To Study or Not to Study: the Influence of Family Migration on School Enrollment among Mexican Adolescents

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March 1, 2004

Paper to be presented at the PAA 2004 Annual Meeting in Boston Massachusetts

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Most of the literature on international migration has focused on its causes and its consequences, mainly from the point of view of the receiving countries. The main goal of this research is to explore some of the effects of international migration for those who stay in the country of origin. **From this perspective, the specific goal is to explore to what extent the family experiences of migration to the U.S. and the community prevalence of migration influence the school enrollment of adolescents in Mexico.**

On one hand, in spite of the advancement in educational indicators in Mexico, more than half of the adolescents will be out of school before the completion of their secondary education (that is, 9 years of schooling) (Giorguli Saucedo, 2004). Even though most of the explanations about this accelerated process of leaving school concentrate on economic arguments—that is, that adolescents leave school because they need to work—census data indicate that "lack of interest in school" is the main reason, as reported by adolescents, for their dropout from school (INEGI 2000). This recent result points to the need of understanding processes such as the construction of expectations regarding education and the possible competition between life careers such as the early entrance into the labor market or migration to the U.S.

On the other hand, international migration has been a long lasting process in Mexico and it has an impact on families and communities in urban and rural zones all along the country. In around 10% of the households with adolescents at least one member of the household has lived or currently lives in the U.S. (INEGI 1997). In spite of the importance of this migration process, we know little about the impact on the population and communities that stay in Mexico, for example, about how cultural practices, expectations and consumptions patterns change as a result of a circular and widespread migration to the North.

This work is a preliminary effort to think about how migration to the U.S. is having, or not, an impact on the lives of adolescents who—most probably—have not migrated to the U.S., but still are exposed to the influence of the migration process

through their families or their communities.[1] To explore this issue, I looked at the enrollment status of Mexican children between 12 and 16 years of age. These children should have finished elementary school and should complete their secondary education within this period; however, as mentioned earlier, most of them will leave school before they turn 17. According to 1997 data, half of the children who were 16 in that year were in school, and the percentage reduces to 42% by age 17 (author's calculations based on data from the *Encuesta Nacional de Dinámica Demográfica,* 1997, INEGI). Because the process of dropping out is closely related to the entry into the labor force, this study explores jointly the enrollment and labor status of adolescents. Thus, the main dependent variable under study combines the enrollment status with two options for those not in school. It includes three categories: (1) enrolled; (2) not enrolled and working; (3) not enrolled and not working (see table 1).

Table 1. School enrollment and labor status of children 12 to 16 years of age. Mexico, 1997 (percent)

Variable	Enrolled	Not enrolled and working	Not enrolled and not working	Total
Boys	75.5	18.1	6.4	100.0 (18,952)
Girls	71.9	10.0	18.1	100.0 (18,275)
Total	73.7	14.2	12.1	100.0 (37,227)

Source: Author's calculations based on data from *Encuesta Nacional de Dinámica Demográfica*, 1997 (INEGI 1997).

As indicated in table 1, around one fourth of Mexican adolescents (12 to 16 years old) were not in school in 1997. The table also shows the gendered nature of the process of dropping out from school. We do see significantly lower enrollment rates among girls compared to boys, although the difference is not large (less than four percent points). The gendered character of the process is more clearly reflected on what boys and girls not in school are doing. While for boys we find that most of them leave school and work, in the case of adolescent girls there is a greater trend to stay at home. Considering the Mexican traditional division of labor, we can assume that most of these

[1]. This document only explores the influence of family migration on adolescents' enrollment. In future stages of this research I will add community variables and will separate the influence of migrant relatives depending who or how many migrate. I will also add a temporal dimension (current migration, less than 5 years ago, more than 5 years ago).

girls are engaged in domestic work. This result is coherent with prior findings that suggest the more frequent participation of boys in nondomestic jobs as a strategy to increase household income (González de la Rocha, 1997). This difference in the process of leaving school for boys and girls justifies the separate analysis for each of them, as presented in the following sections.

