

Determinants of educational accomplishment of migrants in Mexico City*

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Abstract

Determinants of educational attainment of migrants in Mexico City

The purpose of this paper is to analyze the effect of immigration status on the age at which migrants exit formal schooling and their educational attainment. The aim of this work is to identify if the observed differences are due to the immigration status itself or derived from other socio-demographic variables associated with their status, a condition that could place migrants at an educational disadvantage with respect to Mexico City natives. To further investigate, we used data from the 2009 Inequality and Social Mobility Survey of Mexico City and found out that unlike the evidence of research made in the 1970s, which assumed that upward mobility was a phenomenon present in both migrant and native individuals, migrants' educational performance is not as good as that of the natives, not just for the fact that they are migrants but because they tend to have lower economic, cultural and social capital attributes within their families of origin, a condition that prevents them from taking better advantage of their efforts to attain a similar or higher educational performance to the one of the natives. Another finding suggests that even after controlling for the disadvantageous social origin, rural migrant women maintain a consistently unfavorable performance when compared to the performance of the natives.

Key words: Internal migration, education, labor markets, Mexico City.

Resumen

El propósito de este trabajo es analizar el efecto de la situación migratoria sobre la edad de salida de la escuela y el logro educativo. Interesa saber si las diferencias observadas se deben a su condición migratoria en sí misma o bien a otras variables sociodemográficas asociadas a su posición que podrían colocar a los migrantes en situación de desventaja educativas con respecto a los nativos en la Ciudad de México. Para ello se utilizaron los datos de la Encuesta sobre Desigualdad y de Movilidad Social en la Ciudad de México, 2009. Los resultados sugieren, a diferencia de lo evidenciado por las investigaciones de la década de los setenta que suponían que las tasas de movilidad ascendente beneficiaban por igual a migrantes y nativos, que a los migrantes les va mal, aunque no por el hecho de ser migrantes, sino porque tienden a contar con menores atributos económicos, culturales y de capital social en sus familias de origen, lo que les impide obtener un mayor provecho de sus esfuerzos para lograr un desempeño educativo similar o superior al de los nativos. Otro hallazgo sugiere que incluso después de controlar el origen social desventajoso, las mujeres migrantes rurales mantienen un desempeño consistentemente desfavorable en contraste con las nativas.

Palabras clave: Migración interna, educación, mercados de trabajo, Ciudad de México.

* This article is based on my degree thesis: Migración interna y búsqueda del bienestar: el logro educativo y ocupacional de los migrantes en la Zona Metropolitana del Valle de México, 1980-2009, to obtain the degree of Doctor in Social Science with specialty in Sociology, in El Colegio de México. I am grateful to Dr. Patricio Solís, for his generous direction. In like manner, I acknowledge to Dra. Edith Pacheco and Dr. Gustavo Verduzco, for enriching the discussion with their comments. It is not necessary to clarify that mistakes and inaccuracy are exclusively my responsibility.

INTRODUCTION

Historically, Mexico City has been one of the main attraction poles for migrants looking for job opportunities and a place to settle; this was especially noticeable in the case of young migrants from the countryside with low training levels (Negrete, 1990: 647). The growing migration from rural localities and backward zones was accompanied by a reduction in schooling level and lack of experience in nonagricultural labor, which increased their disadvantages in the urban labor market regarding the natives, considering the increase in the formal requirements to enter labor force (Balán et al., 1977; Muñoz et al., 1977).

This was one of the main conclusions of the studies oriented to deepen into the knowledge on migration toward this city, which clearly stated the main characteristics of this process, at least up to the 1970's.

Unfortunately, at present little is known about the new characteristics of internal migration to the large urban areas of the country, the emerging ways of insertion into economic activities in the destination and the situation experienced by the migrants in their new environment, which on occasions are nothing but a failed attempt to run away from the poverty in their places of origin.

This way, the present work intends to contribute to renew the interest in the study of internal migration to large urban areas, in particular Mexico City and its link with one of the most relevant factors: education,¹ which has been the main means through which people have had access to various occupations, from data provided by the Survey on Inequality and Social Mobility in Mexico City (ENDESMOV 2009).² More specifically, the purpose of this work is to analyze the age at leaving school of the migrants

¹ In this work we refer to formal education from elementary to higher education, which at the end grants a degree or a certification.

² The study universe of Encuesta sobre Desigualdad y Movilidad Social en la Ciudad de México comprised people between 30 and 60 years of age living in private households in the Metropolitan zone of Mexico City and was carried out between April and August 2009. The final sample size was 2 038 respondents, with similar proportion of men and women. The survey had format of life stories, with full residential and occupational stories. It also incorporated retrospective information on the most relevant family and educational traditions. Since the main goal of the survey was to find information on the intergenerational transmission of inequality, an extensive battery of questions was set up on the socioeconomic characteristics of the parents of the respondent, which offers information not available in the usual sociodemographic surveys (Solís, 2012).

heading for Mexico City.³ We are interested in finding out if migrants present educational disadvantages regarding the natives, either associated to disadvantages to access education in their communities before migrating or else, their schooling trajectories are cut short once they reached the city. We want to know if, in the case such disadvantages exist, these are directly caused by the current migratory status or else to other associated characteristics such as social background (measured by the father's education and occupation) and other individual sociodemographic (sex) and contextual (birth cohort) variables.

To do so, this work was organized as follows. In addition to introduction and annex. In the first part, we will reflect on the links between internal migration, economic changes and factors that determine educational accomplishment. In the second, the age at leaving school from survival analyses, a technique that allows contrasting the intensities and calendars of men and women according to migratory status.⁴ However, since such technique has some limitations that make it difficult to perform more complex studies. In a third section, a bivariate logistic model is utilized to explore the factors that influence on the probability to experience dropping out of school over individual time. In this case, the model becomes discrete-time logistic, assessing the probability that a person changes from a state (attending school) to another (drop out of school). In the fourth section, for the analysis of determinants of educational accomplishment, firstly we resorted to bivariate logistic regression models ordered by cohort and sex to assess the probability that an individual attains a higher educational level than another over time. Later on, a multivariate logistic regression models were utilized to find out if the effect of migration persists once other socioeconomic characteristics are controlled, mainly those related to social background. Finally, some final considerations from the most relevant findings of this work are presented.

³ In this work the term to refer to the metropolitan zone of Mexico City is Mexico City, according to the definition made in the survey that includes Mexico City proper and 25 municipalities of the State of Mexico (Acolman, Atizapan de Zaragoza, Chalco, Chiautla, Chicoloapan, Chiconcuac, Chimalhuacán, Coacalco de Berriozábal, Coyotepec, Cuautitlán, Cuautitlán Izcalli, Ecatepec de Morelos, Huixquilucan, Ixtapaluca, La Paz, Naucalpan de Juárez, Nezahualcóyotl, Nicolás Romero, Tecámac, Tepotzotlán, Texcoco, Tlalnepantla de Baz, Tultepec, Tultitlán and Valle de Chalco Solidaridad).

⁴ Henceforward, when "leave school" is utilized we are referring to one of the most important transitions toward adult life. It may be due to graduation or dropping out. "In the first case, the student finishes their studies because they reached the level they intended or the highest degree they aspired to or the one their society expected from them. In the second case, the student drops out of school at any moment, either after concluding a year or even over the term, giving reasons as varied as economic issues, family problems, unplanned pregnancy, or lack of motivation, among other reasons" (Pérez, 2012: 701).

MIGRATION AND EDUCATION

In modern societies formal education is the main means for people to reach access to various job posts. Titles or degrees granted by schools serve as ‘credentials’ that certify a certain training level and besides secure that people who hold them have the “adequate” individual characteristics (Balán, 1969). In fact, up to the second half of XX century,⁵ education had an important role in the processes of social mobility in Mexico, thus Solís has argued:

Not only was education an opportunity to enter new realms by accessing culture and knowledge but also acquired greater importance in the world of labor owing to the pressing demand for trained workers associated to industrial expansion (Solís, 2007: 85).

