented two alternative hypotheses regarding how return migrants reenter the home labor market based on a simple model of the job search process. The first hypothesis predicted that migrants began the job search process while still in the United States and timed their return to Mexico to finding a job that was comparable or better than the job they held in Mexico at the time of out-migration to the United States. The second hypothesis predicted that migrants did not time their return to having an attractive job offer in Mexico, in which case both upward and downward occupational transitions were likely to occur upon return to Mexico. Our results were consistent with the second hypothesis. We find that migrants are at a substantially higher risk of making any type of occupational transition in the year in which they return, and that the risk of making a downward skill-based transition was greater

than the risk of making an upward transition. It is possible that there are migrants who time their return to Mexico to finding a desirable job, but the considerably higher risk of experiencing downward mobility at the time of return suggests that more returns are not timed to job offers in Mexico.

We suggest that the higher risks of both upward and downward mobility at the time of return reflects a component of the labor market reentry process that is random from the perspective of the returning migrant. The stochastic nature of finding a desirable job offer at the time of return introduces an important element of uncertainty and risk in return migration that increases the opportunity costs of return. In our review of the theories of temporary migration we noted that the different approaches were either silent on the return to economic activity or they assumed that return migrants smoothly transitioned into income earning activities. Our findings challenge this assumption. The risk of ending-up in a job that is worse than the job held prior to out-migration is likely to discourage return to Mexico among some migrants, and encourage self-employment among other migrants who decide to return to Mexico.

Our findings have implications for anticipating return migration among temporary low-skilled migrant workers in the United States and Europe. Temporary migrant programs function best when the work in the destination country is complementary to work in the origin labor market, as is the case of farm workers, or when the skills that are acquired in the destination country are transferrable and valued in the origin country. The early theoretical models of temporary labor migration were developed to explain the migration behavior of workers in rural, subsistence households where the transition between farm work and off-farm work was smooth. Similarly, the Bracero program between the United States and Mexico recruited workers from predominantly rural areas where reentry into the home labor market was non-problematic. In contrast to the earlier experiences of temporary labor migration, many of the source countries for current temporary labor migrants to the United States and to Europe are predominantly urban societies. Among temporary labor migrants from urban areas, withdrawal and separation from the home labor market and subsequent return and reentry come at a cost to long-term income streams in the home country. These costs have to be weighed against the saved earnings from temporary migration, and the expected earnings from staying on in the destination country beyond the termination of the work contract as an irregular migrant. Because much of the work that is targeted for temporary labor migrants in the United States and Europe is unskilled, the possibilities for acquiring skills that will be valued in the home country labor market are very limited. Consequently, in many instances the income rewards and incentives for return to the home country will be small. The design of sustainable temporary-migration programs needs to take into account the friction in the process of return migration that is generated by the costs of reentry into home country labor markets encountered by migrants engaged in low-skilled work.

References

Alba, F. (2010). Mexico: a crucial crossroads. *Country Profiles February 2010*. Migration Information Source, Migration Policy Institute.

Amin, M., & Mattoo, A. (2005). Does temporary migration have to be permanent? Policy Research Working Paper Series WPS3582, World Bank.

Arango, J., & Martin, P. (2005). Best practices to manage migration: Morocco-Spain. *International Migration Review, 39*(1), 258–269.

Azam, F. (1991). Labour migration from Pakistan: Trends, impacts, and implications. *Regional Development Dialogue, 12*(3), 53–71.

Barrell, R., Fitzgerald, J., & Riley, R. (2010). EU enlargement and migration: Assessing the macroeconomic impacts. *Journal of Common Market Studies, 48*(2), 373–395.

Barrett, A., & O'Connell, P. J. (2001). Is there a wage premium for returning Irish migrants? *The Economic and Social Review, 32*(1), 1–21.

Bengtsson, T., & Scott, K. (2011). Population aging and the future of the welfare state: The example of Sweden. *Population and Development Review, 37* (Supplement), 158–170.

Berg, E. J. (1961). Backward-sloping labor supply functions in dual economies—The Africa case. *The Quarterly Journal of Economics, 75*(3), 468–492.