MIGRATION TO THE U.S. AND EDUCATIONAL EXPECTATIONS AROUND ADOLESCENTS

How may the exposition to U.S. migration experiences change the perceptions or expectations of adolescents regarding their educational career? We can summarize the explanation of such link in three main mechanisms:

An evolution of a "culture of migration" which influences adolescent's perceptions about their careers and their chances of migrating in the future

As pointed in prior works, migration becomes a self-sustained process as a result of the cumulative experiences within families and communities and of the formation of transnational social spaces in migrant communities (Massey et al, 1993; Kandel and Massey, 2002). Through the progressive spread of people's experiences living and working in the U.S. within a community, new normative patterns are created so that, for example, as the incidence of migration increases, people accommodate their aspirations, expectations and conceptions of what they "should do" also in accordance with the meaning given to such experiences. Specially important in the case of adolescents, the expectation of working and living in the north becomes "a rite of passage, and those who do not attempt it are seen as lazy, unenterprising, and undesirable as potential mates" (Kandel and Massey: 982). The circular character of Mexican migration to the U.S. and the creation of transnational spaces favor the evolution of this culture of migration. Thus, adolescents who may have greater expectations (and chance) to migrate, either because they have a greater exposure to migration within their families or within their communities, will tend to leave school earlier.

Change in life style aspirations and expectations regarding adolescents' careers.

The exposition to foreign remittances, new consumption patterns in families that receive remittances and the greater purchasing power of these families influence, in the first place, the life style that adolescents may aspire for themselves and their families in the future. These aspirations may collide with the job and income opportunities in the Mexican labor market. If that is the case, adolescents may perceive that migration to the U.S. is the best option to achieve the lifestyle they desire. Thus, migration may appear more interesting as a career option than education. Migration or education may be even seen as opposite choices in adolescents' lives. Therefore, a higher exposition to migration experiences may have a negative effect on enrollment and educational achievement. As the role of males as breadwinners is still strongly rooted in Mexico, we would expect that this effect will be found mainly in adolescent boys. In their study of Mexican adolescents in Zacatecas, Kandel and Massey (2002) did find evidence that a greater exposition to migration increases the aspirations to work in the U.S., so that adolescents look northward for job opportunities and as a means of social mobility.

The low expected returns from education for migrants who usually work in the low end of the occupational scale in the U.S.

The preference of migration over education (instead of the accomplishment of both in a parallel manner) may be also explained by the lack of interest in education as a mechanism of social mobility. In fact, most of the migrants will most frequently work in unskilled jobs where educational attainment may be difficult to translate into greater upward mobility. If that is the case, migration to the U.S. may be lowering the educational expectations of adolescent children. Prior work based on data from a small community in Zacatecas (Giorguli 2001) showed that educational expectations for children were lower when men, women or their spouses had migrated to the U.S. Reinforcing this argument, migrants may also encounter difficulties in translating the educational attainment in Mexico into better job opportunities in the U.S. (where the educational experience in the Mexican system may be of little value).

In summary, migration and education may be alternative choices for adolescents who expect to migrate later in their lives. Such expectation will be related to the

exposure to migration experiences at the family or community level. Working or living in the North may be seen more often as a way to accomplish a "successful" career and upward social mobility. If that is the case, there may be little interest in staying in school beyond compulsory education.

MIGRATION AS A GENDERED PROCESS

We saw that the process and reasons for leaving school may vary among adolescent boys and girls (table 1). Boys may be leaving school more often in order to work and girls in order to fulfill domestic tasks. Similar to the process of leaving school and entering the labor market, migration is a gendered process (Pessar 1999a and 1999b; Hondagneu Sotelo 1994 and 1999). We know that it still is a male-dominated phenomenon (even though female participation in the flow has increased), that women tend to migrate legally more often than men and that the reasons for migrating may vary by sex. Regarding this last element, men may travel to the North with the expectation of working there and returning later to their communities of origin. In contrast, women that migrate may be doing it mainly for family reasons (following the husband, the children or other relatives) and tend to prefer settlement (over return migration to Mexico) as time passes by (Itzigsohn and Giorguli, 2002). However, we should notice that there is some evidence of an increasing trend in female labor migration (Cerruti and Massey 2001).

Considering the gendered nature of international migration, we could assume that the link to adolescents' enrollment and labor status varies also for boys and girls. As a rite of passage, the expectation to work or live in the U.S. may be stronger for boys whose actions are influenced by the stereotype of being successful breadwinners in their future. In contrast, for girls the link between migration and their life careers may be weaker or less consistent in its direction.