In this context, education became a relevant factor in the decision making process of migration, since the individuals who had a higher education level assimilated better the information, as they perceive labor opportunities better in other regions and thereby be more successful, which turned into a larger propensity to migrate. The very educational system forces people who want to continue studying to move to the cities, additionally since the sort of education is more focused on urban-related activities, they are ushered to live in them. In the case of Mexico City, which has been one of the main attracting poles for migrants looking for work opportunities, noticeable as of the mid XX century has been a growing process of occupational marginalization, partly due to the deficient instruction level of the young migrants who reached the city, mainly from rural localities and backward zones, broadening the gap between the educational levels of the migrants and the native population, which fostered their competitiveness in terms of occupational opportunities, given the increase in formal requirements to enter the labor force (Stern, 1977: 101).

There is need to verify that this and other statements facing the conditions now faced by Mexico City and the country in general. Particularly, the city maintains a privileged situation regarding the rest of the country in socioeconomic development and demographic indicators, which are noticed in the sphere of educational offer that not only is quantitatively broad, but also qualitatively diverse, particularly at the high and higher education levels. Moreover, Mexico City has become the main seat of some most prestigious higher education institutions in Mexico, both public and priva-

⁵ Recently there has been evidence on the diminishing returns of schooling in labor market, particularly at higher education levels (Díaz, 1995: ANUIES, 1996, Muñoz, 1996).

te (Blanco et al., 2014). However, the city is also a space marked by stark educational inequalities, which manifest as the diversification of educational trajectories and stratification in accomplishment levels, as we will see further in text. Previously, we will present succinctly the phenomenon's evolution over previous decades in view of contextualizing the object of study.

MIGRATION TO MEXICO CITY

The fast growth of cities in Mexico, as in Latin America, was owed to a good extent to urban-rural migration that sometimes surpassed the natural population growth in the cities. In Mexico, it was the capital of the country the one that received the most immigrants for as of the 1940's decade it turned into an attraction pole for impoverished rural population (Romer, 2009; Corona and Luque, 1992).

The dynamical industrial and service development created a labor market constantly growing that reached mean annual rates of seven and 7.6 percent for men and women, respectively, stimulating internal migration. This employment offer experienced a noticeable drop in later decades: in 1950, it was 4.9 and five percent; in 1960, 3.2 and 3.3 percent (Contreras, 1972). These changes in employment were largely due to the transformation that took place in the industrial structure as of the mid 1950's. In this time, the substituting policy of capital goods by means of which importations increases and the use of technology intensive in capital, which produced a reduction in the demand for labor force (Oliveira, 1977).

Even if as of the 1940's, the important flows toward the capital responded to an actual attraction that expressed in employment opportunities and better wages; in later decades, the intensification of migration occurred aside the labor force demand and basically became unemployment and underemployment in agriculture, a result of a deep crisis in the sector (Muñoz et al., 1977: 131). Effectively, an intensification of the migratory flows was noticed in the 1960's and 1970's decades, in spite of the diminution of employment opportunities.

Between 1940 and 1970, Mexico City received circa 50 percent of the country's total migrants and the highest intensity of the migratory flow was recorded for 1960's decade. In 1970's, more than a third of the eight million inhabitants of the city were immigrants (Stern, 1977: 115). This single fact accounts for the importance of the migratory phenomenon in the seventies, which was more noticeable if it was taken into account that about 54 percent of the male economically active population between 21

and 60 years comprised immigrant labor force (Muñoz et al., 1977). This mass of workers managed to largely enter the secondary sector —more specifically, in industries that produced manufactured goods— instead of other areas of the tertiary sector, including personal services, which had an important weight in the labor force demand (Muñoz et al., 1977).

Even if up to the 1970's, migrants had the possibility to enter the labor market in occupations with certain labor stability immigrants in later decades, mainly of rural origin and low educational levels, whose experience was predominantly in agriculture, were the most affected by poverty (urban marginality). Their integration into the manufacturing sector implied low wages, while many more did not manage to, which forced to underemployment (or unemployment) disguised in remunerations below minimum wage (Muñoz et al., 1977: 129, 220).

Linked to this, the face pace of the population's spatial concentration, in combination with the development of the industrial sector and economic activity of Mexico City, ended up modifying the observed pattern (at least up to the end of the seventies) of spatial redistribution of Mexicans, as a consequence of various factors related to problems proper to the huge size of the city: urban segregation and marginalization of large number of people who were not absorbed the urban-industrial economies, the growing informalization of labor, the increase in the cost of the main urban services (piped water, sewer, etc.), the scarcity of housing, crime, environmental pollution and problems to meet the demand of health services, education and leisure centers (Browning and Corona, 1995).

In such manner that by the end of the 1970's the industrializing model applied in the country reaches its end ostensibly. The economic and social crisis early in the eighties marked a new stage of growth for the city, where industrial activities and population moved to localities in the State of Mexico, as a result of the new policy of reindustrialization and economic liberalization that pursued the formation of an industrial sector articulated with the rest of the economy and specialized with international trade, propitiating certain territorial diversification of productive activities, an accelerated growth of the nearby secondary urban centers and a process of tertiarization of Mexico City's economy (Garza, 2003).

Perhaps the most important change of its historic behavior of being the main recipient city in the country in the eighties, it changes to the main population ejector (Corona et al., 1999). Censual data indicated that over the quinquennium 1975-1980 Mexico City reached a positive migratory net balance close to 105 thousand people, which implied a mean migra-

tion net rate of 0.7 percent. By contrast, for 1985-1990, the situation was different, immigration decreased while emigration almost doubled in size,⁶ making negative the net migration rate with a value close to -1.9 percent (Camposortega, 1992).⁷ For the first half of the nineties,⁸ data from the 1995 counting show a relative recovery in the migratory balance, which was verified by XII Censo General de Población y Vivienda that disclosed that Mexico City recovered their migratory balance to virtually reach zero in 1995-2000,⁹ a tendency that has continued to the most recent lustrum 2005-2010, according to censal data.¹⁰

One of the main aspects of the changes in migration during the 1980's and 1990's is that the geographic origin of the migrants has varied very little, which has changed is the relative importance of each of the cities of origin.¹¹ In like manner, the sociodemographic characteristics of the immigrant population to Mexico City has experienced few changes, population with low schooling levels, which mainly inserted into the tertiary sector, informal labor or domestic service. An important difference of the nineties with the previous decade is the change of female prevalence by the male.¹² Regarding age structure, immigrants under 15 years accounted for 20 percent of the population that arrived in 1990-1995, while the population from 15 to 34 accounted for 61 percent. This meant that about 80 percent of the migrant population was under 35, which would suggest predominantly labor migration (Corona, Chávez and Gutiérrez, 1999).

The set of these elements shows that migration to Mexico City is an expression of the rearrangement of the inhabitants with low or scarce resources looking for better opportunities and life conditions. The determinants and patterns of educational accomplishment of the migrants in Mexico

⁶ According to censal information, during 1985-1990 the migratory status of the zone was as follows: 425 361 people older than 5 years changes residence from other states of the republic to Mexico City; while, the number of emigrants was 716 224 people, which represented a negative migratory balance of 290 863 people.

⁷ During 1985-1990, 80 men arrived in Mexico City per each 100 women, situation that can be explained by the grater female labor insertion in tertiary activities (Corona et al., 1999).

⁸ Approximately 692 thousand people arrived and 638 thousand left, which became a positive balance of 53 thousand, which represented a migration rate of 0.3 percent (Corona et al., 1999).

⁹ Approximately, 517 thousand people arrived and 549 thousand left, which became a negative balance of 32 thousand (Pérez, 2005).

¹⁰ According to 2010 censal data, approximately 891 thousand people arrived and 680 thousand left, which is a positive balance of 210, 767 people in the reference period.

