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Identifying and Measuring the Lifelong Human Capital of "Unskilled" Migrants in the Mexico-US Migratory Circuit[1]

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Executive Summary

Most human capital and migration studies classify migrants with limited formal education as "unskilled," despite substantial skills developed through job and life experiences. Drawing on a binational multi-stage research project that involved interviews with 320 Mexican migrants and return migrants in North Carolina and Guanajuato, Mexico, we identify the lifelong human capital they acquired and transferred throughout their careers and discover that these include not only basic education and English, but also technical and social skills and competences acquired informally on and off the job throughout the course of one's life. We further find that the learning and transfer of skills is a lifelong, gendered process, reflecting the different social contexts and jobs in which men and women learn. In this paper we document several mobility pathways associated with the acquisition and transfer of skills across the migratory circuit, including reskilling, occupational mobility, job jumping, and entrepreneurship.

Our study has broad implications for the migration policies of both the US and Mexico. US immigration policy confers preference to "skilled" immigrants who rank high on traditional human capital characteristics, such as education levels and other formal credentials, but limits the entry

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of "unskilled" migrants, a categorization that ignores the substantial informal skills they bring to US labor markets. Instead of focusing only on the continued expansion of immigration policy preferences for narrowly defined skilled migrants, the US government needs to consider more carefully what we mean by skilled workers and design fairer and more effective immigration policies that match their abilities to the specific needs of US industry and thereby recognize the economic contributions of all migrants within a lifelong human capital framework. Mexico can also learn from our findings. Between 2005 and 2010 an estimated 1.4 million returned to Mexico from the US, a figure roughly double the number who had returned in the five-year period a decade earlier (Passel et al. 2012). The government of Mexican has a history of developing programs to provide for Mexicans abroad and encourage their remittances. Our research indicates that the Mexican people and their economy would benefit by supporting entrepreneurial ventures and reintegration programs that recognize and reward the enhanced skill sets of return migrants. As we show, some of these individuals are able to fill valued positions and start businesses of their own, creating more jobs in their home communities and thus promoting local economic development.

Introduction

Star and Strauss (1999) have described the manner in which the public has viewed low-wage workers in the service sector as non-people, despite the value of their work experience and interpersonal skills. The low degree of social recognition of these skills contributes to their low status. Nowhere is this truer than in the perception of "unskilled" migrants, especially unauthorized immigrants with low levels of formal education. Scholars of migration fall into the same trap, regularly classifying migrants into two groups—skilled and unskilled—based solely on easy-to-measure attributes and certifications.

The evidence in this paper challenges the narrative of the unskilled migrant by unpacking and elucidating what the category of "unskilled" really covers. Drawing on 120 in-depth interviews conducted in North Carolina and Guanajuato and a survey of 200 returned migrants in León, Mexico, we identify the total human capital that migrants with low levels of education acquire, transfer, and use throughout their migratory careers. This lifelong human capital not only includes easy-to-measure or observable components of traditional human capital such as education and on-the-job training, but also technical and social skills that are harder to measure and learned away from the classroom, skills that can influence mobility pathways. We structure our analysis around three research questions:

1. What human capital skills do migrants with low levels of education possess, and how are these skills acquired?

2. Which job experiences and skills learned in Mexico lead to better job opportunities in the United States? Which skill sets learned in the United States transfer to Mexico?

3. How do social and industrial contexts shape how skills are transferred?

Integrating Migration, Human Capital, and Learning Approaches

Our theoretical approach engages two literatures that have had very limited collaboration: international migration and human capital transfers, and learning and knowledge transactions. The standard human capital model of socioeconomic attainment sees migration as an investment in which returns are balanced against costs (Sjastaad 1962; Harris and Todaro 1970). Recent immigrants in foreign labor markets generally earn lower wages than the native-born because the human capital acquired in countries of origin is undervalued or unrecognized in places of destination. With the acquisition of country-specific human capital such as language proficiency, education, and professional credentials, however, immigrants can achieve occupational mobility and wage growth (Chiswick and Miller 1986; Borjas 1990). Immigrants who do not possess these attributes are often trapped and exploited in unregulated industries in the secondary labor market (Castells and Portes 1989; Zlolinski 1994; Flippen 2012).

Human Capital theory recognizes that the skills acquired abroad can facilitate economic mobility upon return (Williams and Balaz 2005; Dustmann and Weiss 2007). Return migrants can benefit economically from the acquisition of formal human capital abroad, including schooling and English language (Dustmann and Kirchkamp 2002). Return migrants experience the most economic gains when their jobs match their US occupations (Zahniser and Greenwood 1998) and are also more likely than non-migrants to engage in entrepreneurial activities, but most studies credit this difference to duration abroad, savings, and number of foreign jobs (Dustmann and Kirchkamp 2002; Mesnard and Ravallion 2006), not skills transfers. Finally, source countries can gain from the opportunities that its emigrants have to acquire skills abroad (Dustmann and Weiss 2007).

The scholarship on international migration and human capital acquisitions and transfers remains incomplete for three reasons. First, although human capital theory recognizes that human capital refers to both an individual's stock of observable skills (schooling, post-schooling training, language capital) as well as unobservable skills (pre-labor market influences, innate abilities), data requirements compel most empirical studies to rely largely on formal qualifications and credentials as proxies for human capital (Chiswick 1986, Borjas 2000, among others). This practice encourages a dichotomy of skilled and unskilled or low-skilled (Williams 2006; 2007a).

In contrast, the scholarship on learning and knowledge transfers recognizes and studies many different types of knowledge (Williams 2006). Because this literature has focused primarily on codifiable knowledge, it theoretically captures the technical (high levels of symbolic manipulations) and routine (repetitive work) but ignores what Polyani (1966) terms tacit knowledge (knowledge that cannot be demonstrated in explicit ways), what Reich (1992) refers to as social skills (those that facilitate communication) or what Evans (2002) refers to as competences (communication skills; skills related to values and attitudes, such as responsibility and reliability; and practical competences, such as willingness to follow through and carry out tasks).