SPECIFIC INFLUENCE OF MIGRATION ON ADOLESCENT'S ENROLLMENT AND LABOR STATUS

As mentioned, this paper is a first presentation of the progress of this research. Thus, it only includes whether a household member has migrated or currently lives in the U.S. Still it is important to mention specifically which elements of the exposure to international migration may influence children's enrollment and how this influence may be operating.

From my perspective, adolescents may be exposed to the "culture of migration" through family experiences or through the exposition to experiences of other members of their communities. Regarding the former, we can expect that whether a household member is currently in the U.S. will have a stronger influence on children's expectations than a former experience of those who have returned. Who migrates may be also important to consider; if it is a peer such as a sibling or another relative close in age we may also expect a greater influence than if it is someone of the older generations. The number of members of the household who have migrated to the U.S. may be used as an indicator of how strong the migratory tradition is within a family and may reflect the greater access to networks. Finally, female migration may be specially important for girls' expectations.

Regarding the community variables, I will use the index of migration intensity by municipality developed by the *Consejo Nacional de Población* (2002). The index measures four dimensions of Mexican migration to the U.S. at the household level: whether somebody in the household was in the U.S. between 1995 and the year 2000; whether someone in the household had been to and returned from the U.S. during the same period; whether someone in the household had lived in the U.S. before 1995; whether the household received remittances from the U.S. This information fails to capture those families where everybody is in the U.S. and other migrants who may not be reported as part of a household in Mexico.[2] Still, is the best data source to measure migration at the municipal level. The intensity of migration (index) as an indicator of how exposed adolescents are to the culture of migration may have a different meaning depending on the size of the community. Therefore, we should explore interactions between these two variables.

Also important for understanding the influence on girls' expectations, I will looked at the prevalence of female migration at the municipal level. In this case, the data is not available from CONAPO. As an alternative, I will estimate the prevalence of female migration at the household level (percentage of households where at least one female member had lived or currently lives in the U.S.) using survey data[3].

DATA AND METHODS

Aside from the migration index, the statistics used in this paper come from the Demographic Dynamics National Survey, 1997 (*Encuesta Nacional de Dinámica Demográfica,* ENADID 1997). The Survey is based on a representative nationwide sample and provides information for all household members on age, sex, relation to the head of the household, migration status, presence of the mother, presence of the father, educational attainment and labor status. From the survey, I extracted the personal information on all children 12 to 16 years of age and built household and community variables based on the information of all household members.

Of the whole subsample of Mexican children between the ages 12 and 16, I excluded from the analysis those children who reported to be heads of the household (75 cases), spouses of the head (163 cases), domestic workers (121 cases) and those with missing information about the relation with the head of the household (1 case). I also excluded those children who were living temporarily in the household (49) and children with no information on school attendance (49) and on working status (1). The number of children excluded from the subsample represents 1.2% of the total number of children ages 12 to 16. The final data set includes personal, family, dwelling and community information for 37,227 Mexican children between the ages of 12 and 16.

In the survey, all individuals answered whether they were currently going to school. Those who replied positively to the question were defined as enrolled in school. Regarding their labor status, the survey asked whether the individual was working (8,608 cases) or not working but did have a job the prior week (91 cases). Those who replied yes to any of these two options were defined as working.

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2. Another constraint of the data used for this research is that it only has information for current or past household members. We do not know the migration experience of extended relatives that do not coreside with the adolescent.

3. Note for the organizer and reviewer: it is possible that for the presentation of this paper at PAA I will have added to my paper the analysis of the municipal measurement of migration.

For the analysis, I estimated a multinomial logit model predicting the enrollment and labor status of Mexican children between 12 and 16 years of age. The variables used for the analysis are depicted in table 2. The variables selected are considered the main determinants of school enrollment and labor status. Given the differences by sex in enrollment and labor status in Mexico, the models were estimated separately for boys and girls.