¹¹ According to censal data for 1975-1980, 1985-1990, 1990-1995 and 1995-2000, the states that sent more population to Mexico City were Puebla, Veracruz, Oaxaca, Hidalgo, Guerrero, Michoacán, Guanajuato, Jalisco and the conurbation municipalities of the State of Mexico. Over the first lustrum of the nineties these nine states sent 83 percent of the migrants of the zone, this is to say, four out of five came from them (Corona et al., 1999).

¹² While in the second lustrum of the eighties, per a hundred women that arrived, 80 men did. In the first lustrum of the nineties per each 100 women who migrated, 130 men did (Corona et al., 1999).

City will have to be explored so as to assess to what extent migration to the main urban agglomeration in the country represents an alternative of educational accomplishment or else it represents a step into disadvantageous conditions and permanent marginalization (Santiago, 2015).

PARTICULARITIES OF AGE AT THE FIRST SCHOOL LEAVE

The age at leaving school is one of the most important events in transition to adult life, as it denotes the end of an initial training period, to the extent that it involves the acquisition of capacities, cognitive competences and abilities to face adult roles and responsibilities better prepared such as the beginning of labor life and marriage, among others. The educational system has become the main source of socialization, mainly for women, who over the last 30 years have massively incorporated into the educational system in most of the countries (Lloyd et al., 2005; Lloyd, 2006). In the world, by the end of the nineties, the access to the educational system, mainly in rural zones, increased globally —with the exception of some zones in West Africa. The most significant increase occurred in the access to elementary education, which is an accomplishment owing to the increase in the population that attends schools (Lloyd et al., 2005; Lloyd, 2006, UNESCO, 2009). Albeit, speaking of schooling implies going beyond the access to the educational system, as permanence in it is an essential factor to explain transition to adulthood (Billari and Philipov, 2004; Hofferth *et al.*, 2001; Lloyd *et al.*, 2005; Echarrri and Pérez, 2007).

In a country such as Mexico and in particular in its main metropolis, where the institutionalization of the course of life is in the best of cases partial or segmented (Solís, 1997), more heterogeneity might be expected for the age at first leaving school, as it will depend to a good extent the individuals' social background, as well as the difference between men and women. Such differences in age at leaving school would be therefore an indicator of the breach of educational opportunities that exists between the individuals from different social classes. Because of this, it is important because it is important to review the differences in the calendar of school leaving, with especial attention to those associated to migratory status, which are the main object of the present work.

Table 1 shows the indicators of the calendar at the age of the first school leave according migratory status ($1-S_x$), it is a a calendar indicator that values the proportion of people who left school for the first time at 15 years of age. Quartile (Q), age or duration along which 25, 50 and 75 percent of the population interrupts their studies for the first time.

Table 1: indicators of intensity and calendar at leaving school according to social background and context MZMC 2009 (men)

Variables	Individuals who lived the experience at 15 years (%)	Quartiles			Inter- quartile range
		First quartile	Median	Third quartile	
<i>Generations</i>					
Native	14.30	16	18	22	6
2 nd generation	19.40	15	18	23	8
1 st urban generation	37.99	12	14	20	8
1 st rural generation	49.25	12	15	18	6
<i>Occupation of the father or economic supporter</i>					
Non-manual high and intermediate	4.7	17	23	25	8
Non-manual low	7.69	16	20	23	7
Commerce	13.02	16	18	23	7
Manual high	14.88	16	18	23	7
Manual low	34.51	13	16	19	6
<i>Schooling of the father or economic supporter</i>					
None	43.42	13	15	17	4
Incomplete elementary	30.63	13	16	19	6
Complete elementary	16.83	15	18	21	6
Secondary	5.3	16	19	23	7
High school	4.69	21	23	26	5
Professional	4	22	23	25	3
<i>Birth cohort</i>					
Cohort (1950-1959)	35.19	13	16	22	9
Cohort (1960-1970)	21.45	15	17	22	7
Cohort (1971-1979)	11.7	16	18	23	7

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

From quartiles a fourth measure can be obtained, it is called interquartile range, which is the number of years it takes the first school leave accounts for 25 to 75 percent of the total population of the group in question (Solís, 2008).

By and large, results verify that some differences by migratory status particularly among population socialized outside Mexico City, especially people with a rural background, who exhibit a younger calendar at school leave than those socialized in a city. Particularly, first-generation migrant population shows a higher proportion of people who had left school at 15 regarding those of the second generation and the natives (49.25 v 19.40 and 14.3 percent, respectively).¹³ Likewise, the median age is lower for those socialized outside Mexico City (15 years for first generation and 14 for the urban, compared with 18 for the second generation and natives, respectively). Age at first and third quartile presents more consistent trends, the age at school leave in both cases is lower for those socialized outside the city, particularly for the rural. This is consistent with evidence from other works such as Echarri and Pérez's (2007), when they compare Mexican youths with rural and urban backgrounds they found that the proportion of youths with a rural background left school before 15 years is almost 25 percentage points over their urban peers, congruent with the greater extension of school enrolment in urban localities.

Well now, if for example we compare the percentage of school leave at 15 years according to the father's occupation (table 1), it is possible to observe that among children of fathers with low manual jobs the proportion of individuals who had left school at 15 was 34.5 percent; conversely, among children of fathers with high and intermediate non-manual jobs, it decreases reaching about five percent. These differences are verified observing the quartiles, for example the median age for children of fathers with high and intermediate non-manual jobs it is 23 years v 16 years for children of fathers with low manual jobs.

By comparing the father's educational level, it is possible to notice an inverse relation with the leave percentage of school leave at 15 years. Children of fathers with low educational levels exhibit a higher leave percentage, verifying the importance of the socioeconomic status of the origin family in educational opportunities. For example the leave percentage at 15, for children of parents with higher education regarding children of fathers with no education is substantial (4 v 43.4 percent, respectively). In like

¹³ The percentage of people who had left at 15 is even higher than that of first-generation urban immigrant with 37.99 percent.

manner, age at the various quartiles is older for children of parents with more schooling, moreover they present the lowest interquartile range in all the considered groups, this is to say, a better homogeneity at the age of leaving school, while median age for those with fathers with no instruction is (15 years) with a deviation of 4 years, for those with parents with education it is (23 years) with a dispersion of three years.

In the case of birth cohorts, results suggest that those born in the cohort (1950-1959) tend to leave school younger than those born in the most recent cohort (1971-1979).¹⁴ In the first cohort (1950-1959) people who left school at 15 accounted for slightly more than 32 percent, such percentage reduces in the following cohort (1960-1970) to 21.5 percent and then for the most recent cohort (1971-1979), the decrease is drastic, 12 percent, i.e., the change is recent. Furthermore, quartile analysis shows an increase in the median age for school leave over time, after 16 years in the oldest cohort and 18 for the most recent cohort.

It is possible that differences are due to the universalization processes in access to public education started in Mexico in the 1970's, which have been very successful in terms of coverage. This linked to social programs that foster the school participation of individuals with low resources generates a more than considerable growth in the proportion of men and women who attended school as well as an increase in the levels of average schooling in recent-generation population (Muñoz, 2006).¹⁵

Thus far, we have exclusively referred to the calendar of school leave for men. As regards such calendar for women, a greater intensity is noticed in their school leave (in general, the differences between those socialized outside and inside Mexico City remain, in which the former present a smaller proportion or permanence in school).

¹⁴ One must bear in mind for this part of the analysis that each cohort experience will reflect a specific period of the economic and social change experienced by the country and Mexico City itself over the last 50 years, so changes between cohorts show the effects of these transformations in the proportion of school leave at different ages by cohort. "Over the four decades from 1940 to 1980, the country experienced an accelerated industrialization and urbanization process. Then during the eighties, the depletion of the development model based on imports substitution became a deep economic crisis, which produced a marked increase in poverty and reduced the population's welfare levels. Later, by the end of the eighties, the liberalization measures were accompanied by certain reactivation of economic growth, however this had a slower pace than that observed before the 1980's lost decade" (Solís, 2005: 43). In addition to the fact that the 2008 crisis affected and reflected in 2009.