Bijak, J., Kupiszewska, D., & Kupiszewski, M. (2008). Replacement migration revisited: Simulations of the effects of selected population and labor market strategies for the aging Europe, 2002–2052. *Population Research and Policy Review, 27*, 321–342.

Blau, D. M., & Robins, P. K. (1990). Job search outcomes for the employed and unemployed. *Journal of Political Economy, 98*(3), 637–655.

Calavita, K. (1992). *Inside the state: The Bracero program, immigration, and the I.N.S.* New York: Routledge.

Carletto, C., & Kilic, T. (2009). Moving up the ladder? The impact of migration experience on occupational mobility in Albania. *Policy Research Working Paper* 4908, The World Bank, Development Research Group.

Castles, S. (2006). Guestworkers in Europe: A resurrection? *International Migration Review, 40*(4), 741–766.

Coleman, D. (2006). Immigration and ethnic change in low-fertility countries: A third demographic transition. *Population and Development Review, 32*(3), 401–446.

Coleman, D., & Rowthorn, R. (2004). The economic effects of immigration into the United Kingdom. *Population and Development Review, 30*(4), 579–624.

Coleman, D., & Rowthorn, R. (2011). Who's afraid of population decline? A critical examination of its consequences. *Population and Development Review, 37* (Supplement), 217–248.

Commission of the European Communities (2005). Migration and development: Some concrete orientations. COM(2005): 390.

Constant, A. F., & Zimmermann, K. F. (2011). Circular and repeat migration: Counts of exits and years away from the host country. *Population Research and Policy Review*, *30*(4), 495–515.

Co, C. Y., Gang, I. N., & Yun, M. (2000). Returns to returning. *Journal of Population Economics, 13*, 57–79.

de Coulon, A., & Piracha, M. (2005). Self-selection and the performance of return migrants: The source country perspective. *Journal of Population Economics, 18*, 779–807.

Department of Homeland Security (2009). Yearbook of immigration statistics; 2009. www.dhs.gov/files/statistics/publications/YrBh09N1.shtm.

Djajić, S., & Michael, M. S. (2009). Temporary migration policies and welfare of the host and source countries: A game-theoretic approach. CESifo *Working Paper No*. 2811.

Dustmann, C., & Kirchkamp, O. (2002). The optimal migration duration and activity choice after re-migration. *Journal of Development Economics, 67*, 351–372.

Engbersen, G., & Broeders, D. (2009). The state versus the alien: Immigration control and strategies of irregular immigrants. *West European Politics, 32*(5), 867–885.

Fassmann, H., & Munz, R. (1992). Patterns and trends of international migration in Western Europe. *Population and Development Review, 18*(3), 457–480.

Finotelli, C., & Sciortino, G. (2009). The importance of being southern: The making of policies of immigration control in Italy. *European Journal of Migration and Law, 11*, 119–138.

Flinn, C. J., & Heckman, J. J. (1982). New methods for analyzing individual event histories. In S. Leinhardt (Ed.), *Sociological methodology* (pp. 99–140). San Francisco: Jossey-Bass.

Grieco, E. M., & Trevelyan, E. N. (2010). Place of birth of the foreign-born population: 2009. *American Community Survey Briefs*, Oct 2010.

Heckman, J. J., & Singer, B. (1984). A method for minimizing the impact of distributional assumptions in econometric models for duration data. *Econometrica, 52*, 271–320.

Hill, J. K. (1987). Immigrant decisions concerning duration of stay and migratory frequency. *Journal of Development Economics, 25*, 221–234.

Hoekman, B., & Özden, C. (2010). The euro-mediterranean partnership: Trade in services as an alternative to migration? *Journal of Common Market Studies, 48*(4), 835–857.

Hollifield, J. F. (1994). Immigration and republicanism in France: The hidden consensus. In W. Cornelius, P. L. Martin, & J. F. Hollifield (Eds.), *Controlling immigration: A global perspective* (pp. 143–175). Stanford: Stanford University Press.