A second weakness of scholars working in the human capital framework is that they rely primarily on skills that are learned in formal institutional settings, such as on-the-job

training programs, educational settings, and vocational programs, thus favoring the study of knowledge acquired by highly-educated migrants at the schooling and employment stages of their lives. In contrast, there is broad recognition in the learning and knowledge literature that all learning is socially situated and therefore shaped by work and culture (Blackler 2002) and, as Beckett (2000) points out and we document, learning is a lifelong process that is not bound by employment.

A third omission of human capital scholars is that they have focused primarily on the acquisition of formal human capital in the host country, neglecting the learning and transfer of skills beyond education from the home country (but see Akresh 2006; Hernández León 2004; Hagan, Lowe, and Quingla 2011). By not accounting for source country on- and off-the-job human capital investments, researchers ignore the value of home country skills for learning new ones and the role that skill transfers potentially play in the learning and work experiences of immigrants and return migrants.

We argue that the skills acquired and gains made by Mexican migrants have to be understood in the context of lifelong human capital. Like the Creating Capabilities approach of human development (Nussbaum 2011), lifelong human capital focuses on the capabilities of individuals that cannot be limited to standardized metrics. Migrants with low levels of education often develop new skills informally through interaction and observation on and off the job that include the transfer of knowledge, tacit skills, and technical know-how that cannot be expressed or measured in explicit terms (Polanyi 1966; Waldinger and Lichter 2003). Skill development is also a gendered process: the social contexts in which men and women learn and work are different. Rather than viewing skill acquisition as stage-specific, we conceptualize the accumulation of human capital skills as a lifelong social process that is embedded in social networks, families, communities, and labor markets at both ends of the migratory stream. International migration provides the opportunity to learn and apply these lifelong skills.

This broader perspective on human capital has implications for how we define and measure skills and also how we think about economic mobility, which is usually measured through wage increases or occupational change using cross-sectional data at one stage of the migration circuit. We argue that skill acquisition should be considered as a mobility pathway in and of itself. As we demonstrate, skills acquired at one stage of the migratory cycle can create individual labor market opportunities at another stage. We identify several mobility pathways associated with learning and transferring skills across the migratory circuit, including skill upgrading, job transitions, and entrepreneurship.

Research Design, Study Sites, and Survey Sample

This five-year research project included two stages of exploratory fieldwork followed by a survey of a representative sample of return migrants in the industrial city of León, Guanajuato.[2] In Stage One (2007-08), we focused on skill acquisition and transferability

2 This paper is part of a larger book project that draws on in-depth interviews, worksite observations, and a representative survey of return migrants to examine the formulation of human capital across the US-Mexico migratory circuit (Hagan, Hernández León, and Demonsant forthcoming 2015, University of California Press).

among immigrants working in the construction and building trades in North Carolina, interviewing 50 migrant workers. In Stage Two (2009), we traveled to Guanajuato, Mexico and interviewed 70 return female and male migrants working in different occupations, industries, and communities. In Stage Three (2010), we drew on our qualitative findings and developed a survey instrument that captures skill acquisitions across the US–Mexico migratory circuit, detailing work experiences, learning techniques, and skill transfers before migration, while abroad, and upon return. We selected León, a city of 1.3 million inhabitants known as the leather and shoe capital of Mexico, as the survey site because of its diverse industrial base to capture a range of total human capital and to explore various opportunities for economic mobility.

Because the Mexican Census includes a question on whether any current household members were living abroad five years ago, we could identify return migrants at the block level in León. We drew a random sample of the blocks where return migrants were identified in the census, and in summer 2010, a team of six Mexican undergraduate students visited a total of 77 blocks to obtain a sample of 200 return migrants.[3] The 200 interviews averaged an hour-and-a-half and included closed- and open-ended questions that captured detailed job and migration histories. Beginning with the three-digit codes provided by the Mexican Census, we developed more detailed occupational and self-employment codes, depending on skill level and number of job tasks. Finally, we developed skill level codes for each occupation (Table 1). The data in this paper are from the León survey of 200 respondents.

Sample Profile and Context of Departure and Return

Table 2 profiles the León return migrants. Most return migrants in the sample are men, which is consistent with other studies of return migration that find Mexican women are more likely than men to stay longer or settle permanently in the US, often migrating for purposes of joining a spouse or another family member (Ruiz-Tagle and Wong 2009). As Table 2 shows, the return migrants in the León sample possess low levels of traditional human capital based on years of formal education, a finding that is consistent with the standard literature that reports return migrants have lower levels of education than Mexicans who stay in the US (Ruiz-Tagle and Wong 2009). Despite their relatively low levels of education, the León returnees have considerable total human capital as measured by work experience, having entered the labor force an average of 22 years ago. Ninety percent of the sample originated from León.

Table 3 lists the primary reasons for the first migration to the United States and for the return to Mexico for the last trip. As predicted by neo-classical economic theory, economic factors rank high among respondents' reasons. Compared to men, women more often cited social reasons for migrating, including joining a family member, usually a spouse, a reason that the literature reflects (Donato 1993; Hondagneu-Sotelo 1994). Yet close to half of the women cited economic reasons behind their migration. In recent decades economic restructuring and the subsequent rise of female-intensive industries in the US has pulled an increasing number of women from Guanajuato to the US labor market (Arias and Peña

3 Although we did survey a sample of 200 non-migrants in Leon, the purpose of this paper is to examine the labor market experiences of individuals before and after migration. In a paper in progress, we conduct a comparative analysis of the labor market pathways of return migrants and non-migrants.