¹⁵ Educational requirements in the current labor market are higher, which has produced an ascending displacement in the educational requirements necessary to access the world of labor in a relatively advantageous position. This is, accomplish educational levels with in the past were regarded as sufficient to enter the world of labor in favorable positions is now less useful (Vilagómez, 2008: 45).

Table 2 shows the age quartiles at which the event was experienced. By and large, women socialized outside Mexico City present a less prolonged permanence in the educational system than those socialized in the city. However, regarding men, the calendar of women is earlier, this is to say, women present a higher risk of leaving school at earlier ages than men. In the case of native women, the proportion who left school at 15 years was almost 20 percent, among men it reached a value of slightly more than 14 percent. Likewise, while first-generation rural women who had experienced leaving school at 15 accounted for 60 percent, their male peers accounted for 49 percent. Likewise, the median age is lower for first-generation rural female migrants than for their male peers (13 v 15 years, respectively). Age at first quartile and the age at third quartile behave similarly. This concurs with Gandini and Castro (2006), who distinguish that the women's calendar is still earlier than men's, even though they point out that younger women remain longer in school than their antecessors.

As regards the social origins by schooling and occupation of the father or economic supporter, it is still verified that daughters of fathers with low educational levels exhibit a higher school leave percentage; opposite to daughters of fathers with higher educational levels, restating the importance of the family social status in women's educational opportunities. In like manner, daughters of fathers with low manual occupations show a higher percentage of school leave, contrasted by daughters of fathers with high and intermediate non-manual occupations. Albeit, women present a higher risk of leaving school at earlier ages than men mainly in cases in which fathers have lower educational levels and are hired in manual jobs. It is noticeable that in the case of occupational backgrounds—in all the fathers' occupations—women present a higher proportion of school leave at 15 than men and in education only up to high school, after its, women behave inversely (Table 2).¹⁶

Differences by cohorts are evident, as they are more recent, the calendar of the analyzed transition is later for women and even later for men.

¹⁶ In a work in which three generations of Mexican women are compared: 1946-1950, 1951-1955 and 1966-1970, Conapo (2000) finds that youths whose mother did not attend school or did not finish elementary abandon their studies at a much earlier age than those with mothers with complete elementary or more. Among the former, it is also noticed the presence of gender differences, since daughters leave school earlier than sons; conversely, such differences are not noticed when mothers studied for longer. Even though in Conapo's analysis the mothers' education is used as an approach to the socioeconomic situation of the family of origin, its conclusions are still valid for a work like this.

Table 2: indicators of intensity and calendar at leaving school according to social background and context in MZMC 2009 (women)

Variables	Cuartiles			
	Sujetos que experimentaron el evento a los 15 años (%)	Primer cuartil	Mediana	Tercer cuartil
<i>Migratory status</i>				
Native	19.76	15	18	22
2 nd generation	27.62	14	16	20
1 st urban generation	56.26	11	14	18
1 st rural generation	59.99	11	13	15
<i>Occupation of the father or economic supporter</i>				
Non-manual high and intermediate	11.54	17	20	24
Non-manual low	28.67	14	19	23
Commerce	30.23	13	17	20
Manual high	20.62	15	18	22
Manual low	40.89	13	15	18
<i>Schooling of the father or economic supporter</i>				
None	53.6	12	14	16
Incomplete elementary	32.68	13	16	19
Complete elementary	20.47	15	17	19
Secondary	18.59	15	18	22
High school	2.45	18	21	24
Professional	2.93	20	22	24
<i>Birth cohort</i>				
Cohort (1950-1959)	46.92	12	15	18
Cohort (1960-1970)	29.77	14	17	20
Cohort (1971-1979)	17.1	15	17	21
				6

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

In the first cohort (1950-1959), women who left school at fifteen accounted for almost 47 percent v 35 percent of men; such percentages drastically reduce for cohort 1960-1970 to 30 percent for women and slightly more than 21 percent for men. It later falls in the most recent cohort (1971-1979) with 17 percent for women and almost 12 percent for men, this is to say, the gap between men and women in the school leave calendar closes, very probably from the growth and development of the country, particularly regarding education, of which women have benefitted in recent decades. The above is verified by the quartile analysis which shows an increase in increase in the median age at school leave, even though this occurs at a slower pace for young cohorts, particularly in the case of women, for whom there was no increment.¹⁷

The analysis of the calendar of school retirement performed in this section, by exporting the effects of the variables individually, has some limitations that make it difficult to perform more complex studies, as it may induce errors from lack of other variables' control. In these circumstances, the natural step is the adjustment of multivariate models (Solís, 2007).

DETERMINANTS OF THE SCHOOL LEAVE BY SEX

In the previous section, it was suggested that the migrants' age at school leave is heavily influenced by social background. However, the analysis of the calendar of school leave from the descriptive indicators does not allow finding out if the differences in school leave are a direct effect of the migratory situation or are a product of other associated variables such as social origin and other individual and contextual sociodemographic variables. This is only accomplished by a multivariate model that allows adequately valuing the independent effect of each variable on the probability of leaving school.

In this section, a logistic model of discrete time is proposed to explore the factors that influence on the probability of experiencing school abandonment.¹⁸ The dependent variable refers to: the individual experienced (1) or not (0) school leave. As independent variables migratory status, the

¹⁷ Gandini and Castro (2006) have attributed the closing of the gap in the school leave calendar between men and women to advances that in terms of school attendance and compulsoriness that were enforced in Mexico after the 1930's and which become more visible in the 1950's decade and onwards, hence the differences regarding the transition calendar seem gradual in the inter-cohort differences between older generations and are more stressed in the case that generation of the 1960's especially between men.

¹⁸ Since there is an educational trajectory for the individuals, the exact years which the subject spent in the educational system can be stated as well as the year they left (if they lived it). This way, the unit of analysis are person-years that correspond to the years that an individual remained in the educational system, this is to say, there will be as many observations for an individual as

fathers' occupation and education, as cohort and age are included. The person-years in risk of experiencing school leave are included in the model as a dummy variable of four categories: the first is defined from six to ten years of age (6-10); the second from eleven to fifteen (11-15); the third category goes from sixteen to twenty (16-20); and the last from twenty-one to twenty-nine (21-29) (annex). With this it is assumed that the probability of occurrence of the event does not vary inside each category, but does between categories.

Results for men are presented in Table 3. Models 1 to 6 present unadjusted odds ratios, i.e., those which are obtained from adapting models where each variable is introduced as a single independent variable. In general, most of the coefficients are significant, indicating the already described association between the different variables and school leave.

Regarding migratory status, the unadjusted model shows that it is more probable to leave school at any age for first-generation migrants, particularly rural. The odds to leave school at any age for urban and rural first-generation migrants are 27 and 37 percent higher than the natives, respectively. The adjusted model shows that controlling for education and occupation the father, cohort, age and migratory status, the odds to leave school at any age for first-generation migrants are 45 percent higher than the natives and only 17 percent lower in the case of second-generation migrants regarding the natives. It is possible that this is because the latter inherited the entrepreneurial spirit, additionally they do not have the disadvantageous conditions their parents had, linked to the access to the educational system in Mexico City. However, it is worth underscoring that in the case of first-generation rural migrants the effect increases comparing with the first-generation urban whose coefficient in fact becomes nonsignificant, which suggests that being first-generation rural migrant implies a higher risk of leaving school, mainly due to their origin deficiencies —disadvantages present before migrating—.

The occupation of the father or economic provider reports significant coefficients, as expected: the odds to leave school at any age are about 20 percent higher for children of fathers engaged in trade than for children whose fathers are in high and intermediate non-manual occupations; similarly, the odds are 48 percent higher for children whose fathers had a low manual occupation than for children of fathers with high and intermediate non-manual occupations.

years they spent in the educational system. The dependent variable is binary and takes the value of 0 if the individual did not leave school in the year in question and 1 if they left such year.