Hooghe, M., Trappers, A., Meuleman, B., & Reeskens, T. (2008). Migration to European countries: A structural explanation of patterns, 1980–2004. *International Migration Review, 42*(2), 476–504.

Hugo, G. (1982). Circular migration in Indonesia. *Population and Development Review, 8*(1), 59–83.

Ilahi, N. (1999). Return migration and occupational change. *Review of Development Economics, 3*(2), 170–186.

IOM (International Organization for Migration). (2010). *Managing return migration*. Geneva: International Organization for Migration.

Jandl, M. (2007). Irregular migration, human smuggling, and the eastern enlargement of the European Union. *International Migration Review, 41*(2), 291–315.

Jacoby, N. (2003). America's de facto guest workers: Lessons from Germany's Gastarbeiter for U.S. immigration reform. *Fordham International Law Journal, 27*(4), 1569–1662.

Kasper, H. (1967). The asking price of labor and the duration of unemployment. *Review of Economics and Statistics, 49*, 165–172.

Konseiga, A. (2006). Household migration decisions as survival strategy: The case of Burkina Faso. *Journal of African Economies*, 1–36.

Kosic, A., & Triandafyllidou, A. (2004). Albanian and Polish migration to Italy: The micro-processes of policy, implementation and immigrant survival strategies. *International Migration Review, 38*(4), 1413–1446.

León-Ledesma, M., & Piracha, M. (2004). International migration and the role of remittances in Eastern Europe. *International Migration, 42*(4), 65–83.

Lindstrom, D. P. (1996). Economic opportunity in Mexico and return migration from the United States. *Demography, 33*(3), 357–374.

Lindstrom, D. P., & Lauster, N. (1999). Local economic opportunity and the competing risks of internal and U.S. migration in Zacatecas, Mexico. *International Migration Review, 35*(4), 1232–1256.

Lippman, S. A., & McCall, J. J. (1976). The economics of job search: A survey. *Part I. Economic Inquiry, 14*, 155–189.

Marques, H. (2010). Migration creation and diversion in the European Union: Is Central and Eastern Europe a 'natural' member of the single market for labour? *Journal of Common Market Studies, 48*(2), 265–291.

Martin, P. (2006). Managing labor migration: temporary worker programmes for the 21st century. International symposium on international migration and development, population division, department of economic and social affairs, United Nations Secretariat, Turin, 28–30 June 2006.

Massey, D. S., Alarcón, R., Durand, J., & González, H. (1987). *Return to Aztlan: The social process of international migration from Western Mexico*. Berkeley: University of California Press.

Massey, D. S., Durand, J., & Malone, N. J. (2002). *Beyond smoke and mirrors: Mexican immigration in an era of economic integration*. New York: Russell Sage Foundation.

Massey, D. S., & Liang, Z. (1989). The long-term consequences of a temporary worker program: The U.S. Bracero experience. *Population Research and Policy Review, 8*, 199–226.

Massey, D. S., & Parrado, E. A. (1998). International migration and business formation in Mexico. *Social Science Quarterly, 79*(1), 1–20.

Mattila, J. P. (1974). Job quitting and frictional unemployment. *The American Economic Review, 64*(1), 235–239.

McCormick, B., & Wahba, J. (2004). Return international migration and geographical inequality: The case of Egypt. United Nations University, World Institute for Development Economics Research, *Research Paper No.* 2004/7.

Montgomery, J. (1991). Social networks and labor-market outcomes: Toward an economic analysis. *American Economic Review, 81*(5), 1408–1418.

Mortensen, D. T. (1986). Job search and labor market analysis. In O. Ashenfelter & R. Layard (Eds.), *Handbook of Labor Economics* (Vol. II, pp. 849–919). New York: Elsevier Science Publisher.

Oucho, J. O. (1998). Recent internal migration processes in Sub-Saharan Africa: Determinants, consequences, and data adequacy issues. In R. E. Bilsborrow (Ed.), *Migration, urbanization, and development: New directions and issues* (pp. 89–120). New York: United Nations Population Fund and Kluwer Academic Publishers.