Table 1. Total Human Capital and Learning Context Variables Developed and Used in Analysis

Variable	Definition
Formal education	Years of education.
English	Return migrants who reported sufficient knowledge of English that they considered it a marketable skill.
On-the-job learning	On-the-job technical skills learned through observation, interaction, and other informal learning processes (cooking, painting, auto body repair).
Off-the-job learning	Technical skills acquired in the home or in non-work communities of origin (working on a neighbor's home, appliance repair, working on the engine of a family car, specialized domestic activities).
Social and personal competences	Customer service skills, new ways of approaching work, new work habits (punctuality), entrepreneurial skills (initiative), self-confidence, leadership skills, teamwork, and follow through.
Skill level 1	Work that involves repetitive tasks, e.g., dishwasher, leather cutter, laborer who mows lawns.
Skill level 2	Requires experience and formal or informal training. Involves multitasking or the mastery of a specific skill, e.g., painter, gardener with multiple tasks, such as mowing lawns, pruning trees and building walls.
Skill level 3	Workers who have experienced extensive occupational mobility over time and mastered all skills within an occupation through extensive formal or informal training, e.g., maestro albañil, shoe designer, factory floor supervisor, carpenter, nurse, teacher.
Self-employment	Return migrants who reported owning their own businesses. This does not include return migrants who were independent contractors such as albañiles, unless they owned a business that was housed in a structure.
Patrón	Return migrants who reported owning their own businesses with one or more employees.

Table 2. Profile of Return Migrant Sample

Individual characteristics (at time of interview)	Total (n=200)*	Men (n=172)	Women (n=28)
Age (mean)	39.6	39.6	39.3
Married	82%	86%	61%
Education level			
Less than primary	26%	25%	29%
Completed primary	21%	22%	14%
Some secondary	34%	35%	32%
Completed secondary	12%	11%	18%
More than secondary	7%	7%	7%
Work history			
Total years since first job (mean)	21.8	22.4	18.5
Years worked prior to first migration (mean)	7.5	7.7	5.7
Years worked since last return (mean)	4.5	4.7	2.9
Migration experience			
Year of first migration (mode)	1995	1995	1999
Age at time of first migration to US (mean)	23.9	23.7	25.3
Number of trips to US (mean)	2.5	2.6	1.6
Number of years working in US (mean)	4.4	4.6	3.2
Percent unauthorized in US	92%	93%	89%

*Due to missing values, the number of observations varies for each panel (work history, educational level, reasons for migrating, migration experience, and reasons for return to Mexico) from 191 to 199 cases.

2004). Aspirations for self-improvement and adventure also weighed in the decision to migrate; more than a quarter of the León sample cited adventure, curiosity, interest, and opportunities to improve skills.

Return migration is a relatively recent phenomenon, with 76 percent of our sample coming home after 2001. Fifty-eight percent of the sample returned to Mexico between 2006 and 2010 in the wake of the Great Recession and during a period of modest growth in Mexico. As Table 3 highlights, 10 percent reported that economic concerns in the US drove their return to Mexico. Eleven percent of the sample were deported after 1996, a year that marks the passage of a number of laws that made it easier to detain and deport migrants (Hagan, Eschbach, and Rodriguez 2008). While the anti-immigrant sentiment and poor economic conditions in the US pushed some migrants to return to Mexico, the positive pull factors associated with going home had more influence in return migration decisions, findings consistent with the historical evidence on return migration (King 2000). Over half cited "family" as the primary motive behind return, meaning they wanted to rejoin family or kin. A final category that reflects the desire to return home and supports the target income theory is "completed goals" (Massey et al. 1993).

Table 3. Primary Reasons for First Migration and Most Recent Return by Gender

Primary reasons given	Total (n=200)	Men (n=172)	Women (n=28)
For migration to US			
Investing, expanding, business/buying, building, remodeling home	6%	6%	4%
Debt	4%	4%	4%
Economy/Work/Money	48%	49%	39%
Family/Reunification	12%	9%	29%
Self-Improvement/Opportunities to learn new skills	9%	9%	7%
Adventure/Interest in learning about US	18%	19%	14%
Other	4%	4%	4%
For return to Mexico			
Family	53%	52%	57%
Lost job/Could not find work	10%	9%	14%
Deported	11%	11%	7%
Completed goals	8%	9%	7%
Other (health, nostalgia, discrimination)	18%	19%	15%

Findings

Social Contexts of Learning Skills in Communities of Origin

Table 4 features the contexts in which surveyed return migrants acquired their skills and knowledge before migrating to the US. Formal learning captures skills and knowledge acquired through a structured set of learning experiences leading to credentials or qualifications that are recognized beyond the workplace or local industry (Misko 2008), and are thus more easily transferable across local, regional, and national labor markets. Skills acquired in non-formal social contexts refer to those developed by workplaces for purposes of skill development, such as on-the-job training programs or formal demonstrations by experienced co-workers (Misko 2008). Because non-formal learning processes are developed at workplaces, they usually do not lead to formal qualification or recognition beyond the workplace. Informal learning is unstructured and refers to the acquisition of knowledge that is acquired through everyday work and life. Informal learning is very much a social process. Skills and knowledge are acquired through interacting with, speaking or listening to or observing more skilled or experienced individuals. The transfer of skills and knowledge acquired in the informal learning context depends on an individual demonstrating skills and an employer recognizing them.

As Table 4 shows, many in the survey sample combined multiple forms of learning, though on- and off-the-job informal learning dominates. Only eight percent used skills acquired through formal schooling in their jobs, which is not surprising given that the average number of years of schooling in the sample is seven. Of these, however, over half identified either

mathematics or English as a valuable skill they had learned in primary school and applied to their jobs in construction and manufacturing. The acquisition of mathematical and English language skills during the formative years of schooling has important implications in terms of how we conceptualize and measure skills among the "unskilled." Traditionally, scholarship identifies migrants with only primary levels of education as "unskilled." Yet even a few years of formal education can be important in the acquisition and application of certain technical and language skills.