Table 3: Discrete time model for the first school leave for men. Odds ratio derived from the binomial logistic models (adjustment of discrete time logistic models up to 29 years of age)

School leave	Unadjusted models						Adjusted model
Variables	1	2	3	4	5	6	7
<i>Generations of immigrants</i>							
Native (ref.)							
2 nd generation	1.01						0.83b
1 st urban generation	1.27 ^c						1.31
1 st rural generation	1.37 ^c						1.45 ^b
<i>Occupation of the father or economic supporter</i>							
Non-manual high and intermediate (ref.)							
Non-manual low		1.13 ^c					1.12
Commerce		1.20 ^c					1.11
Manual high		1.22 ^c					1.07
Manual low		1.48 ^c					1.36 ^c
<i>Schooling of the father or economic supporter</i>							
None (ref.)							
Incomplete elementary			0.90 ^c				0.77 ^a
Complete elementary			0.79 ^c				0.62 ^c
Secondary			0.70 ^c				0.50 ^c
High school			0.58 ^c				0.32 ^c
Professional			0.58 ^c				0.34 ^c
<i>Birth cohort</i>							
Cohort (1950-1959) (ref.)							
Cohort (1960-1970)				0.94			0.95
Cohort (1971-1979)				0.85 ^c			0.99
<i>Age</i>							
6 to 10 (ref.)							
11 to 15					11.51 ^c		11.99 ^c
16 to 20					25.66 ^c		32.06 ^c
21 to 29					50.33 ^c		72.29 ^c
<i>Schooling up to private or public secondary</i>							
Public (ref.)							
Private						0.76 ^c	0.79 ^b
<i>Number of observations</i>	12 012	11 740	12 012	12 012	12 012	12 012	11 740

^a p < 0.1, ^b p < 0.05, ^c p < 0.01

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

The adjusted model, conversely, shows that the effect is only significant for children of parents with low manual occupations v children of parents with high and intermediate non-manual occupations, this is to say, inequality becomes evident between these two groups. Regarding the schooling of the father or economic provider, there is a significant effect. The unadjusted model shows that it is less likely to leave school with better schooling of the father, something similar occurs with the odds of the adjusted model. This verifies that the father's education is relevant to explain educational inequalities between individuals in general and between the migrants and natives in particular.

Regarding cohorts, the unadjusted model shows that is less likely to leave school at any age for the most recent cohort, this possibly associated with the universalization process in the access to public education in Mexico. The adjusted model did not report any significant effect at the age of leaving school by cohort, which would suggest that other variables buffer the effect.

In the case of women (Table 4), the odds to leave school are close to 10 percent higher for second generation female migrants regarding the natives, situation that was not noticed for the case of men. Separately, odds to leave school are 41 and 50 percent higher for first-generation urban and rural female migrants, respectively, than for the natives. The adjusted model shows that controlling for the father's occupation and education, cohort, age and migratory status, the odds of leaving school at any age for first-generation rural migrants is still higher than that of the natives (1.38), in like manner the first-generation urban migrants present higher odds to leave school (1.41) than the natives.

Regarding second-generation female migrants, the coefficient becomes non-statistically significant, which would suggest that the effect is buffered by other variables. The occupation of the father or economic provider reports some variants regarding men, even if the unadjusted model shows that it is less likely to leave school with a better occupation status of the father, the effect is only significant for daughters with a father in trade or manual occupation v the daughters of fathers who had high and intermediate non-manual occupations. The adjusted model, conversely, shows that the effect is only significant for daughters of fathers with low manual occupations v daughters of fathers with high and intermediate non-manual occupations, similar to the case of men.

Table 4: discrete time model for first school leave for women. Odds ratios from the logarithmic binomial models (adjustment of discrete time logarithmic models up to 29 years)

School leave	Unadjusted models						Adjusted models
Variables	1	2	3	4	5	6	7
<i>Immigrant generations</i>							
Native (ref.)							
2 nd generation	1.09 ^c						0.97
1 st urban generation	1.41 ^c						1.41 ^a
1 st rural generation	1.50 ^c						1.38 ^a
<i>Occupation of the father or economic supporter</i>							
Non manual high and intermediate (ref.)							
Non-manual low		1.07					1.00
Commerce		1.24 ^c					1.05
Manual high		1.13 ^c					0.94
Manual low		1.49 ^c					1.53 ^c
<i>Schooling of the father or economic supporter</i>							
None (ref.)							
Incomplete elementary			0.78 ^c				0.63 ^c
Complete elementary			0.73 ^c				0.64 ^c
Secondary			0.67 ^c				0.51 ^c
High school			0.57 ^c				0.42 ^c
Professional			0.52 ^c				0.35 ^c
<i>Birth cohort</i>							
Cohort (1950-1959) (ref.)							
Cohort (1960-1970)				0.83 ^c			0.79 ^b
Cohort (1971-1979)				0.78 ^c			0.74 ^c
<i>Age</i>							
6 to 10 (ref.)							
11 to 15					9.06 ^c		10.26 ^c
16 to 20					19.65 ^c		28.16 ^c
21 to 29					29.05 ^c		50.06 ^c
<i>Studies up to secondary, private public</i>							
Public (ref.)							
Private						0.67 ^c	0.54 ^b
Number of observations	10 504	10 281	10 497	10 504	10 504	10 504	10 281

^a p < 0.1, ^b p < 0.05, ^c p < 0.01

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

In the case of the father's schooling, the coefficients reported are significant, similarly to men. The unadjusted model indicated that it is less likely to leave school at a better father's schooling, which is also demonstrated in the adjusted model. This indicates that one of the main determinants in the migrants' educational accomplishment is the father's education and to a lesser extent his occupation.

The effect attributed to birth cohorts shows for the case of the unadjusted model that is less likely to leave school at any age for women in the most recent cohort, very similar to men. If there is a difference, it is in the intermediate cohort where women present odds 17 percent lower to leave school at any age. Conversely, men for that same cohort the coefficient was not significant. The adjusted model verified this. Well now, to observe the interaction terms between migratory status and the age categories for men, it is necessary to make additional calculations that allow not only to compare the probability to leave school according to the migratory status at the different ages, but also contrast the migratory status at each group age, which the main objective of the coming section. This in view of evincing if the migratory status has a differential effect on the age at leaving school.

EFFECTS OF MIGRATORY STATUS BY SEX ON THE PROBABILITY OF LEAVING SCHOOL ACCORDING TO AGE GROUP

Table 5 shows the effects of migratory status on the probabilities to leave school for men. Results suggest that the effect of migratory status depends on age. The probabilities of leaving school before 16 years are much higher for first-generation rural migrants (the odds ratio regarding the natives is 9.56 in at the ages 6-10, and 3.03 for 11-14). However, at later ages rural migrants that managed to remain in school up to 15 have no differences with other groups, including the natives. This suggests that the different performance of first-generation rural migrants, particularly in the educational sphere, is mainly the result of their origin disadvantages (those present before they migrated) reason why the effect of being rural migrant only appears after 16. No doubt, leaving school at early ages is an important element of disadvantage for first-generation migrants (particularly rural) in comparison with the native, which will have an impact on the quality of labor insertion because low schooling levels are associated with employment precariousness (Oliveira, 2006; Oliveira and Mora, 2008).