Table 2. Descriptive statistics of Mexican children between the ages of 12 and 16. Independent variables to be included in the model. Mexico, 1997

Variable	Description	Mean or Percent	Standard Deviation
Age: 12-13	Age at the moment of the survey. Added as	41.6	
14-15	a categorical variable	38.8	
16		18.6	
Mean age (years)		13.9	0.5
Years of education completed:	At the moment of the survey		
Whole population		6.6	2.1
Not enrolled		5.8	2.5
Migrant	If the child migrated from one state to another at least once during the last five years.	6.0	
Number of younger children in the household	All children younger than the respondents and regularly living in the HH	1.9	1.7
Number of older boys	Older male adolescents living in the HH (up to age 20).	0.5	0.7
Number of older girls	Older female adolescents living in the HH (up to age 20)	0.5	0.7
Family-owned business	If at least one member of the HH reported to be employed in a family-owned business.	20.4	
Household migration experience to the U.S.	At least one of the members of the HH lived in the U.S. during the last 5 years or was living in the U.S. at the moment of the survey.	10.5	
Natural logarithm of the household per capita income	Natural logarithm of the sum of the income reported by all members of the HH divided by size of the HH.	5.5	1.6
% EAP employed in manufactures		16.3	
% Women 15 and older working in the municipality		40.5	
N= 37,227			

Source: *Encuesta Nacional de Dinámica Demográfica*, 1997 (INEGI 1997)., 1997 (INEGI 1997).

Note: All the household information excludes domestic servants and lodgers. HH=household. When appropriate, the standard deviation is included in a separate column.

A total of 912 households (2.4% of the sample) reported to have no income at all. They were given the mean income by size of the location and education of the parents. The variable "household income" captures all the economic earnings coming from labor and nonlabor sources. Thus, it considers, for example, resources received through remittances in the case of households with migration experience to the U.S. Regarding

the inclusion of both, income and education in the model, the correlation between both variables (excluding the missing cases on income) was 0.30.

INTERNATIONAL MIGRATION AND ITS INFLUENCE ON ADOLESCENT'S ENROLLMENT

Table 3 shows the enrollment and labor status of adolescent boys and girls by household migration condition. The chi-square statistic suggests that there is a significant association between both variables. The table shows that enrollment rates are considerably lower when there has been exposition to international migration at the household level. The difference in enrollment is about ten percent points for both, boys and girls. We also see for girls a trend towards a greater specialization in domestic work when there is a certain exposition to family migration. One in every four of these girls will be "not enrolled and not working". The difference in enrollment for boys exposed to family migration is evenly distributed between those who work and those who are not enrolled nor working. It is still interesting to note that close to 10% of these boys are neither in school nor engaged in domestic jobs.

Table 3. School enrollment and labor status of children 12 to 16 years of age by sex and by household migration status. Mexico, 1997 (percent)

Variable	Enrolled	Not enrolled and working	Not enrolled and not working	Total
Boys:				
No migration to the U.S. in the HH	76.6	17.2	6.2	100.0 (16,971)
Migration to the U.S. in the HH	65.8	24.9	9.3	100.0 (1,981)
Girls:				
No migration to the U.S. in the HH	73.1	9.7	17.3	100.0 (16,361)
Migration to the U.S. in the HH	61.9	12.4	25.8	100.0 (1,914)

Source: Author's calculations based on data from *Encuesta Nacional de Dinámica Demográfica*, 1997 (INEGI 1997).

An aspect to consider is that this result is reflecting a certain selectivity of migrant households rather than the influence of a culture of migration. In other words, at the national level there may be certain selectivity by socioeconomic status and by size of the location of households exposed to migration experiences. It is possible then that the difference in enrollment rates is capturing this selectivity effect. In order to isolate the impact of a culture of migration from other aspects, I estimated multinomial logit models predicting the enrollment and labor status of adolescents. The model can be seen as a construction of the determinants of school attendance and working condition of Mexican adolescents. It includes individual, household and community variables and was estimated separately for boys and girls.

Table 4 shows the results of the multivariate analysis and table 5 summarizes the effects of family migration to the U.S. From the results we can conclude that the effect of international migration on the probabilities of leaving school remain significant only for boys, supporting the hypothesis of a clearer influence of migration on the aspirations and expectations of boys compared to girls. The exposure to migration within the household increases the probabilities of working (versus studying) and of remaining idle (not working nor studying). There is even some evidence that the effect is stronger on the probabilities of being idle among Mexican boys. In summary, boys tend to leave school more often in migrant households. To a certain extent, they drop out probably in order to work. However, the impact is greater on the probabilities of remaining idle.