Table 4: Social Contexts and Processes of Learning Skills in Communities of Origin, by Gender

Learning process	Total (n=200)	Men (n=172)	Women (n=28)
Formal: Vocational and other schooling leading to credentials	8%	9%	4%
Non-formal: On-the-job training program designed by the workplace or explicit instruction from boss or coworker	39%	40%	29%
Informal (on the job): Observation, social interaction with coworkers, experimentation and practice at work	55%	56%	50%
Informal (off the job at home and community): Observation, social interaction with family, friends and neighbors	53%	54%	43%

Note: The total is above 100% as many combined multiple ways of learning skills

Over a third of the sample acquired skills through the non-formal learning environment at work. On-the-job training programs were reported as either offered or required in several industries: nursing, banking, real estate, pharmacies, and international automotive and agricultural companies with branches in Mexico, sometimes leading to inter-company transfers across borders. By far the most often-reported social contexts of learning were informally on-the-job through observation, interaction with family and friends, trial and error, practice, and off-the-job in homes and communities. On- and off-the-job learning were important for almost all of the jobs migrants held before migrating, but especially for those in farming or jobs associated with crafts such as shoemaking, construction, and brick-making, work environments that depend on learning-by-doing rather than formal education. Take the case of Cristián who was introduced to the craft of shoemaking as a young boy in his father's *piquita*. "I would come home from school and watch my father make shoes. Eventually he let me practice stitching the leather with the *pespuntador* machine" recalled Cristián. When Cristián entered León's paid labor force at the age of 17, he had already acquired considerable cobbling and machinist skills, all of which he learned informally through observation and practice at home and in his father's *piquita.*

Off-the-job informal learning is also associated with the acquisition of particular skills, including construction-related skills such as brick-making and tile installation—skills that many working-class people acquire because they lack the financial means to purchase

those products. For example, while he was still in school, Ruy assisted his family in the construction of a brick addition to their family home. "From my brothers, who had worked in construction, I learned to make red bricks, beginning with molding them from mud, horse and donkey manure, twigs, and straw, drying them in the hot sun and then firing them in an oven fueled by plastics until they turned red." Ruy learned these marketable skills from his brothers *before* entering paid employment.

Women also acquired most of their skills through informal learning, and the types of skills were largely influenced by their gendered work experiences and social contexts. Because the majority of women in our survey were concentrated in domestic service, retail, and administrative support positions, jobs that involve face-to-face interactions, they were more likely than men to discuss not only the technical skills they acquired in their jobs, including cooking, cleaning, and caregiving, but also social competences, such as team work and intergroup communication skills. Their jobs as receptionists, secretaries, domestics, and cooks made them good candidates for similar positions in the US.

Skills and Job Transitions Before Migration

As the cases of Ruy and Cristián show, social contexts and processes through which migrants acquire their skills can facilitate opportunities in local labor markets. Table 5, which lists the industry transitions from first to last job before migration, shows that over a quarter of the sample found their first jobs in the shoe, leather, and textile manufacturing sectors of León. Many of these first-time skilled and semi-skilled jobholders brought with them skills they had learned off-the-job in informal contexts and from an early age, as did Cristián from his father's *piquita*.

Table 5 also shows that about half had just one job before migration, while the reminder had two jobs or more. Over 70 percent of the first jobs before leaving Mexico were in shoe, leather and textile manufacturing; retail and hospitality; and other services, and most job changes took place within the same industry. In contrast, persons initially working in construction and manufacturing transitioned to different manufacturing and services industries. Half the men who found their first jobs in agriculture stayed in agriculture, but among those who left, almost three-fourths found jobs in the manufacturing sector as cobblers and in construction as plumbers and metalworkers. These transitions were in part facilitated by the acquisition of off-the-job skills acquired in the social spheres of household and community before paid employment. Three of the four respondents who moved from agriculture to manufacturing and construction reported that the skills they acquired off the job at home had enabled their transition across industries and into new jobs. Off-the-job learning allowed some to transition out of farming and land a paid job in Mexico's construction industry, a much desired occupation among the migrants we interviewed because it offers a moderately better salary, involves learning multiple skills that can be easily transferred to other industries, and requires no formal educational credentials. As Table 5 also shows, there was very little movement from the more desirable manufacturing sector where workers held jobs as machinists, semi-skilled and skilled shoemakers, welders, auto mechanics, electricians, and plumbers.

Women, in contrast, were concentrated in the service, retail, and hospitality industries

where they experienced very little, if any, movement out. Like men, however, they overwhelmingly transferred off-the-job skills to paid employment. All women who worked as domestics or cooks reported applying the cooking and cleaning skills they had acquired in their own kitchens and homes to their workplaces. But by and large, their off-the-job and on-the-job skills did not provide for substantial occupational mobility, either within or across industries, reflecting the narrower occupational opportunities for women relative to men (Arias and Peña 2004).

Table 5. Industry Transitions Before Migration (n=200)

		Last industry before leaving Mexico						
First industry before leaving Mexico	*Single job holders or never worked*	Agriculture	Construction	Shoe, leather, and textile	Other manufacturing	Retail and hospitality	Other services	**TOTAL**
Agriculture	*7*	0	2	2	1	2	0	**7**
Construction	*14*	0	2	1	3	2	3	**11**
Shoe, leather, and textile	*18*	0	7	18	4	6	3	**38**
Other manufacturing	*14*	0	0	3	4	5	1	**13**
Retail and hospitality	*8*	1	3	6	0	12	4	**26**
Other services	*18*	0	0	2	1	2	9	**14**
Never worked	*12*							
TOTAL	*91*	**1**	**14**	**32**	**13**	**29**	**20**	**109**

Migrants acquired their skills in a learning context in which home and work are not easily distinguishable, and interaction with family and observation and experimentation best describe their learning processes. Once in the labor market, they picked up additional on-the-job skills through observation and practice and through informal training. The next question to address, then, is whether they were able to transfer these skills to their jobs in the US.