Table 5: Effects of migratory ascription on the probability to leave school. Odds ratios calculated from the interactions between migrant generations and age (men)

Variable	6 - 10 years	11 - 15 years	16 - 20 years	21 - 29 years
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
<i>Migrant generation</i>				
Native (ref.)				
2 nd generation	1.81	1.21	0.93	0.86
1 st urban generation	3.98 *	2.66 ***	1.07	1.32
1 st rural generation	9.56 ***	3.03 ***	1.12	1.13
<i>Number of observations</i>	4 684	4 121	2 142	1 065

* p < 0.1 ** p < 0.05 *** p < 0.01

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

In the case of women (Table 6), results are similar, even though with larger differences between migrants and natives. Between six and 10 years, the odds to leave school are 24 times larger for first-generation urban migrants than for the natives and almost 28 times larger then between the first-generation rural migrants v the natives. In the following age group (from 11 to 15) despite the odds ratios to leave school decrease, it is still a disadvantage for those socialized outside Mexico City, particularly rural. From 16 to 29 years, the age to leave school is not determined by being first-generation rural migrants; and from 21 to 29 years fro being socialized outside Mexico City. It is noticeable that second-generation migrants display significant coefficient for all the age groups and that between six and 20 years of age have higher probabilities to leave school than the natives, particularly at earlier ages and that only the group from 21 to 29 their possibilities to leave school are almost a third below. This is interesting as it suggests there are significant differences in the insertion patterns (Santiago, 2012 and 215) of migrant men and women, in the way that women did not accomplish full adaption to the second generation, the opposite is observed for men.¹⁹

But, why is there a deficit in the second generation of women and not in men? A possible answer, offered by the literature, is that the pattern reported for women is an indication of the ways in which the sexual division of labor works at home. Women's dropping out of school may be accompanied by heavier workloads of house chores and care of siblings and old people in their families. Similar results are reported by other authors for

¹⁹ It is possible that they have children earlier, this is to say, a transitional family model.

young population (Horbath, 2004; Gandini and Castro, 2006). However, the results of this work concur with Oliveira and Mora, who argue that this is not a behavior proper to women with few resources. It seems as if the patterns of the sexual division of labor are more persistent in the most disfavored social contexts in socioeconomic terms (Oliveira and Mora, 2008: 127). In this same sense, Mier y Terán (2004) shows that female youths in marginalized rural communities leave school earlier than men, but start their labor life at lower proportions than men at all ages.

Table 6: effects of migratory ascription on the probability to leave school. Odds ratios calculated from the interaction between migrant generations and age (women)

Variable	6 - 10 years	11 - 15 years	16 - 20 years	21 - 29 years
	Odds Ratio	Odds Ratio	Odds Ratio	Odds Ratio
<i>Migrant generations</i>				
Native (ref.)				
2 nd generation	4.47 **	1.36 ***	1.30 *	0.72 ***
1 st urban generation	25.08 ***	1.92 ***	1.75 **	1.83
1 st rural generation	28.59 ***	3.11 ***	1.11	0.66
<i>Number of observations</i>	4483	3749	1673	599

* $p < 0.1$ ** $p < 0.05$ *** $p < 0.01$

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

DETERMINANTS OF EDUCATIONAL ACCOMPLISHMENT

It is worth bringing to mind that this research was as an objective to assess the influence of migratory status in two aspects central to education trajectories: age at leaving school and educational accomplishment. So far, we have only presented the particularities at leaving the educational system, recognizing the importance of the migratory status, individual and contextual variables, in addition to their interaction with age at leaving school of the migrants and the natives by sex. To complete this, in this section we will analyze the influence of the migratory situation on educational accomplishment. To do so, we will enquire whether educational opportunities are determined by the migratory status, even after considering the familial socioeconomic status, sex and cohort.

Before starting to study the determinants of educational accomplishment, it is necessary to point out that we decide to start this section with a previous analysis by birth cohort so that we can descriptively outline the differences generated in the educational accomplishment of the subjects

associated to changes over time, product of the process to universalize access to public education as of the 1970's, in addition to the transformations related to the urban development of the country. This way, in the following section we study the structural transformations in limited time intervals and their impact on the opportunities of educational accomplishment of each cohort distinguished for the analysis.

CHANGES BY COHORT AND SEX IN THE EDUCATIONAL ACCOMPLISHMENT OF MIGRANTS IN MEXICO CITY

Table 7 presents the odds ratios for the models ordered logistic regression models that measure the effect of various generations of male migrants on the educational accomplishment for three different cohorts. It is worth remembering that the dependent variable is the schooling level attained by the individual, classified into six categories (none, incomplete elementary, complete elementary, incomplete and complete secondary, incomplete and complete high school and graduate), as presented in the annex. The results of the unadjusted model on the migrants' educational accomplishment does not show sufficient statistical evidence for the second-generation migrants for all birth cohorts. Conversely, first-generation rural migrants from the oldest cohort (1950-1959) showed deficits in terms of educational accomplishment, the odds ratios of 0.29 verify this, suggesting a higher probability of being pushed to the bottom of the social structure owing to the association with poor education levels. In the intermediate cohort the situation does not improve, in fact, it seems as if the deficit remains up to the most recent cohort. Noticeable is the first-generation urban migrants, which in the cohort (1950-1959) displayed a deficit in educational accomplishment, but from the intermediate cohort the odds become nonsignificant.

In the case of women, the story is utterly different. In fact, Table 8 shows that from the oldest cohort (1950-1959), second-generation showed the deficit of educational accomplishment, the odds of 0.38 for second-generation migrants verify that even since there was deficit in educational accomplishment among them. It is distinguishable that second-generation female migrants present a nonsignificant coefficient in the intermediate cohort, however the deficit in educational accomplishment remains in the last cohort, even though with a slight diminution.

For their part, first-generation urban female migrants, the analysis for the cohorts points at a heavy deficit in educational accomplishment and it worsens in the most recent cohort.

Table 7: unadjusted effects of migratory background on educational accomplishment. Odds ratio of the ordered logistic regression model (men)

Highest schooling	1950-1959	1960-1970	1971-1979
	Odds Ratio	Odds Ratio	Odds Ratio
<i>Migrant generations</i>			
Native (ref.)			
2 nd generation	0.77	1.24	1.15
1 st urban generation	0.45 **	0.70	0.43
1 st rural generation	0.29 ***	0.16 ***	0.29 *
<i>Number of observations</i>	256	349	339

* p < 0.1 ** p < 0.05 *** p < 0.01

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

Table 8: unadjusted effects of migratory background on educational accomplishment. Odds ratio of the ordered logistic regression model (women)

Highest schooling	1950-1959	1960-1970	1971-1979
	Odds Ratio	Odds Ratio	Odds Ratio
<i>Migrant generations</i>			
Native(ref.)			
2 nd generation	0.38 ***	1.06	0.57 **
1 st urban generation	0.26 **	0.25 ***	0.07 ***
1 st rural generation	0.06 ***	0.17 ***	0.23 **
<i>Number of observations</i>	248	344	318

* p < 0.1 ** p < 0.05 *** p < 0.01

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

Conversely, results from first-generation rural female migrants show that the odds to attain higher educational levels regarding the natives indicate a reduction in terms of the deficit of educational accomplishment. However, the panorama is not pleasant, the odds ratio of 0.23 for first-generation rural migrants in the most recent cohort, being significant suggests a lower probability of attaining higher education levels regarding the natives, pointing out that being socialized outside Mexico City brings along some disadvantages associated with social backgrounds and poor schooling levels.

From this comes that in the case of first-generation rural migrant men, their disadvantaged position is persistent regarding the natives to attain better schooling, mainly in the intermediate cohort, this calls to attention mainly in the context of improvement, as we have mentioned, of the educational coverage in recent decades. In the case of women, the tendency is to reduce the negative effects in terms of educational accomplishment, particularly among rural migrants, however their initial disadvantage is such that not even in the most recent cohort show a very broad gap in educational accomplishment regarding the natives.

DETERMINANTS OF THE MIGRANTS' EDUCATIONAL ACCOMPLISHMENT

So far we have only considered in the analysis the association between educational accomplishment and migratory status by cohort and sex individually. However, since multiple are the factors that intervene in educational accomplishment, it is necessary to move to a multidimensional explanation that allows finding out the effect of each variable “controlling” for the others. To do so, we adjusted six models in which the dependent variable is still educational level. As independent variables migratory status, occupation, father's schooling and birth cohort were included (Table 9 and Table 10).