Table 4. Multinomial logistic regression predicting educational and labor status. Boys and girls 12 to 16 years of age. Mexico, 1997

	BOYS		GIRLS	
Variable	**Not enrolled and working**	**Not enrolled and not working**	**Not enrolled and working**	**Not enrolled and not working**
Age: 12-13	-2.518 **	-1.311 **	-2.367 **	-1.704 **
14-15	-0.894 **	-0.489 **	-1.001 **	-0.580 **
16	--	--	--	--
Migrant	0.341 *	0.327 *	0.479 **	0.248 *
Younger children	0.146 **	0.122 **	0.183 **	0.183 **
Older boys	-0.065	0.101	-0.032	0.184 **
Older girls	-0.101 *	0.074	-0.080	-0.036
Both parents:				
mother not working	--	--	--	--
mother working	-0.121	0.058	0.202 *	-0.300 **
Only father	0.382 *	0.482	0.767 **	0.773 **
Only mother:				
mother not working	0.138	0.203 *	0.312 *	0.280 *
mother working	0.029	0.215	0.490 **	0.009
Neither parent in the HH	0.435 **	0.281	0.945 **	0.900 **
Other income earners	0.195 **	0.044	0.232 **	0.082 **
Other nonworking adults in the HH	-0.219 **	-0.022	-0.501 **	-0.141 **
Family-owned business	0.684 **	-1.083 **	0.814 **	0.073
HH migration to the U.S.	0.136 *	0.289 **	0.069	0.094
Parental education	-0.205 **	-0.182 **	-0.201 **	-0.216 **
Ln (income)	-0.052 *	-0.068 *	-0.037	-0.920 **
Size of the community:				
Less than 2,500	0.580 **	0.055	0.874 **	0.677 **
2,500-99,999	0.210 *	0.090	0.533 **	0.227 *
100,000 or more	--	--	--	--
% EAP in manufactures	0.010 **	0.017 **	0.020 **	0.017 **
% of women working	-0.008 *	-0.013 **	0.017 **	-0.016 **
Constant	0.279	-0.521	-2.004 **	0.527 *

Source: Author's calculations based on data from the *Encuesta Nacional de Dinámica Demográfica*, 1997 (INEGI 1997)., 1997 (INEGI 1997).

Wald Chi2(63)= 3742**

Pseudo R2=0.2330

* p<0.1

** p<0.01

Table 5. Odds ratios for "not enrolled and working" and "not enrolled and not working" versus "enrolled" by household migration to the U.S. Mexico, 1997

Variable	Not enrolled and working	Not enrolled and not working
Boys:		
No migration to the U.S. in the HH	1.00	1.00
Migration to the U.S. in the HH	1.15*	1.34**
Girls:		
No migration to the U.S. in the HH	1.00	1.00
Migration to the U.S. in the HH	1.07	1.10

Source: Author's calculations based on data from *Encuesta Nacional de Dinámica Demográfica*, 1997 (INEGI 1997).
* $p<0.10$
** $p<0.01$

FIRST RESULTS AND PRELIMINARY REFLECTIONS

The main goal of this research is to explore how the exposure to international migration experiences may influence children's enrollment in school and their working status in Mexico. The underlying argument is that international migration has an effect on the expected roles and the aspirations of adolescents. To a certain extent, studying and migrating may be seen as competing choices. If a greater exposure to migration increases their expectations of following this path, there may be a disincentive to stay in school. Furthermore, the low expected returns from education among migrants may also discourage them from studying beyond compulsory education.

This paper is a first exploration of this larger research concern. So far, it only includes a raw measurement of household migration experience based on whether at least one of its members has migrated to the U.S. Even though it is a preliminary approach, I did find some evidence to support the hypothesis of a detrimental effect of

exposure to migration on school attendance. This effect remains for boys even after controlling for diverse confounding variables. Considering that boys tend to leave school more often when exposed to household migration to the U.S., we may think that migration has a greater impact on their expectations and aspirations and that there is a lack of interest in studying when they intend to migrate in the future. It is also interesting to stress that the detrimental effect of migration on school attendance for boys specially raises the probabilities of remaining idle (that is, of not working nor studying).

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