Skill Transfers from Mexico to the US

Table 6 shows the skills that return migrants acquired and transferred from all jobs over the entire course of the migratory circuit. As predicted by human capital models, most

Mexican migrants bring very little traditional human capital with them to their US jobs as measured through host country language facility, formal education, vocational classes, and on-the-job training programs; in our sample these composed two percent of the entire sample. Yet, as Table 6 shows, close to half of these migrants arrived with substantial skills and were able to transfer them to the US labor market. Men were almost twice as likely as women to report that they transferred on-the-job skills and three times as likely to report having transferred off-the-job skills, reflecting their greater occupational diversity in Mexico and the strong emphasis on off-the-job learning among young boys and men. Machinist and electrical skills, masonry, tile installation, agricultural skills, and metalworking transferred the most common technical skills to the US. Because of the limited occupational opportunities for women relative to men, the on- and off-the-job skills that women reported centered on interpersonal skills such as caregiving and food and beverage preparation, indicative of women's domestic roles as spouses and homemakers, and entry-level jobs in food production.

Table 6. Skill and Knowledge Transfers Across the Migratory Circuit by Gender

	Mexico to US			US to Mexico		
	Total (n=200)	**Men** (n=172)	**Women** (n=28)	**Total** (n=200)	**Men** (n=172)	**Women** (n=28)
Any transfer	48%	51%	26%	51%	50%	56%
English	2%	1%	4%	11%	10%	18%
Formal education	1%	1%	0%	2%	2%	0%
On-the-job technical skills	44%	47%	26%	39%	40%	32%
Off-the-job technical skills	11%	12%	4%			
Social skills and interpersonal competences	3%	2%	4%	19%	17%	32%

Mexico-US Skill Transfers and Job Transitions

Do these skill transfers make a difference in the labor market experiences of Mexican migrants? Do they enable reskilling, job advancement and higher wages? Our data suggest that they do, but with a caveat. Skills alone do not assure economic mobility. Social networks, the conditions and social organization of work environments, and the institutional mechanisms that support skill acquisition filter the application of migrant human capital.

When they arrived in the US most of the migrants surveyed found low-wage jobs in agriculture, manufacturing, retail, hospitality, and other service industries where they labored as farm workers, janitors, busboys, and domestic workers. These preliminary jobs are not surprising, and the scholarship on the labor market incorporation of unauthorized migrants with low levels of education and language skills would predict them. Yet, almost half the sample landed skilled, semi-skilled, or unskilled manufacturing jobs upon arrival in the US, indicating substantial skill variation. Thus, some entered entry-level jobs as dishwashers and helpers, while others entered those same industries as cooks and skilled masons.

Although social networks play a large role in channeling migrants to their first jobs and industries, job transitions can be in part explained by the skill sets they bring with them from Mexico and in part by the skills they learn on their jobs in the US, which they then use to leverage better jobs. Of the 20 migrants who entered agricultural work upon arrival, 16 reported that the agricultural experience in Mexico helped them in their agricultural jobs in the US. Among the skilled and semi-skilled workers, 40 percent reported applying skills learned in Mexico to their jobs in the US, and 76 percent got their first jobs because family and friends recommended them to an employer. Some respondents were recommended because of their particular skill sets.

Table 7, which summarizes some social mobility experiences within the sample, shows that migrants reskilled in the US and experienced occupational advancement, and wage gains. Eighty-one percent of the sample learned new skills in the US, and many learned multiple skills; 68 percent acquired them through observation on the job, and another 56 percent through explicit instruction from a co-worker. Reskilling was especially pronounced in construction because of the technological differences between the industry in the US and Mexico. Subcontracting and the social organization of the work process also facilitate reskilling in the construction industry. Although subcontracting generally makes for precarious employment and working conditions, especially for unauthorized migrants who often experience wage theft from their subcontractors (Bernhardt et al. 2009), this system also offers reskilling opportunities to immigrants. Because immigrant construction workers are also typically excluded from formal apprenticeship and training programs, they depend on learning through observation and trial and error and through informal on-the-job mentoring from a more seasoned worker or a skilled *maestro* or *encargado* (Hagan et al. 2011).

Table 7. Indicators of Economic Mobility in US Labor Market (n=200)

Learned new skills/reskilling in US	81%*
Transitioned to a better job requiring more skills	36%
Wage increase	33%
Skills recognized and rewarded	65%**

* 68% learned new skills through on-the-job observation and 56% through explicit instruction from boss or co-worker.

** Of these, 52% received a raise; 12% were asked to teach others a skill; 19% reported receiving more autonomy at work; and 17% were given more responsibility on the job.

Reskilling in the US labor market facilitated transitions to jobs that required higher skills. As Table 7 shows, 36 percent transitioned to better jobs requiring additional skills. For example, the six migrants who moved from one job to another within the agricultural sector reported that the on-the-job skills they learned in their US jobs facilitated these moves. One reported learning new planting techniques through observation and practice; another three were taught how to operate farm machinery through instruction from co-workers

or supervisors. Two moved into foreman positions, and one migrant, Jaime, mobilized old skills learned off the job at home to engage in what migrant workers call *brincando* (job jumping with skills), first within the agricultural sector, and later across industries to construction. Recognized as an effective strategy employed by both native-born and immigrant professionals to circumvent exploitation and market new skills to secure higher wages (Saxenian 1996; Shih 2006), the concept of job jumping has not really been investigated in studies of labor market incorporation of less educated and unauthorized immigrants (but see Hagan et al. 2011). We found that migrants with skills regularly took the risk and jumped jobs. Among the survey sample, of those that reported changing jobs, 20 percent reported going out on their own and approaching another employer; among these, 59 percent reported changing their jobs to improve wages. Others changed jobs to leave exploitative work conditions and improve wages, but these transitions required skills.