Results for men are presented in Table 9. The coefficients of the unadjusted models by migratory status synthesize the already observed effects in table 7. The odds to reach a higher educational level are lower for first-generation urban and rural migrants than for the natives. Conversely, in the adjusted model, when controlling for occupation and father's education, as well as birth cohort, the odds ratio suggests higher probability, for second-generation migrants, of reaching a higher educational level than the natives. The negative effect of being a first-generation urban migrant disappears in the adjusted model, by contrast, first-generation rural migrants retain the negative effect, but with a little reduction of the odds, which suggests that the fact of being a migrant does “explain” why some people accomplish a higher education level than others. This is likely due to certain factors associated to characteristics they have before arriving in Mexico City and which makes that rural migrants are less prone to reach higher educational levels and thereby they prefer to enter low hierarchy positions (Santiago, 2015).

Table 9: determinants of educational accomplishment for men. Odds ratios from binomial logistic models (adjustment of discrete time models up to 29 years)

Highest schooling		Unadjusted models				Adjusted model
Variables	1	2	3	4	5	6
<i>Migrant generations</i>						
Native (ref.)						
2 nd generation	0.96					1.52 ***
1 st urban generation	0.42 ***					1.00
1 st rural generation	0.18 ***					0.43 ***
<i>Occupation of the father or economic supporter</i>						
Non-manual high and intermediate (ref.)						
Non-manual low		0.42 ***				0.56 *
Commerce		0.34 ***				0.81
Manual high		0.32 ***				0.80
Manual low		0.11 ***				0.50 ***
<i>Schooling of the father or economic supporter</i>						
None (ref.)						
Incomplete elementary			1.65 ***			1.46 *
Complete elementary			3.68 ***			3.00 ***
Secondary			7.32 ***			4.82 ***
High school			18.45 ***			12.48 ***
Professional			26.04 ***			13.84 ***
<i>Birth cohort</i>						
Cohort (1950-1959) (ref.)						
Cohort (1960-1970)				1.68 ***		1.51 **
Cohort (1971-1979)				2.93 ***		1.69 ***
<i>Studies up to secondary, public or private</i>						
Public (ref.)						
Private					3.86 ***	1.97 ***
Number of observations	944	920	944	944	944	920

* p < 0.1 ** p < 0.05 *** p < 0.01

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

Table 10: determinants of educational accomplishment for women. Odds ratios from binomial logistic models (adjustment of discrete time models up to 29 years)

Highest schooling	Variables	1	2	3	4	5	6
<i>Migrant generations</i>							
	Native (ref.)						
	2 nd generation	0.59 ***					0.98
	1 st urban generation	0.17 ***					0.42 ***
	1 st rural generation	0.10 ***					0.30 ***
<i>Occupation of the father or economic supporter</i>							
	Non-manual high and intermediate (ref.)						
	Non-manual low		0.71				1.33
	Commerce		0.29 ***				1.03
	Manual high		0.42 ***				1.07
	Manual low		0.12 ***				0.47 **
<i>Schooling of the father or economic supporter</i>							
	None (ref.)						
	Incomplete elementary			2.89 ***			2.19 ***
	Complete elementary			4.84 ***			2.68 ***
	Secondary			7.44 ***			3.80 ***
	High school			17.47 ***			6.40 ***
	Professional			60.74 ***			24.02 ***
<i>Birth cohort</i>							
	Cohort (1950-1959) (ref.)						
	Cohort (1960-1970)				2.86 ***		2.48 ***
	Cohort (1971-1979)				4.77 ***		3.40 ***
<i>Studies up to secondary, public or private</i>							
	Public (ref.)						
	Private					10.02 ***	5.28 ***
<i>Number of observations</i>							
		910	892	909	910	910	892

* p < 0.1 ** p < 0.05 *** p < 0.01

Source: own elaboration based on data from Encuesta sobre Desigualdad y Movilidad Social en la Zona Metropolitana del Valle de México 2009.

The occupation of the father also shows a substantial effect. Better employment for the father implies that the odds of reaching a higher educational level are higher and vice versa. In the adjusted model, the effect of the fathers' occupations—trade and high manual jobs—on the children's educational accomplishment disappears (coefficients become nonsignificant). However, the hypothesis that a better job of the father contributes to a better educational level of the children remains, the odds of 0.50 and 0.56 for children of fathers with low manual and non manual low activities, thus verify it.

For its part, the father's education clearly shows a substantial effect both in the unadjusted and adjusted models. Higher schooling of the father makes it more probable to reach higher educational levels, especially for children of fathers with higher education. For instance, the odds of attaining the highest educational level are (1.46) higher for individuals whose fathers reached incomplete elementary than for individuals whose fathers have no schooling. The effect on the odds increases as the schooling of the father does, but as already stated, the father's higher education sets a distance before the odds of reaching a higher educational level, such odds are (13.84) times larger for children of fathers who accomplished higher education than for children of fathers who had no schooling.

In the analysis of the effects of the birth cohort, the unadjusted model verifies the progress in educational levels in Mexico City as of the seventies. The odds of reaching an educational level are 1.68 times higher for the second cohort than for the first one. The effect of the universalization policies during the seventies in our country is clearly noticed in the increase of the odds to reach an educational level over 2.93 for the cohort (1971-1979), regarding the first. The adjusted model verifies this reduction of the effects in the educational levels. In this regard, it is necessary to remember the figures referred to in the demographic statistics, which have documented a slight increase in the average level of schooling among men and women over 15 years of age in the country, which changed from 2.6 schooling years on average in 1960 to 5.5 years in 1980, 6.6 years in 1990 and 7.4 years in 1997 (INEGI, 2000).

Regarding women according to their migratory status, the unadjusted model verifies the differences in educational opportunities (Table 10). In all of the cases, first and second-generation female migrants present a deficit in educational accomplishment. The adjusted model, once it is controlled for social background and birth cohort, the odds to reach a higher educational level become nonsignificant in the case of second-generation

migrants, indicating there is not enough statistical evidence (nonsignificant coefficients) to make any inference, which suggests that other variables buffer the negative effect. However, it is not the same being an urban migrant as a rural one, for the latter present the greatest educational disadvantages (the odds of 0.42 and 0.30) for first-generation urban and rural migrants, thus indicate), which later will become deficient labor insertions (Santiago, 2015).

the occupation of the father also shows a substantial effect, even though the daughters of fathers with low non-manual jobs do not report a significant effect on the odds to reach a higher educational level regarding the daughters of fathers with high non-manual occupations. Albeit, as in the case of men, the tendency to higher educational accomplishment among those who come from families whose head had a high-hierarchy job. The adjusted model shows that the daughters of fathers with low occupations report a deficit in terms of educational accomplishment regarding daughters of fathers with high non-manual occupations, the rest of the categories become non statistically significant, which suggests that the effect manifests through other variables.

For its part, the father's education has very powerful effects on educational accomplishment and preserves its importance even after controlling for other variables. Both in the adjusted and unadjusted models it is notices that a higher educational level of the father makes it more likely to reach a higher educational level, mainly among the daughters of fathers with higher education. This verifies, as we have been stating, the importance of the social background measured by means of the father's education.

In the analysis of the effects of birth cohort, notice that the odds to reach a higher educational level are 2.86 times larger for the second cohort than for the first one, and 4.77 times higher for the most recent cohort than for the earliest. Indubitably, as mentioned before, associated to the important advances in education on our country as of the 1970's, mainly for female population.

To sum up, the results suggest that the mechanisms that generate and reproduce inequalities in educational opportunities according to the migratory status in Mexico City, particularly in education, are mainly the result of their original differences (existing disadvantages before migration), and only in a secondary manner the result of the disadvantages they face in Mexico City (Santiago, 2015).