Papademetriou, D. G., Meissner, D., Rosenblum, M. R., & Sumption, M. (2009). *Aligning temporary immigration visas with US labor market needs: The case for a new system of provisional visas*. Washington: Migration Policy Institute.

Parkes, R. (2009). EU mobility partnerships: A model of policy coordination? *European Journal of Migration and Law, 11*, 327–345.

Parsons, D. O. (1973). Quit rates over time: A search and information approach. *The American Economic Review, 63*(3), 390–401.

Passel, J. S. and Cohn, D. (2009). Mexican immigrants: How many come? How many leave? Washington, DC: Pew Hispanic Center (22 July 2009).

Passel, J. S. and Cohn, D. (2010). U.S. unauthorized immigrant flows are down sharply since mid-decade. Washington: Pew Hispanic Center (1 Sept 2010).

Passel, J. S. & Cohn, D. (2011). Unauthorized immigrant population: National and state trends, 2010. Washington: Pew Hispanic Center (1 Feb 2011).

Peixoto, J. (2009). New migrations in Portugal: Labour markets, smuggling and gender segmentation. *International Migration, 47*(3), 185–210.

Piore, M. J. (1979). *Birds of passage: Migrant labor and industrial societies*. New York: Cambridge University Press.

Pissarides, C. A. (1992). Loss of skill during unemployment and the persistence of employment shocks. *The Quarterly Journal of Economics, 107*(4), 1371–1391.

Plaza, D. (2008). Transnational return migration to the English-speaking Caribbean. *Revue Européenne des Migrations Internationales, 24*(1), 115–137.

Reichert, J. S. (1981). The migrant syndrome: Seasonal U.S. wage labor and rural development in central Mexico. *Human Organization, 40*(1), 56–66.

Reyes, B. I. (2001). Immigrant trip duration: The case of immigrants from Western Mexico. *International Migration Review, 35*(4), 1185–1204.

Ruhs, M., & Anderson, B. (2010). Semi-compliance and illegality in migrant labour markets: An analysis of migrants, employers and the state in the UK. *Population Space and Place, 16*, 195–211.

Ruhs, M., & Martin, P. (2008). Numbers vs. rights: Trade-offs and guest worker programs. *International Migration Review, 42*(1), 249–265.

Rye, J. F., & Andrzejewska, J. (2010). The structural disempowerment of Eastern European migrant farm workers in Norwegian agriculture. *Journal of Rural Studies, 26*, 41–51.
Schwab, S. J. (1999). Employment discrimination. In B. Bouckaert & G. De Geest (Eds.), *Encyclopedia of law and economics* (pp. 1–22). Aldershot: Edward Elgar.
Stark, O. (1991). *The migration of labor*. Cambridge: Basil Blackwell Inc.
Taylor, J. E. (1999). The new economics of labour migration and the role of remittances in the migration process. *International Migration, 37*(1), 63–88.
Ünver, O.C. (2006). Current discussions in the German integration debate: The culturalist vision vs. social equity? *Revue européenne des migrations internationales, 22*(3), 2–14.
U.S. Census Bureau (2009). Current population survey, annual social and economic supplement.
Van Dijk, J., & Folmer, H. (1985). Entry of the unemployed into employment: Theory, methodology and Dutch experience. *Regional Studies, 19*(3), 243–256.
Vasileva, K. (2010). Foreigners living in the EU are diverse and largely younger than the nationals of the EU member states. *Eurostat Statistics in Focus* 45/2010.
Walmsley, T., & Winters, A. L. (2005). Relaxing the restrictions on the temporary movement of natural persons: A simulation analysis. *Journal of Economic Integration, 20*(4), 688–726.
Winters, L. A., Walmsley, T. L., Wang, Z. K., & Grynberg, R. (2003). Liberalising temporary movement of natural persons: An agenda for the development round. *World Economy, 26*(8), 1137–1161.
Wood, C. H. (1981). Structural changes and household strategies: A conceptual framework for the study of rural migration. *Human Organization, 40*(4), 338–344.
Woodruff, C., & Zenteno, R. (2007). Migration networks and microenterprises in Mexico. *Journal of Development Economics, 82*, 509–528.