There was little movement out of manufacturing, construction, and auto repair, especially among the migrants who worked as skilled or semi-skilled masons, carpenters, plumbers, electricians, auto mechanics, and machine operators. Industries such as construction and auto repair offer desirable jobs not only because they provide higher wages and greater mobility compared to other migrant-heavy industries like food and hospitality services, but also because migrants can apply skills learned at home and learn new ones abroad.

The US labor market experience for women in the sample was very different. Migrant women tend to enter a smaller range of jobs in the US compared to their male counterparts (Pedraza 1991). Concentrated in the service and hospitality industries, they work in low-wage and undervalued jobs as domestics, janitors, and entry-level food service workers—jobs that offer few avenues for mobility (Pedraza 1991; Powers and Seltzer 1998; Hochschild 2002; Hondagenu-Sotelo 2001; Hagan 1998). The migrant women in our study followed this pattern: in the US they were concentrated in manufacturing, hospitality, and other personal and support services and sales sectors of the economy. In these sectors they worked as private household domestic workers, chambermaids, janitors, or food preparation workers. And although the majority reported learning new skills in their US jobs (68 percent), their old and new skill sets provided limited opportunities for changing jobs as the nature of the particular job shaped opportunity structures for these women. For example, none of the women were able to transition from domestic work, where the isolation and nature of the social relations are limited to unequal personal exchanges with employers, making it very difficult to advance to other types of jobs (Hagan 1998; Hondagneu-Sotelo 2001).

Those women working in food manufacturing or hospitality reported transferring cooking skills learned on and off the job in Mexico to their US jobs. Unlike the domestics, however, some workers in the hospitality industry were able to move to better jobs within the industry, from chambermaids, food prep workers, or janitors upon arrival in the US to positions as waiters, assistant cooks in restaurants, or supervisory cleaning positions in hotels. In these positions they reported wage increases and more autonomy. They also transferred and acquired new on-the-job skills, including preparing and cooking different types of food and developing customer service, teamwork, and English skills. Take the case of Carmen, who upon arrival in the US, found work busing tables at an Anglo-owned restaurant earning $5.50 an hour. She spoke no English, but eager to learn, she practiced with co-workers and watched television in English. Within time, Carmen was promoted

to a food preparation assistant. Carmen pointed out to the cook that he was using the wrong *chiles* for *chile rellenos*. Impressed by her initiative he asked her to teach him how to prepare the dish "the Mexican way." By the time she left the restaurant to return home to be with family, she was earning $12.00 per hour, was one of two lead cooks, and spoke enough English to communicate with co-workers.

Not all migrants were able to transfer skills from Mexico to the US. In some cases, industrial location, regional opportunity structures, and social networks drew them to other sectors of the economy. In other cases, their skill sets did not match the skills demanded in the US labor market or a lack of English language ability made it more difficult to demonstrate skills. Lack of work authorization may also impose institutional barriers that block mobility and rewards, even when skills are recognized. Thus, for migrants to benefit economically from the skills they bring with them from their home communities, their skills must not only match demands for those skills upon arrival, but workers must be able to demonstrate their skills and employers must recognize and value them (Williams and Baláž 2005). In spite of these barriers, as Table 7 shows, 65 percent of the sample reported that when they were able to demonstrate their skills or when their employers recognized them, they were sometimes rewarded, either through higher wages (52 percent), more job responsibility (17 percent), and/or more autonomy (19 percent). The skills that employers recognized and valorized included both technical and hard skills, along with what Polyani (1966) refers to as tacit knowledge, and sociologists of migration and labor have call working knowledge, competences, social skills, and also "soft" or "people" skills (Kusterer 1978; Waldinger and Lichter 2003; Moss and Tilly 1996; Evans 2002; Donato and Bankston 2008). In the immigration and labor scholarship soft skills are regularly associated with what an employer wants from her or his workers, and scholars view them as indicative of the exploitive nature of immigrant work conditions. Along these lines, and as other studies have documented, our employers regularly spoke of the "hard work ethic" and "punctuality" of immigrants workers.

US-Mexico Skill Transfers and Job Transitions

As Table 6 shows, the skill sets that migrants take back to their jobs in Mexico are more diverse than those transferred to the US. Eleven percent transferred English language skills to their current jobs, primarily in the business and tourist sectors of the local economy. Women were almost twice as likely as men to report transferring English skills, reflecting the types of jobs they held in the US (domestic workers, assistant cooks, cooks, waiters, sales clerks), which require regular interaction with English-speaking managers and customers. The table shows that while neither men nor women acquired off-the-job skills in the US, both transferred substantial on-the-job technical skills to Mexico. Men reported the transfer of construction, carpentry, and automotive repair skills; women reported food and beverage preparation skills and some support and managerial skills such as computer and data entry knowledge.

The most striking feature of Table 6 is the substantial number of personal and social competences that were transferred. Migrants listed hard-to-measure personal achievements and competences such as initiative, responsibility, self-confidence, follow-through, punctuality, and presentation of self, along with a number of social skills, including

customer service, teamwork, and management skills. Women were almost twice as likely as men to report transferring these social skills, reflecting in part the greater propensity among women to hold service jobs in the US, which often require the further development of interpersonal skills.

Do these skill transfers make a difference in the types of jobs and labor market mobility migrants encounter in the Mexican labor market? Our findings are mixed. Reintegration into the Mexican labor market is a complicated process. Skill transfers depend on many factors, including migration duration, whether the return was forced or voluntary, job content, and the industrial sector in which the migrant worked in the US. There are also institutional and social barriers to reintegration in the local labor market, including different levels of technological development and the fact that recognition of skills is gendered.