FINAL CONSIDERATIONS

This work had as goal to analyze the influence of the migratory status in two central aspects of educational trajectories: the age at leaving school and educational accomplishment. It was intended to find out if migrants had educational disadvantages regarding the natives, if these were associated with disadvantages in access to education in their own communities or their educational trajectories are cut short in Mexico City. Essentially, if those differences existed it was of interest to find out if these were directly due to the current migratory status or other characteristics associated, such as social background (measured by education and the father's occupation) and other individual (such as sex) and contextual (birth cohort) sociodemographic variables. On this basis and retaking the results of this work, we put forward the following final reflections.

In the first place, first-generation rural immigrant population presents the earliest calendar to leave school. This implies that the residents of Mexico City who were socialized in rural areas attended school for a shorter time, had lower educational accomplishments, faced school detachment at early ages and experienced other transitions that typically ensue leaving school before than other with different migratory characteristics. When we consider women, first-generation rural migrants noticeably show greater disadvantages in their educational trajectories regarding second-generation and native women. These differences might be more significant if we consider the effects of age of leaving school of the father's schooling, suggesting that first-generation rural female migrants face greater limitations over their lives which prevent them from developing successful educational careers.

To explain the breach between migrants and natives, the results presented in this work confirmed that these differences were owed to characteristics they had before migrating, in fact results of tables 6 and 7 pointed that the breach was because (particularly in the case of educational differences and disadvantages of rural migrants) of the already existing differentials when migrants reached Mexico City.

In the third place, the father's schooling verifies its great importance in the explanation of educational inequalities between individuals. A better education of the father is very likely to be associated with a better socioeconomic status of the family, which not only turns into more resources to provide children with quality and continuity in their education trajectories, but also into the intergenerational transmission of abilities and positive perceptions about education.

As well, migratory status exercises a heavy influence on educational opportunities. Inequalities between natives and first and second generation migrants may be supported on institutional mechanisms that operate in urban and rural zones regarding child labor and school attendance, in addition to migration itself. It is likely that many of the migrants who had coursed their early education in rural areas, in which there is a higher opportunity cost to develop agricultural activities as family workers without remuneration or pawns at early ages, interrupting their education. This probably affects people who migrated at early ages and started their education in Mexico City, in most of the cases, the position of social disadvantage in which the parents or relatives arrive is likely to effect the abandonment of education, making them hire in low-training manual activities, a situation that can extend to second-generation migrants and natives of the lower economic classes in the city.

A number of factors may be influencing the behavior of cohorts. In the first place, and like in the rest of the country, the effect of industrialization as of the fifties and the increase in education coverage as of the seventies as suggested along this work made it possible a longer permanence in school and thereby an increase in the level of educational levels over various cohorts; however, as evinced, it has not been sufficient to revert the growing inequalities in our country particularly among rural migrant women, whose policies of expansion of education in the country still marginalize them, which forces to think otherwise, a strategy that effectively contributes to reduce inequalities, not only in terms of school years, but also their quality that actually allows increasing competitiveness in terms of occupational opportunities, given the growing increase in the formal requirements to enter the labor market in Mexico City.

Finally, the present work allowed glimpsing the need to carry on with the endeavor to find out the mechanisms that foster inequality in education opportunities between natives and immigrants, both in other cities and at national scale. This way, the effects of the migratory status in structural change and socio-occupational mobility and educational accomplishment must be assessed in future research, in the light of more advanced methodologies, supported on analytic frameworks such as those in stratification studies, educational and occupational accomplishment, which allowed us to produce important and original contributions. We consider that the results we found in this research are interesting and novel on their own, in the way that the studies we reviewed evinced that little is known about female migration to Mexico City and much less on the distinction between migratory

status from migrant generations, which also is a substantial theoretical-methodological advance for the analysis of intergenerational processes of social incorporation.

ANNEX

We now describe the variables utilized for the analysis; we also present the characteristics, codification and name of the variables.

Dependent variables

- *Leaving school* (discrete time logical model): This dependent variable refers to whether the individual experienced (1) or not (0) school abandonment. It is a variable that allows ascertaining the probability that a person changes from one state to another.
- *Ego schooling (ordered logistic model)*:²⁰ it is a variable that measures capabilities, competences and quantification of individuals. It will be measured by the schooling years attained by ego.

Independent variables

- *Migratory status*:²¹ it codes as 0 for “Natives”,²² 1 “Second-generation migrants”,²³ 2 “first-generation urban migrants”,²⁴ and 3 “first-generation rural migrants” (See Santiago, 2012).²⁵
- *Age* (only included in the discrete time model): person years at risk of experiencing school abandonment are include in the model as a 4-category “dummy” variable: the first category is defined from six to ten

²⁰ The positive effects of educational accomplishment in stratification and mobility have been well documented in studies on stratification and social mobility and investment on human capital and incomes (Blau and Duncan, 1967). Providing certificates of better education is an advantage in labor market, especially in the access to higher-status occupations over which there is fierce competence. This way, educational level is included as a variable that measures capabilities, knowledge, competences and the individual’s qualification.

²¹ The conventional way to differentiate a population as the one we intend to analyze in this work is to use the distinction native-migrant, which is the one included in all censuses and in most of the surveys. In such manner that if a person is interviewed in a place different from their birthplace, they are classified as migrant and if they were born in the place, they are native. However, this distinction is only made on the basis of the birthplace, so this differentiation is far from being ideal. What is interesting is to present a more detailed differentiation that takes “their origin community” into account — that in which the individual spent most of their time from 5 to 15 years of age— as the classic studies by Browning and Feindt 1969 and Muñoz et al. 1977— as being born in a determined community has little sociological importance compared to that of spent the socialization period in it.

²² The father was born in Mexico City and so was ego.

²³ The father was born outside Mexico City, but ego was born and/or socialized in the City.

²⁴ Ego was born and socialized outside Mexico City in an urban community.

²⁵ Ego was born and socialized outside Mexico City in a rural community.

years of age (6-10); the second from eleven to fifteen (11-15); the third category from sixteen to twenty (16-20); and finally, the last category from twenty-one to twenty-nine (21 a 29). With this, we assume that the probability of the event's occurrence does not vary inside each category, but does between categories.

- *Sex*:²⁶ The variable is codified as 1 for men and 0 for women.
- *Birth cohort*: this variable is codified as 1 "1950-1959", 2 "1960-1970" and 3 "1971-1979", with it we intend to control

The influence of long-lasting sociodemographic and socioeconomic changes in the last third of the XX century.

To measure the influence of social background in the calendar for leaving school and educational accomplishment we introduced the father's schooling and occupation into the model:²⁷

- *Occupation of the father or economic supporter*: this variable is obtained from the classification of the occupation of the father or economic supporter of the respondent at 15 years. It is codified as: 0 "non-manual high qualification", 1 "non-manual low qualification", 2 "trade", 3 "manual high qualification" and 4 "manual low qualification".
- *Schooling of the father or economic supporter*: it is a variable measured by the years of schooling of the father or economic supporter of the respondent at 25 years of age. It is an element (such as father's occupation) that allows assessing the importance of social background in the process of accomplishment of occupational status.

²⁶ The variable sex is an articulating principle of demographic (biologic sex), cultural (gender roles) and social factors (how such roles are reaffirmed or transformed over the migratory experience). Gender is a basic organizing principle that configures identities, behaviors and power relations that are socially built regarding biologic sex (Paredes, 2009). This principle underlays in the migratory processes, this way, gender relations may configure occupational accomplishment.

²⁷ With this, three ways of intergenerational transmission of socioeconomic status are distinguished: the first refers to the inequalities in education opportunities; the second emphasizes that aspirations, personality traits and values of the individuals are heavily affected by the characteristics of the family and dominating cultural models in society; finally, the intellectual abilities can also be transmitted from parents to children.

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Article received on February 2nd, 2016 and approved on October 30th, 2016.