Table 8. Industrial Distribution in Mexico Before and After Migration (n=200)

	Last industry after return							
Last industry before leaving Mexico	Agriculture	Construction	Shoe, leather, and textile	Other manufacturing	Retail and hospitality	Other services	Not in labor force	**TOTAL**
Agriculture	0	1	1	0	5	1	0	**8**
Construction	0	17	3	1	6	1	0	**28**
Shoe, leather, and textile	0	0	22	4	15	5	5	**51**
Other manufacturing	1	2	1	10	3	4	6	**27**
Retail and hospitality	0	1	6	2	26	3	0	**38**
Other services	0	2	2	1	6	21	6	**38**
Not in labor force	0	0	2	0	4	2	2	**10***
TOTAL	**1**	**23**	**37**	**18**	**65**	**37**	**19****	**200**

*Among those not in the labor force before migration were seven unemployed and looking for work, two university students and one homemaker.

**Among those not in labor force at time of interview are 10 unemployed and looking for work, three migrants who just returned from US (within month) and not yet looking for work, two retired persons, one university student, one disabled person, and two homemakers. Table 9. Labor market status of return migrant sample and León population, by gender

Despite these reintegration barriers, Table 8 shows that skills acquired in the US and transferred upon return to Mexico facilitated transitions from manual jobs in agriculture and manufacturing to service-based occupations in the hospitality and retail industries. New skills and remitted savings allowed other former machinists in leather and shoe factories

to bypass salaried work and open up their own small- to medium-sized shoemaking factories. Others chose not to reenter manufacturing and instead found work in the retail and hospitality and service sectors where they also applied skills learned in the US. Of those who returned to León with English language skills, some moved into retail and hospitality jobs while others used their English in their professional relationships with the international business clientele who travel to León to purchase leather goods. Those who used their English to find work in hospitality and tourism were waiters or receptionists or started their own businesses that cater to English-speaking persons. English language capability has enabled some female return migrants to bypass traditional domestic service and find work as English teachers or move to tourist towns where they can demand a higher salary because of their language skills.

Table 9, which compares the employment status of our sample with the León population, highlights the large number of return migrants who started businesses after returning to Mexico, a finding that has been replicated in other recent studies of return migration to Mexico (Hazan 2013). We found that launching a business upon return home may be more than just a function of applying remitted savings or a strategy to secure higher wages and overcome local labor market failures and constraints, as documented in the literature (Dusstmann and Kirchkamp 2002; Papail 2002; Mesnard and Ravallion 2006; Cerase 1974; Gmelch 1980). It is also an opportunity to apply new technical, personal, and social skills learned abroad to an entrepreneurial venture that provides individual occupational mobility and opens up possibilities for local development.

Table 9. Labor Market Status of Return Migrant Sample and León Population, by Gender

Work Status	Male sample (n=172)	Male León (n=10,124)	Female sample (n=28)	Female León (n=6,164)
Salaried worker	52%	59%	36%	32%
Self-employed	26%	17%	29%	11%
Self-employed with employees (Patrones)	15%	4%	7%	1%
Unemployed looking for work	4%	4%	14.3%	1%
Homemakers	0%	1%	4%	42%
Others (retired, disabled)	2%	16%	11%	55%

In Table 9, we also distinguish between two groups of return migrants who own their businesses: those that are self-employed and those that are self-employed and have employees, the latter of whom are identified in the table as *patrones*. In the former category are return migrants who reported using remittances to open up small informal businesses (e.g., small sundry shops, ambulatory food and beverage vending stands, and second-hand clothing stores) as a survival strategy to overcome barriers to labor market reintegration. Deportees were largely concentrated in this category, reflecting the problems of labor market

integration for migrants who are forcibly repatriated and return with little or no financial resources and often are stigmatized upon arrival home. Women also were concentrated in this category and reported turning to self-employment as a response to the gender and age discrimination they experienced in the mainstream labor market.

On the other hand, 14 percent (15 single job holders and 12 job changers) of the migrants did become *patrones*, a figure over five times the *patrón* percentage for the city of León. Many of the *patrones* were target migrants, that is, they moved to the US with the aim of accumulating enough capital to open up a business upon return. They identified two factors that facilitated their entrepreneurial activities: remittances and skill transfers. Eighty percent of all *patrones* used remitted savings to start their businesses and 68 percent applied skills learned in the US to their current businesses. Of these, 64 percent reported transferring technical skills acquired in US jobs, including from restaurant and construction work, auto repair, and carpentry.

But technical skills are not the only skills that facilitate entrepreneurial activities and diversify local economies. Equally important are the language and social skills successful return migrants bring back with them. Fifty-four percent of the *patrones* and 76 percent of the self-employed return migrants cited specific non-technical on-the-job skills that they acquired in the US and were able to apply to their business ventures. Another 35 percent reported transferring English skills to their entrepreneurial ventures. Take the case of Enrique, the son of a cobbler, who emigrated from León to the US as a teenager. After graduating from a US high school, he found work in an Anglo-owned and -run Mexican restaurant. Because of his English skills, he quickly moved up the ladder from busboy to assistant manager. When he returned to León, Enrique bypassed shoemaking and became a self-employed taxi driver, catering to the international English-speaking business clientele who travel to León to purchase leather goods. His services are unique, providing airport transfers, tours of the city, and chauffer service for the day. When asked about the skills he learned in the US, he referred to a set of integrated personal and social competences that he had learned from his boss in the restaurant: confidence, responsibility, initiative, and customer service.

Assessing Welfare Gains Across the Migratory Circuit

To assess migrants' cumulative and relative welfare gains across the migratory circuit, we now turn to Table 10, which provides subjective and objective measures of well-being and social mobility across the labor market careers of return migrants. Although the majority of the sample reported considerable job satisfaction in their labor market careers, the percentage reporting job satisfaction was highest in the US. Even though their limited English and unauthorized status placed many migrants in exploitative work conditions, we know from qualitative interviews that migrants gained satisfaction from, among other things, higher wages, opportunities for learning new skills, and rewards for skill recognition.

"Transitioned to a higher skilled job" reflects a direct measure of occupational mobility associated with skill transfers. It is in our opinion the most direct evidence of migrant agency and *brincando* (job jumping). According to the literature, immigrant workers adjust to exploitation, discrimination, and blocked mobility in the secondary labor market

by shifting back and forth between jobs in the informal and ethnic economies, but rarely experiencing real economic mobility (Sassen 1989; Zlolniski 1994; Theodore, Valenzuela, and Melendez 2006; Light 2006). In contrast, we find that roughly one-third of the sample transitioned to higher skilled and more prestigious jobs across the migratory circuit. Men's transitions to higher paid and more skilled occupations were greatest in the US, reflecting the skills, especially construction- related ones, they brought with them from Mexico, along with their greater occupational choices and skill opportunities relative to women who entered the US labor market as domestics, chambermaids, and low-skilled food preparation workers. But men also gained from reskilling in the US, especially in automotive and construction work. In Guanajuato, skills acquired in the US also allowed returnees to cater to a growing expatriate population and other return migrants seeking to build homes in the American style. While some women moved on to higher-skilled jobs in the US, many remain trapped in low-wage domestic and hospitality work. On the other hand, on some levels women trumped men upon return, reflecting their ability to mobilize their English language capital and social skills learned in the US to land better jobs.

Table 10. Indicators of Social Mobility Across the Migratory Circuit

	Before Migrating		In the US		On Return	
	Men (n=168)	**Women** (n=22)	**Men** (n=171)	**Women** (n=28)	**Men** (n=161)	**Women** (n=20)
Satisfied with job	69%	78%	84%	89%	73%	76%
Transitioned to a higher skill job*	32%	27%	39%	27%	29%	44%
Mean skill level*	1.8	1.5	1.8	1.4	2.1	1.6

* Among those who had more than one job at any given stage

**1=low skilled, 2=semi-skilled, 3=highly skilled

Finally, we can see from Table 10 that overall, both men and women upgraded their skills across the migratory circuit, moving from low-skill jobs characterized by repetitive tasks (dishwasher, leather cutter) to semi-skilled jobs, defined as those that involve multi-tasking or the mastery of a specific skill (see Table 1). Men were more likely than women to transition to semi-skilled jobs upon return, reflecting the different entry jobs of men and women upon return and the more limited occupational choices for women. Reintegration into the Mexican labor market was more difficult for women than men, but most women appeared to benefit economically and socially from migration. Some faced institutional discrimination because of age; for others, it took time to market their English language capital and interpersonal and customer service skills acquired in the US. As a result, upon return, some of the women first entered traditional jobs requiring few skills, such as domestic service, but some managed to transition to semi-skilled jobs requiring multi-tasking, such as food preparation and customer service or English and customer service.

Conclusion

To explain the variability in learning and skill transfers among migrants with low levels

of formal human capital and to distinguish their labor market experiences from the highly skilled, we have engaged the literature on learning and knowledge transactions which recognizes multiple types of knowledge—both codified and tacit—along with the social contexts in which they are created. We find that unlike migrants whose human capital is largely acquired in formal learning environments leading to credentialed and codified knowledge, migrants with low levels of education acquire most of their skills informally through interaction and observation both on and off the job. This is not to say that migrants with formal credentials do not acquire some skills informally before migration, but that for migrants with low levels of formal education, job skills are learned predominantly in social contexts rather than classrooms and thus are often hidden skills. It is therefore especially important that the assessment of migrant welfare gains according to models of human capital account for the acquisition of lifelong human capital.

The literature on learning and knowledge transactions also sheds light on the non-technical skills and knowledge migrants acquire in their workplaces, or what Evans (2002) refers to as social methodological, and practical competences. The literature on skilled migration has begun to recognize that language capital and social competences acquired or improved in workplaces abroad can be transforming, enhancing social status and self- esteem upon return (Williams 2007b). But as we argue in this paper, the acquisition of competences is not limited to the skilled, but is dispersed across jobs and labor markets.

Our research also suggests that the occupational and industrial context of learning and skill transfers matter. On- and off-the-job work experience in construction and automotive repair is easily transferrable to the US and back to Mexico, where demand for these services is high. Other skills are place-specific and cannot be transferred (e.g., the techniques used in roofing and some aspects of agriculture in the US are not applicable to work in Mexico), while others are easily transferable (e.g., metalworking, automotive repair, and English language skills), especially in large cities with a diverse industrial base and wherever demand for language capital is high.

Our study has broad implications for the migration policies of both the US and Mexico. US immigration policy confers preference to "skilled" immigrants who rank high on traditional human capital characteristics, such as education levels and other formal credentials, but limits the entry of "unskilled" migrants, a categorization that ignores the substantial informal skills they bring to US labor markets. Instead of focusing only on the continued expansion of immigration policy preferences for narrowly defined skilled migrants, the US government needs to consider more carefully what we mean by skilled workers and design fairer and more effective immigration policies that match their abilities to the specific needs of US industry and thereby recognize the economic contributions of all migrants within a lifelong human capital framework. Mexico can also learn from our findings. Between 2005 and 2010 an estimated 1.4 million returned to Mexico from the US, a figure roughly double the number who had returned in the five-year period a decade earlier (Passel et al. 2012). The government of Mexico has a history of developing programs to provide for Mexicans abroad and encourage their remittances. Our research indicates that the Mexican people and their economy would benefit by supporting entrepreneurial ventures and reintegration programs that recognize and reward the enhanced skill sets of return migrants. As we have shown, some of these individuals are able to fill valued positions

and start businesses of their own, creating more jobs in their home communities and thus promoting local economic development.

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